Criteria Number: 7   Criteria Name: **Institutional Values and Best Practices**

Sub criteria Number: 7.1   Sub-criteria Name: **Institutional Values and Social Responsibilities**

7.2.1 Describe two best practices successfully implemented by the Institution as per NAAC format provided in the Manual.

Best Practice II Evidence

Soft Skill Development

This document contains the criteria supporting documents and the associated proofs for Best Practice II Evidences. The documentary evidence can be accessed by clicking on the link given.

Documents for Evidence of success	Link
Winners of sports events	Supporting documents
VISTA magazine	Supporting documents
Newsletter and Magazine	Supporting documents
Pragati business Event competition winner	Supporting documents
Faceoff Event winners	Supporting documents

VIDYAVARDHINI'S COLLEGE OF ENGINEERING & TECHNOLOGY

K.T.MARG, VASAI ROAD (WEST), PALGHAR- 401202

Certificate Of Appreciation

This certificate is awarded to ___PRATIK MANGAONKAR_____

In recognition of being ___WINNER_____

___KABADDI_____ in Avahan 2019.

_____
Mr. Bhushan Patkar
Sports Secretary

_____
Prof. Vishal Pande
Sports Incharge

_____
Dr. H.V. Vankudre
Principal

VIDYAVARDHINI'S COLLEGE OF ENGINEERING & TECHNOLOGY

K.T.MARG, VASAI ROAD (WEST), PALGHAR- 401202

V.C.E.T

AVAHAN

Certificate Of Appreciation

This certificate is awarded to **PRANITA KAPSE**

In recognition of being **WINNER** in

GIRLS CRICKET in Avahan 2019.

_____
Mr. Bhushan Patkar
Sports Secretary

_____
Prof. Vishal Pande
Sports Incharge

_____
Dr. H.V. Vankudre
Principal

VIDYAVARDHINI'S COLLEGE OF ENGINEERING & TECHNOLOGY

K.T.MARG, VASAI ROAD (WEST), PALGHAR- 401202

AVAHAN

Certificate Of Appreciation

This certificate is awarded to __SAURAV MAJGAONKAR__

In recognition of being __WINNER__

__BOX CRICKET (DEPT.)__ in Avahan 2019.

Mr. Bhushan Patkar	**Prof. Vishal Pande**	**Dr. H.V. Vankudre**
Sports Secretary	Sports Incharge	Principal

VIDYAVARDHINI'S COLLEGE OF ENGINEERING & TECHNOLOGY

K.T.MARG, VASAI ROAD (WEST), PALGHAR- 401202

V.C.E.T

* * * AVAHAN * * *

Certificate Of Appreciation

This certificate is awarded to __MILIND PUROHIT__

In recognition of being __WINNER__ in

__OVERARM CRICKET__ in Avahan 2019.

Mr. Bhushan Patkar	Prof. Vishal Pande	Dr. H.V. Vankudre
Sports Secretary	Sports Incharge	Principal

VIDYAVARDHINI'S COLLEGE OF ENGINEERING & TECHNOLOGY

K.T.MARG, VASAI ROAD (WEST), PALGHAR- 401202

V.C.E.T

AVAHAN

Certificate Of Appreciation

This certificate is awarded to **PURVESH DESAI**

In recognition of being **WINNER**

VOLLEYBALL (DEPT.) in Avahan 2019.

_____
Mr. Bhushan Patkar
Sports Secretary

_____
Prof. Vishal Pande
Sports Incharge

_____
Dr. H.V. Vankudre
Principal

VIDYAVARDHINI'S COLLEGE OF ENGINEERING & TECHNOLOGY

K.T.MARG, VASAI ROAD (WEST), PALGHAR- 401202

V.C.E.T

AVAHAN

Certificate Of Appreciation

This certificate is awarded to __YASH SHAH__

In recognition of being __WINNER__ in

__BADMINTON (DEPT)__ in Avahan 2019.

Patkar		_signature_
Mr. Bhushan Patkar	**Prof. Vishal Pande**	**Dr. H.V. Vankudre**
Sports Secretary	Sports Incharge	Principal

VIDYAVARDHINI'S COLLEGE OF ENGINEERING & TECHNOLOGY

K.T.MARG, VASAI ROAD (WEST), PALGHAR- 401202

V.C.E.T

AVAHAN

Certificate Of Appreciation

This certificate is awarded to **JENIL SHAH**

In recognition of being **WINNER**

BADMINTON (BOYS) in Avahan 2019.

Mr. Bhushan Patkar
Sports Secretary

Prof. Vishal Pande
Sports Incharge

Dr. H.V. Vankudre
Principal

VIDYAVARDHINI'S COLLEGE OF ENGINEERING & TECHNOLOGY

K.T.MARG, VASAI ROAD (WEST), PALGHAR- 401202

V.C.E.T
AVAHAN

Certificate Of Appreciation

This certificate is awarded to   CHIRAG KULKARNI

In recognition of being   WINNER   in

CARROM - MIXED   in Avahan 2019.

Batkar		
Mr. Bhushan Patkar	**Prof. Vishal Pande**	**Dr. H.V. Vankudre**
Sports Secretary	Sports Incharge	Principal

VIDYAVARDHINI'S COLLEGE OF ENGINEERING & TECHNOLOGY

K.T.MARG, VASAI ROAD (WEST), PALGHAR- 401202

V.C.E.T
* * * AVAHAN * * *

Certificate Of Appreciation

This certificate is awarded to _Jyoti Manjrekar_

In recognition of being _Winner_

Kho - Kho in Avahan 2019.

Mr. Bhushan Patkar	**Prof. Vishal Pande**	**Dr. H.V. Vankudre**
Sports Secretary	Sports Incharge	Principal

VIDYAVARDHINI'S COLLEGE OF ENGINEERING & TECHNOLOGY

K.T.MARG, VASAI ROAD (WEST), PALGHAR- 401202

V.C.E.T

AVAHAN

Certificate Of Appreciation

This certificate is awarded to **AADIL BUDHWANI**

In recognition of being **WINNER**

TT (DOUBLES) in Avahan 2019.

_____
Mr. Bhushan Patkar
Sports Secretary

_____
Prof. Vishal Pande
Sports Incharge

_____
Dr. H.V. Vankudre
Principal

Vision

To be a premiere instituion of technical education, always aiming and becoming a valuable resource for industry and society.

Mission

We at VCET aim

- To provide technologically insipiring environment for learning.
- To promote creativity, innovation and professional activities.
- To inculcate ethical and moral values.
- To cater personal, professional and societal needs through quality education.

विद्यावर्धिनी प्रेरणा गीत

विद्यावर्धिनी... विद्यावर्धिनी... विद्यावर्धिनी....
ज्ञानगंगा आली आमुच्या अंगणी
विद्येची ही ज्योत तेवते विद्यावर्धिनी ॥ धृ ॥

भाऊसाहेब वर्तक यांनी रोप हे लाविले
दीन-दलितांना-आदिवासींना, प्रवाहास जोडीले
सावित्रीच्या लेकी घडती, ज्ञानाच्या अंगणी
अभिमानाने डौलत संस्था विद्यावर्धिनी ॥ १॥

'सा विद्या या विमुक्तये' हे बीद् झळकते तेजाने
नवे-नवे शिखर जिकुण्या, वाटचाल ही जोमाने
हिरव्या स्वप्रांसाठी, करीते कष्टांची पेरणी
समानतेचे सूत्र जाणते विद्यावर्धिनी ॥ २॥

कला, साहित्य-संस्कृती फुलतो अंकुर येथे
सा-रे-ग-म-प-य-नी सात सुरांचा घुमतो एकसूर येथे
भव्य क्रीडांगण, ग्रंथसंपदा, अनुभवांच्या खाणी
गुरु-शिष्याचे नाते जाणते. विद्यावधिनी ॥ ३॥

सागराची गंभीरता.. विद्यावर्धिनी
मर्वतांची खंबीरता.... विद्यावर्धिनी
सूर्याचा प्रकाश नवा.. विद्यावर्धिनी
चंद्राची शीतल छाया... विद्यावर्धिनी
ध्यास उंच आभाळाला.... विद्यावर्धिनी
विश्वास बदलत्या काळाचा.. विद्यावर्धिनी
समता, मानवता अन हक्कांचे रक्षिणी
राष्ट्रक्याचा धागा विणते विद्यावर्धिनी ॥ ४॥

संकल्पना - प्राचार्य डॉ. अशोक भोंसले
गीतकार - प्रा. डॉ. सखाराम डाखोरे
समन्वयक - प्रा. डॉ. प्रदिप गुळभिले
प्रा. डॉ. शतुघ्न फड

छकम

UNITING FOR A SUSTAINABLE RENAISSANCE

नमस्कार

कैसे हैं आप लोग? आशा करता हूं अच्छे होंगे. आप सभी का इस साल के विस्टा, जो हमारे महाविद्यालय के वार्षिक पत्रिका के सफर में है, मैं विस्टा प्रभारी स्वागत करता हूं। ये VISTA'23 अपने महाविद्यालय के प्रतिभावान और मेहनती छात्रो और शिक्षको और अन्य जनो का एक प्रतिबिम्ब है।

ये विस्टा पत्रिका हम सभी की मेहनत और सफलता को दर्शन हेतु लिटराती क्लब द्वारा बनाई गई एक प्रस्तुति है। हमने पिछले एक शैक्षणिक वर्ष एकम होके कई सारे प्रतियोगिता में विजय हासिल की है, कई नए आयामों को छुआ है। जो हमारी महाविद्यालय का नाम रोशन करने का काम कर रही है। ये एकजुटता और एक होके लक्ष्य पे काम करने से हुई है। ये सब विषय आपको ये पत्रिका पढ़ने से पता चलेगा ही।

आप सोच रहे होंगे कि ये जो इस साल के VISTA'23 का थीम है, जिसका नाम EKAM : UNITING FOR A SUSTAINABLE RENAISSANCE क्यों रखा है, जो एक वाजिब प्रश्न भी है। जो सार्वभौमिक मानव मूल्यों (यूएचवी) के एक स्तंभ एकता अर्थात एकम को दर्शाता है। एकम जो हमें अपने लक्ष्य को प्राप्त करने के लिए ताकत देता है, एकम जो हम एक साथ आके अपनी सृष्टि और पर्यावरण को बचाने के लिए इस पुनर्जन्म को सफल कारवाने के मार्ग पर अग्रसर होना चाहते हैं।

एक दीर्घकालिक पुनर्जन्म जो हमें एक्जुट्टा होके ही हासिल होगा। अगर आप ये पत्रिका के मुख्य पृष्ठ को देखेंगे तो आपको ये समझ आएगा कि ये चिपको आंदोलन को दर्शाता है, जहां पे हर एक उमर के लोग एक होके साथ आए थे जो हमारे पर्यावरण को संरक्षण किए थे। और आप अगर आखिरी पृष्ठ देखेंगे तो ये समझेगा कि एकम जो हर एक जीव के साथ में आके होता है।

आशा करता हूं आपको ये पत्रिका पढ़के अच्छी लगेगी और साहित्यिक क्लब की ये मेहनत अच्छी लगेगी और ये पढ़ने के लिए यात्रा के लिए शुभकामना देता हूं।

Mr. Aayush Jha
Vista Incharge
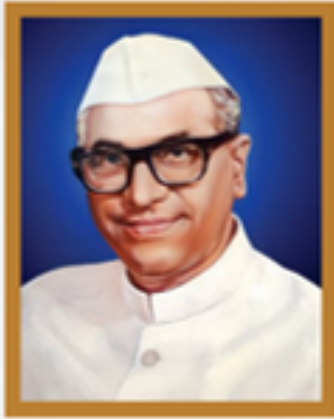
Late Padmashri H.G. Vartak alias Bhausaheb Vartak

Founder President of Vidyavardhini

(1914 - 1998)

Late Smt. Tarabai Vartak

Former President

(1926 - 2008)

Late Shri. Prataprai Khokhani

Former President

(1933 - 2018)

GOVERNING BODY

Shri. Vikas N. Vartak
(President, Vidyavardhini)

Shri. Arun G. Vartak
(Chairman, Vidyavardhini)

Shri. Shantaram B. Jadhav
(Vice–President, Vidyavardhini)

Shri. Madhukar N. Mohol
(Secretary, Vidyavardhini)

Shri. Pandurang G. Naik
(Vice–President, Vidyavardhini)

Shri. Hasmuk M. Shah
(Treasurer, Vidyavardhini)

Shri. P. D. Kodolikar
(Vice–President, Vidyavardhini)

GOVERNING COUNCIL

Shri. Arun G. Vartak
(Chairman, Vidyavardhini)

Shri. M. N. Alias Bhausaheb Mohol
(Industrialist)

Shri. Vikas Vartak
(Educationist)

Shri. Pandurang Alias Babansheth Naik
(Educationist)

Shri. Hasmuk M. Shah
(Industrialist)

Shri. Madhukar B. Parekh
(Industrialist, Chairman of Pidilite Industries)

Shri. Subhash Dandekar
(Industrialist, Chairman of Emeritus
of Kokuyo Camlin Limited)

Director of Technical Education[M.S]

Director, WRO AICTE

**Nominee of the University
Educationalist / Industrialist**
(Nominated by AICTE)

Dr. Harish V. Vankudre
(Principal)

Dr. Uday Aswalekar
(Staff Representative, Professor)

Dr. Archana Ekbote
(Staff Representative, Assistant Professor)

FROM THE PRESIDENT'S DESK

Dear Friends,

Hello! I am excited to talk to you at this special time when the creative side of our students shines in VISTA 2024, our yearly showcase of talent.

In the engineering world, where things can get technical, VISTA is a way for our students to show off their writing skills. It's like a collection of creative ideas all bundled together in a publication that has been a part of our college since 1999.

In Vidyavardhini's College of Engineering and Technology for the last 29 years, we've always focused on giving quality education. We believe that learning should be enjoyable, and teaching should be a pleasure.

We've achieved a lot during this journey—excellence, trust, and a commitment to the "Overall Development of the Students". We like trying new things, facing challenges, and making good memories. I am proud to talk to all of you at this moment.

Besides technical stuff, VCET also cares about students in many other ways like culture, literature, social activities, entrepreneurship, and competitions. I am happy to say that VCET has shown excellence in all these areas. We're known as one of the best colleges in the University, and our students do well in academics and land great jobs in top companies. Engineering education at VCET is not just about textbooks; it's about preparing students to be smart engineers. At VCET, we are committed to preparing our students for success in the industry. We provide comprehensive training programs designed to equip them with the skills and knowledge needed to be industry-ready.

Our training initiatives go beyond traditional classroom learning, focusing on practical applications and real-world scenarios. We understand the dynamic nature of industries and strive to ensure that our students are not only academically sound but also possess the hands-on experience and practical skills demanded by employers.

Through strategic partnerships with industry leaders, internships, workshops, and practical projects, we expose our students to the latest trends, technologies, and challenges in their respective fields. This hands-on approach helps bridge the gap between academic knowledge and the practical skills required in the professional world.

Our students have done amazing things in the past, and I am sure they'll keep leading in new technology.

I hope you enjoy flipping through the pages of VISTA as much as our students enjoyed putting it together. It's a great reflection of the excellence we stand for at VCET.

Best Wishes,

Mr. Vikas N. Vartak,
President
VCET

FROM THE PRINCIPAL'S DESK

I am elated at the publication of the college magazine "VISTA" for the academic year 2022 - 23.

We at Vidyavardhini's College of Engineering and Technology is focused on the transformation of our students into professional engineering graduates.

We have implemented OBE-Outcome Based Education. We have started courses in the emerging areas. We conduct an INDUCTION PROGRAM for the newly admitted students. We conduct sessions on Universal Human Values. We encourage the students to participate in extracurricular activities. National Education Policy – NEP is flexible and inclusive. It fosters a culture of innovation and a start-up ecosystem. We are looking forward to the implementation of NEP.

Through the college magazine VISTA, we provide a platform to nurture Students' Creativity. VISTA is a mirror of the college life. It reflects the literary, educational, and sports activities going on in the college.

I wholeheartedly congratulate the VISTA team.

Dr.Harish Vankudre
Principal
VCET

FROM THE DEAN OF ACADEMICS

Dear Esteemed Readers,

It is with great pleasure that I address you through the pages of our cherished college magazine. This annual publication stands as a testament to the creativity, intellect, and vibrant spirit that defines our esteemed institution.

Over the years, our college has not only excelled in academic pursuits but has also fostered an environment of nurturing.

Our students, the heart and soul of this institution, continue to amaze us with their talent, passion, and dedication. At Vidyavardhini's College of Engineering, we are committed to our motto of transforming students into valued societal-contributing people. We provide opportunities for students to transform themselves into working professionals with the right mix of integrity, ethics and professional acumen. As such, we have the most experienced and educated faculty members and staff to assist us with this mission. Thus, we are dedicated to providing a holistic environment for the development of students.

I am proud to mention our NBA and NAAC accreditation which allows our students and faculty to avail multiple grants, autonomy, etc. We are also proud of increasing the intake of students into various computer engineering allied programs at our institute. We are, at the moment, also offering Honors/Minors degree programs to aid our students with further knowledge and industry readiness. I am also proud to announce the successful launch of the Structural Engineering Postgraduate Program within the Institute.

All the courses offered by VCET aim at all-round development of every student. As such, we have also introduced a mentor-mentee program to enable students to intermingle and gain knowledge from their seniors. I also would like to thank our 'Training and Placement Cell' for tirelessly working with our students to make them industry-ready. Our students are encouraged to form committees to learn additional soft-skills and collaboration. I am sure with the continual work and efforts of our teacher, student, and staff body, we'll take our prestigious institution to even greater heights.

Finally, I am immensely grateful to our management, Principal, Joint Director, HODs, Registrar, Deans, and Staff members for their continual support and encouragement that was crucial the past year. Lastly, I am certainly honoured and blessed to mentor such young, talented members who strive for the utmost excellence.

Dr. Vikas Gupta
Dean
Academics

FROM THE DEAN OF STUDENT AFFAIRS

I take great pride in summarising the diverse activities encompassed in Vista'24, our college magazine. Firstly, I extend my greetings to all contributors and the editorial board of "Literati - The Literary Club" for their dedicated efforts in bringing forth this splendid publication.

VCET has consistently aimed to bridge the gap between theoretical knowledge and practical application, fostering the confidence and personality development of each student to align with industry standards and societal expectations. Firmly believing that genuine education is an ongoing experiential process, transcending the confines of a traditional classroom, VCET's Vision is to be a premier institution of technical education, always aiming at becoming a valuable resource for industry and society.

Its Mission includes providing a technologically inspiring environment for learning, promoting creativity, innovation, and professional activities, inculcating ethical and moral values, and catering to personal, professional, and societal needs through quality education.

Welcoming the incoming students, an orientation program was organised by various student committees to acquaint them with the myriad academic and extracurricular activities hosted by the college. The eagerly anticipated ZEAL event by the Students' Council took place on 8th, 9th, and 10th February 2023, themed "ZEAL 2023, OXALIS: A Quest for Hidden Talents." Additionally, AVAHAN, our annual sports festival, was held from 4th to 15th January 2023, providing a much-needed break from the students' daily routines. The Literary Club's highlight event, LITFEST, showcasing students' innovative thoughts through writing, took place from 6th March to 16th March and achieved resounding success.

NSS serves as a crucial platform for social engagement, with our students organising impactful events such as tree plantation drives, cleanliness campaigns, blood donation camps, social surveys, drawing competitions, vaccination drives, and road safety awareness initiatives. These activities facilitated meaningful interactions with various social stakeholders, including the police, municipal corporations, and other institutions.

I encourage you to seek inspiration in engaging with those around you, and various student organisations such as E-Cell, IEEE, IETE, ISHRAE, ISA, and CSI are available to guide you in enhancing your interactions with colleagues. Wishing you success on all fronts, I eagerly anticipate collective contributions for the overall betterment of our community.

Dr. Madhavi Waghmare
Dean
Student Affairs

FROM THE STAFF INCHARGE

As a chief painter to the beautiful literary canvas of our students, it is both an honour and privilege to present this year's addressal as the Staff In-Charge of Literati Committee of Vidyavardhini's College of Engineering. Within the next few lines, you'll find a narration of the committee that forms the very soul of our institution.

Being a shepherd to this talented lot of individuals has certainly been a very intellectually-stimulating and a heartwarming experience. From its inception till date, the Literati Committee has progressed by leaps and bounds over the years and has proved to be a haven for all the literary enthusiasts of our esteemed institution. As such, our committee conducts a plethora of events to cater to all spectrums and personalities that encapsulate our college.

We were also responsible for conducting the LITFEST, a week-long literary journey that captures every aspect of literature spectrum. From Kavi Sammellan to Extempore speech competition, 'Choose your anime', 'Literature Quiz', 'Spelling Bee', 'Dialogue-writing', etc., all events have witnessed tremendous participation and an overwhelming response from students and teachers alike. This also serves as a testament to the dedication and enthusiasm of all the literati members for successful execution of the said events.

This year's theme, 'Ekam', gives an account of the year-long journey of this institution and serves as a conduit for seldom heard voices. After bouncing- back successfully from a two-year long pandemic, looking back, it really served as an impetus for bringing us together and strengthening our resolve. We thus hope that this magazine reflects the same with the articles and pieces of literature that our students and teachers have contributed enormously to.

I am immensely grateful to our management, Principal, Joint director, Deans, Registrar, Committee- in- charges and staff members for their continual support and encouragement that was crucial in making the magazine a success. I am also thankful to the entire student fraternity for their contributions to the Literati committee in various capacities. A special vote of thanks to the Literati Chairperson, Ms Insha Mulla and her team for making this possible and bringing laurels to the committee. Lastly, I am certainly honoured and blessed to have such young, talented members who strive for utmost excellence for this committee and institution.

Ms. Swati Varma
Staff Incharge
Literati - The Literary Club

FROM THE CHAIRPERSON
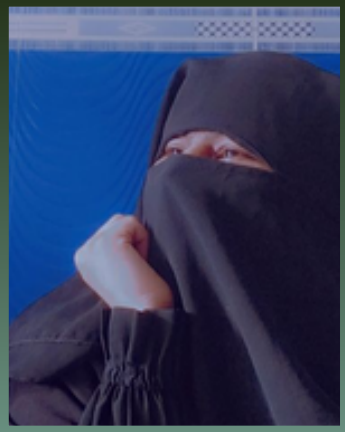
Dear Readers,

I stand before you, not just as the Chairperson of our beloved literary club, but as someone profoundly touched by the warmth, support, and camaraderie that defines Literati - our literary family.

As I reflect on my journey, I realize that Literati was not merely a club; it was a sanctuary of learning, a haven of support, and, most importantly, a family that embraced me for who I am. The club and its incredible members taught me a fundamental truth - **"It's okay to make mistakes, as long as you're learning and growing from them".** This year has been a testament to the resilience and adapta--bility for us. We transitioned from the virtual realm to the lively embrace of offline activities, and the spirit was nothing short of extraordinary. The enthusiasm, the laughter, and the shared passion for literature turned every gathering into a homely haven. I'm delighted to announce the incredible accomplishments of our team this year, orchestrating a total of 13 unique events. For the very first time, LitFest embraced the theme "Escape from Reality", featuring decorations adorned with virtual characters and imparting valuable lessons beyond fiction. The renowned Faceoff 10 marked the return of inter-college debates post-COVID, a testament to our team's dedication. Additionally, the team introduced Hindi and Marathi in our Extempore Competition alongside English for the first time, and the overwhelming participation confirmed the decision was spot on. Participating in various events, I was delighted to witness the team's unwavering dedication and commitment to our moral principles, finding joy in my defeats as proof of our steadfast adherence to impartiality.

In the 27th year of our college, we reunite under the theme for VISTA'23, "**Ekam - Uniting for a Sustainable Renaissance"**. This theme is not just a call for collective action; it embodies the very essence of what VCETians firmly believe in — unity, sustainability, and a shared commitment towards excellence. As we stand together for a sustainable renaissance, let's continue to be the family that nurtures growth, celebrates uniqueness, and weaves stories that resonate for a lifetime.

A heartfelt thank you to our respected Principal, Dr. Harish Vankudre, and the ever-supportive Dean of Student Affairs, Dr. Madhavi Waghmare, for being the wind beneath our wings. Ms. Swati Varma, our guiding star, your constant encouragement and wisdom mean the world. To our wonderful seniors, thank you for your enduring guidance. To my incredible fellow BE members, your tireless dedication turned dreams into reality. To all members of #LitFam, you are the soul of Literati, each a brushstroke of brilliance. Special thanks to my dearest friends and faculties for coping with me during the busiest times, and a nod to the unsung heroes - participants, audience, and readers - you are the heartbeat of our literary endeavors. Without you, our joy would be incomplete, and our stages would lack the vibrant energy you bring.

Let's embark on the pages of VISTA'23, where every story we tell, every word we write, is a step towards a sustainable renaissance — together, we are Ekam, a family bound by the ink of our shared dreams.

Ms. Insha Mulla
Chairperson
Literati - The Literary Club

FROM STUDENTS' COUNCIL FACULTY COORDINATOR

It is with great pleasure and a sense of responsibility that I address you as the Faculty Coordinator of the Student Council in this edition of our esteemed college magazine. Being entrusted with the role of overseeing the Student Council is both an honour and a privilege. The Student Council serves as a dynamic platform that fosters leadership, creativity, and collaboration among our talented student body. It is a space where leaders are moulded ideas flourish, initiatives take root, and the voice of our students resonates throughout the campus.

From its inception till date, the Student's Council has progressed by leaps and bounds over the years and proved to be a haven and the de-facto choice as the cultural committee of the college. As such, our committee conducts a plethora of events to cater to the entire spectrum of students and their interests.

As we embark on a new academic year, I am excited about the myriad possibilities and achievements that lie ahead. The Student Council, under our collective guidance and the support of you, esteemed reader, will continue to strive for excellence to serve students with a plethora of cultural activities and events like Fresher's party, Garba Night, Farewell and our 3 Day flagship event, ZEAL.

I encourage each and every student to actively participate in the various events and initiatives that the Student Council undertakes throughout the year in an attempt to broaden perspectives, gain experiences and enjoy the camaraderie offered by its enthusiasts. Your ideas and contributions are not only welcomed but vital to the success and vibrancy of our college community. Together, let us create an environment that promotes learning, leadership, and a strong sense of belonging and purpose. I am confident that with your enthusiasm and dedication, we will achieve new heights and make this academic year a memorable one.

I am immensely grateful to our management, Principal, Deans, Registrar, Committee- in-charges and staff members for their continual support and encouragement that was crucial the past year a success. Also thankful to our GS Mr. Kaustubh Gharat, and the entire team for their contributions to the Students' Council in various capacities. Lastly, I am certainly honoured and blessed to have such young, talented members who strive for utmost excellence for this committee and institution.

Dr. Sunayna Jadhav
Faculty Coordinator
Students' Council

FROM THE GENERAL SECRETARY

Hello there, hope you all are doing well and enjoying these fun times! Fun times I say, somebody probably reading this might have a pile of assignments coming in and would be cursing me right now lol. But trust me, these are the days and memories we cherish forever. Enough digression, you get the point. When I was asked to write this addresal, I was hit with this tsunami of emotions, I was in a spot where looking back makes me realise how crazy these four years have been (in a good way ofc) while at the same time I miss those days already!

I'm really grateful that I was able to serve as the General Secretary last year. While writing this addressal I'm overwhelmed with all the memories this college and committees have given me. Right from the first year where a fresher was so excited with all the activities happening around him and he somehow just wanted to be a part of that experience in and out, to being at a position in his final year where he could actually create a similar experience for others! This was a journey I would never forget.

The Students' Council itself was a vital chapter of my Engineering journey. This committee has been conducting events for the students, providing them a chance to indulge into various extra-curricular activities. These events are a way to relax from the rapid paced curriculum and explore various domains apart from academics. Being part of such a massive committee, one gets to experience responsibilities faced in the real world while by participating in the events as a non-organiser one gets to experience a multitude of events.

It wasn't all smooth sailing for us though. In our final year, we were the only batch to have experienced all the activities offline all thanks to the pandemic. Since every other batch after us were the so called "online wala batch", it was our responsibility to make them experience the real fun, the real offline events our college has to offer. Hence, all our focus and hard-work was to sort of revive the "activities" in the "extra-curricular activities" and we certainly hope that we were successful in doing that.

As cliche as it sounds, each and every member of this committee is responsible for the execution for such events, no matter the scale of that event. I owe this one to all my committee members! A special mention to Varun, Nidan, Nidhi and all my BE Council members who trusted in me and together we were able to create something we all visioned of, not to forget the faculty staff who were always there to guide us at all times! All the faculty members whose guidance and insights acted as a foundation for this committee.

Lastly, I would like to end this addressal with a call back to what I began with; a message to all the readers, we are here for our degree and we will work hard for it but make sure you explore and make the most out of these days, be it being part of some committee, be it participating in some event you never tried before or be it creating your own startup! These are the days and memories you will cherish forever!

Mr. Kaustubh Gharat
General Secretary

FROM THE SPORT'S SECRETARY

As the Sports Secretary, I'm thrilled to convene the Sports Committee and foster a spirit of athletic excellence within our college. Our mission is to elevate our sports programs, and one remarkable highlight from the past year was the grand sporting extravaganza, 'Avahan,' which took place from January 4th to January 15th, 2023.

During Avahan, our college was transformed into a hub of sporting action. Students enthusiastically participated in a wide array of sports, including kabaddi, football, volleyball, badminton, and table tennis, competing at both the inter and intra-college levels. This festival of sports brought together talents from various disciplines, uniting the college in the spirit of healthy competition.

At the intra-college level, exciting events such as box cricket, throwball, and tug of war created an electric atmosphere, fostering a strong sense of camaraderie among our students. Avahan encapsulated the values of teamwork, sportsmanship, and physical fitness.

I would like to commend all the participants for their dedication and enthusiasm, and extend my gratitude to the organising committee for orchestrating a remarkable event. A special thank you to the Sports Committee members whose hard work made Avahan a resounding success. Your dedication and commitment are the driving force behind our sports programs, and I look forward to another year of incredible achievements. Together, we shall continue to cultivate a culture of sports excellence within our college community, celebrating achievements, fostering camaraderie, and inspiring our students to strive for greatness in sports.

Mr. Niteesh Kulal
Sports Secretary

FROM THE EDITORIAL HEAD

Esteemed Readers,

It is with profound honor that I address you today in my capacity as the Editorial Head of the Literati Club. My journey within Literati, which began as a Marathi Sub-editor, led me to the role of Hindi Editor, and now, Editorial Head.

For me, Literati is more than a club; it is a space where I found peace. The time I spent with Literati is actually the time I LIVED.

When we read, we feel. When we feel, we accept. And when we accept, we get united through thoughts. Considering the present situation around us, where people are struggling for a peaceful life individually, we dedicate "Ekam - Uniting towards a sustainable renaissance" to UNITY.

The Sanskrit word 'Ekam' symbolizes 'unity,' and our mission is to inspire unity that leads to a renaissance, a rebirth of hope and progress. We aim to get united, not physically, but through thoughts, for thoughts.

This year, Literati has witnessed a surge of enthusiasm in promoting intercollegiate debates through 'Faceoff.' We introduced a fresh celebration, 'Bhartiya Bhasha Diwas,' to celebrate the diversity of Indian languages. The 'Kavi Sammelan' has always been a joyous occasion, where the love for words and diverse thoughts takes center stage. This year, the Kavi Sammelan dazzled both participants and the audience alike with the introduction of an on-the-spot poetry round, challenging participants to craft verses within a mere 10 minutes.

As a platform to express my gratitude, I extend my heartfelt thanks to our readers, who are the driving force behind our committee's tireless efforts. I would like to express my deep appreciation to our Principal, Dr. Harish Vankudre, and our Staff In-Charge, Ms. Swati Varma, for their unwavering guidance and support. My sincere gratitude also goes to the entire BE team of Literati for their leadership in steering the club toward success. Special acknowledgment is due to the diligent team of editors and sub-editors who meticulously reviewed, analyzed, and refined the content and articles within this magazine.

In closing, I would like to quote again, 'When we read, we feel. When we feel, we accept. And when we accept, we get united through thoughts.'

Let us, together, embrace the power of literature to feel, accept, and unite for a positive change.

Chinmay Raut
Editorial Head
Literati - The Literary Club

INDEX

INDEX

1

English Section

EDITORIAL

Dear Readers,

It is with great pleasure that I address you as the English Editor through the pages of our beloved magazine. Looking back this year, while it certainly had its ups and downs, it was a learning experience more than anything. It also made me realise what Literati Club stood for – a haven for all the loving and open-hearted people here at VCET. This is the very ethos of this club – to enable ollaboration between people who come from different strides of life. As such, this year's magazine is the very embodiment of its theme – 'Ekam'.

'Ekam' - a word derived from Sanskrit Literature, signifies 'Unity'. The work here at Literati is a reflection of this core value that we try and not only inculcate but also regularly practice in all our ventures. In the 27th year of our college, we reunite under this theme for the Vista'23 magazine of our college. As we stand together for a sustainable renaissance, let us continue to be the family that stands as an embodiment for this year's theme. To wit, I would like to extend my deepest gratitude to our Principal, Dr. Harish Vankudre our Dean of student affairs, Dr. Madhavi Waghmare, and our Staff In-charge Ms. Swati Varma for being the pillars of support and a beacon of light throughout our ventures here at VCET. I would also like to mention our Chairperson Ms. Insha Mulla for leading our committee through these extremely difficult and challenging times. Here at Literati, I have met people who actually shared my thoughts(my geeky thoughts) and I have also met some of the most unselfish and loving people: Aayush, Omkar, Gautham, Shreyas Thank you for making this year a memorable one. And to my fellow LitFam, words fall short of the brilliance of your imagination, unfazed will, and continual persistence that has been the very soul of this committee.

As the world and people slowly turn hard and cold, we can always rely on you to bring the coziness of literature and a streak of poetic sunshine into everybody's lives. I conclude by finally thanking you, our beloved readers, who have been a constant source of support and encouragement throughout all the ventures here at Literati. You have undoubtedly been the Romeo to our Juliet, the Elizabeth to our Mr. Darcy, and the Portia to our Bassanio. Without you, our events are lacklustre and our joys, unfounded.

With this, I humbly welcome all to browse the pages of this year's literary canvas that encapsulates the brilliance and unity of the students here at VCET. Ultimately, we all are quills bleeding our hearts onto the canvas of our lives.

Faizan Raiba
English Editor
TE - CSE(DS)

Getting United for Sustainable Renaissance

Getting United for Sustainable Renaissance: A Pathway to a Better Future

In the face of pressing global challenges such as climate change, resource depletion, social inequality, and environmental degradation, there is a growing recognition of the need for a sustainable renaissance. This renaissance represents a transformative shift towards a more equitable, prosperous, and environmentally conscious world. Achieving such a future requires united efforts from individuals, communities, businesses, and governments to address the root causes of these challenges and work together towards sustainable development. This article explores the importance of unity in achieving a sustainable renaissance and highlights key areas where collective action can make a significant difference.

Recognizing the Interconnectedness of Global Challenges
One of the fundamental principles of sustainable development understands the interconnectedness of various global challenges. Climate change, for instance, impacts not only the environment but also exacerbates social and economic inequalities. To tackle these challenges effectively, it is crucial to recognize that environmental sustainability, social equity, and economic prosperity are interdependent. By uniting around this shared understanding, we can foster collaborative solutions that address multiple issues simultaneously.

Engaging Stakeholders and Building Partnerships
A sustainable renaissance requires the active participation of diverse stakeholders, including governments, civil society organizations, businesses, and individuals. Collaboration and partnerships between these stakeholders are essential to leverage collective knowledge, resources, and expertise. Governments can create supportive policy frameworks, businesses can innovate sustainable practices, civil society organizations can mobilize grassroots movements, and individuals can make conscious choices in their daily lives. By forging alliances and working together, stakeholders can create a powerful force for change.

Investing in Education and Awareness
Education and awareness play a vital role in fostering sustainable behavior and empowering individuals to become agents of change. By investing in education systems that prioritize sustainability and promoting awareness campaigns, we can cultivate a sense of responsibility and equip future generations with the knowledge and skills needed to address global challenges. Education can inspire young minds, encouraging them to think critically, adopt sustainable practices, and become leaders who drive the sustainable renaissance forward.

Transitioning to Sustainable Systems

To achieve a sustainable renaissance, we must transition from unsustainable practices to sustainable systems. This involves adopting clean and renewable energy sources, promoting circular economy models, reducing waste and emissions, and adopting sustainable agriculture and consumption practices. By transitioning to sustainable systems, we can reduce our ecological footprint, mitigate climate change, and create opportunities for green innovation and economic growth. This transition requires collective action, as governments, businesses, and individuals all have a role to play in driving systemic change.

Addressing Social Inequalities

Sustainable development is not just about environmental sustainability; it also encompasses social equity and justice. To achieve a sustainable renaissance, it is crucial to address systemic social inequalities, including poverty, gender disparities, and access to healthcare and education. By working collectively to eliminate these barriers, we can create a more inclusive and equitable society that benefits all individuals. This requires policies that promote social justice, empowerment, and equal opportunities, as well as a collective commitment to dismantling systemic discrimination.

Conclusion

A sustainable renaissance represents a transformative vision for our future, one that harmonizes environmental sustainability, social equity, and economic prosperity. By getting united and working collaboratively, we can overcome the global challenges we face and build a better world for present and future generations. Recognizing the interconnectedness of these challenges, engaging stakeholders, investing in education and awareness, transitioning to sustainable systems, and addressing social inequalities are key pathways towards achieving this sustainable renaissance. It is through our collective efforts that we can create a thriving, resilient, and sustainable future for all.

**"Alone, we are drops of water; together, we are a mighty ocean.
Let us unite for a sustainable renaissance, where every action ripples into a wave of positive change for our planet and future generations."**

**Mr. Sumeet Shingi
(Assistant Professor - CSE(DS))**

EHHI
Uniting for a Sustainable Renaissance

My Mother, The Teacher

In a realm of love, both gentle and pure,
My mother, the teacher, I adore.
With wisdom and care, she guides my way,
Influencing my growth, day by day.

Her words, like a melody, soothing and kind,
Unveiling the treasures of knowledge I find.
As a mother, her love knows no measure,
As a teacher, she's my source of treasure.

Her nurturing touch, like a gentle breeze,
Fosters my dreams and brings me ease.
With patience and grace, she leads the parade,
In her presence, my fears gently fade.

Her lessons of empathy and grace,
Shape my character and light my space.
A mother and teacher, both intertwined,
Influencing my heart, my soul, my mind.

Grateful I am for this wonderful pair,
For their love and guidance, beyond compare.
In the bond of a child, their impact is true,
My mother, the teacher, I owe it all to you.

Adithya Jayakumar
(FE - CSE(DS))

Unlocking The Power Within
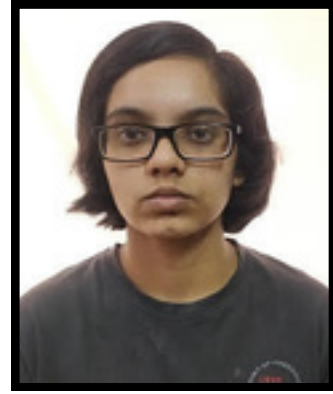
A charged piece of steel attracts weight,
far beyond its own,
But when demagnetized, it can't
even lift a feather blown.

Likewise, there are two kinds of souls,
distinct in their sway.
The empowered, confident ones, destined
to triumph and sway.
And then, there are the dispirited, drained of belief,
Fearful of failure, doubting, causing their
dreams to deceive.

These souls won't venture far,
remaining stagnant and still,
Bound by their apprehensions, reluctant to fulfill.

Embrace the charged spirit,
the ancient secret in disguise,
Transform into a magnetic force, where success lies.

Embrace the magnetic force,
its brilliance shining bright.
For success awaits those who dare to believe
Transform into a magnetic force, where success lies.

Embrace the magnetic force,
its brilliance shining bright.

Brahmeti Patil
(SE - COMPS)

Lost into You

The Fire That No One Puts Away

1st poem
I'm lost into you,
Whenever I see...
Looks too close yet so far.

You upheld me always, whenever I felt bad,
Gave some hope and made me mad,
At something which could never happen...

The day I realized you weren't reachable,
I should have quit.
But I'm lost into you...

I thought I would achieve this universe with ease,
Alone in this dramatic world,
Searching for someone who could match my energy...

I found you as a pearl in the Black Ocean,
Who always shines even in the dark.

Prays the day to elapse so quick,
Only to talk till the dawn,
Sharing my feelings that no one cares,
Makes me feel they aren't scars.

I'm lost into you in such a way,
That I will happily leave my soul to reach you.

My love for you getting better each passing cloud,
It will never come to an end...
Even if I die.

Saivamshi Jilla
(FE - COMPS)

Life but a burning page, from birth, Where does one lie in the page, no one knows.
How menacing and quick the fire grows, no one knows,

Maybe the page is written with a complete joke, or maybe with the wisdom of generations old, or maybe an empty page and will become emptiness, or maybe an idea never seen, but oh dear, the fire will consume all the page, for once and all.

Sometimes, you might think the fire might just burn you now and the end has come, but it might alter its course, and you will just feel ecstatic by its warmth, but oh dear, the fire will consume all the page for once and all.

When the warmth of the fire isn't felt for long enough, one thinks the fire has stopped, and lives as if life is an endless page, and thinks foolishly they have now become the blazing fire! but oh dear, millions of pages burn daily, for even your page will be ashes soon, for you were not even a spark in front of the actual fire.

Maybe there might fall a water drop on the page, and make the fire end, the water drop which will quench the philosopher's thirst,
The drop which will put the fire away.

For the foolish, they avoid the inevitable flame from

fear, And also not search for the drop, from ignorance, but millions have only hoped for the drop while they just got burnt, you should make the water drop fall on your page before it's too late, and the fire has consumed you.

Siddharth Chakravarty
(FE - CSE(DS))

Twilight and Me

Thinking in bed, with much to say
Deep in thought, Motionless I lay,
Clasping my pillow with my arms tight,
I wonder would anyone ask, if I am alright?
Questions racing through my mind
This is how survive.. my circadian grind
I wonder, glancing up at the ceiling wall,
Would anyone lift me when I fall,
At last, the clock struck three,
Oh, its time to have my coffee.
I glow my lamp to think and write,
Whatever my mind leaks this midnight.
Always had my loyalty to this desk,
Never minded the corners, grotesque
Loved scribbling my pen, creating a mess
Although my love for the diary wasn't any less,
Air around..., smokey, thick and antique
Had so much to say, I could barely speak.

Wajiha Kulsum
(FE - COMPS)

Darkness

The nights are getting longer day by day
When it is time, I follow the black path into the darkness that is the mind of day.
I can see nothing in here, unaware of where the path is taking me to just trusting the path that everything would be alright in the end...
The struggles, the sacrifices, facing the darkness would be worth it in the end...
And it is, an age of brightness, a new day, a new start, a new chance.

Garima Mohanty
(FE - CSE(DS))

Why Don't You

Why don't you, my friend, take a chance?
Embrace the unknown, join life's dance.
Cast aside fear, let go of doubt,
And see what magic life's about.

Why don't you, my love, speak your heart?
Let your feelings shine, set them apart.
Express your love, don't hold it in,
And watch as new beginnings begin.

Why don't you, my soul, seek new paths?
Explore new worlds, break free from old traps.
Take a leap, trust the journey,
And discover all the beauty.

Why don't you, my dear, be yourself?
Embrace your quirks, your unique wealth.
Celebrate who you are,
And you'll shine like a star.

So why don't you, my friend, take a chance?
Embrace the unknown, join life's dance.
For the world is waiting, open wide,
And you have all the power inside.

Garima Mohanty
(FE - CSE(DS))

Country Side

Feeling to go on an island aside;
Yet living in a country side.
Looking forward to leap high ride;
Hustle and bustle has lost us a wide.
Craving a lot, fulfilled nothing;
Life is all about pursuing.
Kept finding in a moment the ecstasy;
Having lost in the impossible fantasy.

Tejashree Karekar
(FE - AI&DS)

Nature, The Giver

Nature, the giver, selfless and kind,
A mother who nurtures, a love we find.
With open arms, she embraces us all,
Answering our wishes, both big and small.

She paints the sky with hues so bright,
Gifts us with stars that sparkle at night.
Her rivers flow with soothing grace,
Quenching our thirst, a familiar embrace.

The trees sway gently, their branches a shield,
Providing shade in the heat of the field.
Her flowers bloom, a vibrant display,
Sharing their beauty, along our way.

Nature's love knows no boundaries, no bounds,
She asks for nothing, no rewards, no crowns.
In her presence, we find solace and peace,
Her selflessness, a love that will never cease.

So let us cherish her, our dear Mother Earth,
Protect her, preserve her, for all she's worth.
For in her embrace, we find endless bliss,
Nature, the giver, a timeless gift we shall not miss.

Adithya Jayakumar
(FE - CSE(DS))

Faith in God

It is believed that the whole universe is created by God. We too are his creation. That is the reason why we believe in God. As we have faith in god, we believe that he is omnipresent. He watches us and protects us at all times.

In the olden days, people had time for aarti's, prayers, bhajans, and other rituals too. They also believed that God is omnipotent. Those people who believe in God but not in themselves never become successful. But on the other hand, the one who believes in God as well as themselves are bound to achieve all their goals and fulfill their desires.

There is nothing like heaven or hell after death. If we do bad deeds, then we will surely get the punishment for it in return. That is the time when we are in hell. Instead, if we do good deeds, we get good returns and that is the period of living a life in heaven. So heaven and hell are all on this planet.

Nowadays, as the number of scientists are increasing, the number of fraud saints are also increasing. The fraud saints make everyone believe that they are the messengers of God. They assure people that they can fulfill their wishes and then take money in the form of 'dakshina '. In this way, the common people are looted.

Believing in God gives us a positive attitude towards life and working hard with it, which helps to fulfill all our aims and ambitions.

We must have a thought in our mind that everything happens for a good reason. If you are unhappy today, don't worry at all cause time never remains the same, it keeps on changing. Maybe God might have kept a lot of happiness in store for you. Having this thought in mind will always give you positivity.

So "**YOU ARE ENOUGH TO WIN THE WORLD, FIGHT ALL YOUR BATTLES WITH PRAYER, YOU WILL ALWAYS WIN**"

Tanishka Das
(FE - COMPS)

Harmony of Life

In life's vast realm, two sides reside,
Happiness and sadness, hand in stride.
A raindrop's joy for the land it greets,
Yet sorrow for birds, drenched in its feats.

I yearn for the moon amidst this rain,
Its gentle glow, a celestial bane.
Through joyful hues and somber tears,
We bloom like the moon, conquering fears.

For happiness and sorrow, both shall fade,
Transient whispers in life's grand parade.
In the grind and process, we find our way,
To become our best, through night and day.

Naba Sarwar
(SE - COMPS)

Give wings to your Dreams

Everyone dreams. But its those that pull their dreams into their waking hours who will turn them into goals. A goal your waking dream is a sacred thing. It can give your life motivation, inspiration and direction, as it can be the weight that hangs around your neck, as you say, "Someday

Goals shouldn't be feared, but they shouldn't be taken lightly either They are your dreams that are setting on the runway headed towards success. And all pilots know that the only reason we taxi onto an active runway telling the tower we're going to depart and never do is a dangerous place to be.

If we all dream, then why can't we all achieve our goals? The answer is we can. But some people think I can't be possible because Others say "Someday I will," but someday never comes. And there are those who tell everyone, I'm going to." But never take action toward their goal because life gets in the way.

Here is the secret. Life will always get in the way of your dreams. Something will always come up. Someone will always need you. Work, family, friends, and commitments. So what makes some people achieve success while others say they want to but they never do.

Tony Robbins said, "Don't ever make a goal without taking some action towards it. This is a powerful step and essential if you plan on making your dreams come true.

The choice is yours. What are you waiting for?

Raja Shah
(SE - MECH)

Finally it's Holiday

On Saturday, I was all set for my last exam. The real last exam in my engineering.

Evening, misty and fresh, at 4:30 pm I sat down to do all those tasks which I had postponed.
I found my broken bracelet. Black beads, shiny and very small. Without spending much time, I started to entwine (interweave) the fallen beads through a needle and thread.
I remember avoiding this task for the entire 2 months. But now, I was on it. 15 minutes past entwining, I felt restless, irritated, and frustrated.
The following kept popping into my head ;
Why am I doing it at first? Can't I ask someone else?
Is this helping me GROW?
This isn't helping you EARN, do something else. Is this PRODUCTIVE?
I should go and do something MORE WORTHY than this.
I should go for a walk, watch a video, post a story, edit an image, capture some images,
isten to music, talk to a friend, eat something, sleep or just do ANYTHING ELSE which doesn't make me feel restless.
But why am I having these thoughts?
Why do I want to run away from doing such simple work?

I spent a while, keeping myself entwining the beads. After hustling for 20 minutes, my consciousness rose the following;

But why am I having these thoughts?
Why do I want to run away from doing such simple work? I spent a while, keeping myself entwining the beads. After hustling for 20 minutes, my consciousness rose the following;

My brain: This bracelet might have been made in the 1000s, so there would be people who entwined it, spending hours on doing so with 1000s of bracelets. So are these people simply wasting their time? Are they unproductive?

My consciousness: NO.
They are EARNING via entwining beads so they aren't wasting time.
My brain: So are they PRODUCTIVE?

My consciousness: YES
My brain: Is the definition of productivity different for everyone? Because I see, I did the same act, but I felt I was wasting time, agreed they earn money but equivalently I'm wearing the bracelet, for my leisure.

My consciousness: YES, you are getting there! Productivity is different for everyone.
My brain: okay, then they must be GROWING at least right?

My consciousness: Yes, each day they do their task more effectively.
My brain: So they earn, grow, and are productive, then why does the world tend to look down on their job and go on to say "Don't work like labor, work like a professional"?
Isn't PRODUCTIVITY proportional to more MONEY?
And more MONEY proportional to GROWTH?

My consciousness: Productivity doesn't mean doing a thousand visible things. It has a different meaning for everyone, we need to FIND it.

But today's consumerist culture is trying to define these words for us. They are taking away your FREEDOM, getting you in DILEMMA, and selling you ESCAPES.
You define, what is productive,
NO. Having more money doesn't assure growth.
You grow when you do better than you did yesterday.
You earn, in the true sense, when you work for it.
And you are productive when you FOCUS DEEP.

Manisha Kushwaha
(BE -MECH)

Saturday Night

The world's outside, alive with fun
But here in my room, I'm the only one
I wonder why I'm stuck in this plight
On a Saturday night with no one in sight
Do others feel the way I do?
Or am I just in a lonely queue?

The stars above, the moonlit sky
Reminds me of the beauty in life
Even in the depths of this lonely night
There's magic and wonder, a breathtaking sight

So, I'll take a deep breath and let it all go
I'll find peace in the stillness and the unknown
I'll revel in the moment, cherish the quiet
For in solitude, there's also delight

Garima Mohanty
(FE - CSE(DS))

Time by Myself

It's a word expressing its feelings of hurriedness and happiness. Maintaining a bond! Better watch out. A master of all teachers who gave missions to lives. Steal it or freeze at it. Years changed but dimensions were constant, so constant always constant. Once gone never came back! That's power. Planck was so shocked when he saw the Supereon, that taught me his existence. You blame him, you play him or you praise him, it's never going to be the same it doesn't make noise but that tick-tick every time is rather scary. He has two friends, Management and Pass. But the two of them are rather bitter foes. Management is a long, boring, and rather difficult friend to have. Pass is a short, interesting and easy friend to have. Both came in life when you became alive. I went to buy a Pass as it was such an interesting and short friend. In the store, I saw a ton of people so I sat near Management's store. I was the 10th person sitting there in a queue. There I saw a proverb that said 'Long Term Investments Are Wise But Not Easy'. I bought Management as my friend. Years passed, and I struggled and gave it all till my blood kept running in my vessels. Maybe I took the wrong friend for myself. Finally one day, I asked Time, "Can I exchange Management with Pass?" Time smiled at me and said "Yes, I will bring Pass to you and then you can exchange it. But tell your name before exchanging." Pass asked me my name, Time smiled and said, "Work Is Always Suited With Management And Not Pass, my son! Before I could understand anything, I got a gift from Management Surprisingly Time said, "Management was a good

friend of yours, he was always happy with you. He took some time but before he left, he gave you this small gift as a result of your patience and dedication." On the gift it was written,
From- Management To- Work.
I opened the gift, there I saw a letter with congratulations written. I opened and read,
"Dear Work, I(management) was a short-term friend of yours. Thank you for choosing me. You have been ambitious and dedicated all your life. I'm sorry I took a few years and so you were upset with me. But do you remember the quote? Yes you do. That's the reason you never gave up. Time had appointed me to be with you. Pass couldn't stand by you and so he vanished. I was always standing beside you because I had faith in you. Okay I won't take much of Your Time, just go outside and look around you. Take care, Bye." I quickly went outside and I saw....
I saw what I dreamt. I saw what I did. I saw what I will do. I saw I have achieved everything in life when my Time came. Then I realised, the importance of Work Management and Time Management.
I smiled at the sky and thanked time with a Patek Philippe on my left Wrist.

Khanjan Joshi
(TE - COMPS)

Cycle of Failures

The term itself refers to a repetitive sequence of failures, Often leading to a continuous loop of setbacks. It can happen to any individual of any age.Everything starts with an initial triggering event

occurring due to a wrong approach or some external circumstances. Once the trigger sets off it leads to a recurring interconnected series of events.

After the initial failure the individual tries to make a comeback as a response to the initial setback by working on some minor issues which eventually leads to short-term success but due to lack of thorough analysis as failure is not properly assimilated and necessary adjustments made, leads to the same shortcomings are likely to be repeated in the subsequent attempts. Not addressing the root cause of the failure leads the subsequent attempts also in failure, perpetuating the cycle or loop of continuous failures. With each repeated failure the frustration of the individual increases which further impedes dear thing and problem-solving ability making the situation even worse.This repeated failure brings a peak psychological impact on the individual, hurting their self-esteem, confidence and makes them believe that failure is inevitable. The psychologically affected individual starts avoiding similar situations and becomes risk averse. The risk aversion potentially leads to another failure hindering his/her self confidence in the ground. Avoidance of challenges makes the individual miss the opportunity of making a comeback. These continuous setbacks eventually disrupt the whole motivation, The process of continuously running away from challenges again leads the individual to the starting point of the triggering event leading to no growth but resulting in a thoroughly broken person from inside with zero self-esteem and confidence of making his/her dreams come to reality. The cycle repeats itself perpetuating the cycle of failures.

The cycle of failures is an almost inevitable process from which only one percent of people could break through.

The cycle of failures is an almost inevitable process from which only one percent of people could break through. Breaking through the cycle of failures is the process of interrupting the rigorous failures attempts or overcoming the recurring pattern of negative

outcomes by thorough analysis of the previous. Trying to attempt the loop of the pattern of the failures or setbacks. But breaking this cycle of failures requires resilience which is the ability to adapt to the setbacks with a determined brain towards success and a positive approach towards the upcoming challenges. Cultivate resilience by focusing on strengths of the individual and practicing self-compassion.

Breaking through the cycle is not an overnight process; it takes multiple attempts and multiple failed attempts. But the key to the door of success hides behind being persistent and keep trying. Openly seek the feedback of peers, mentors or experts of the same field. Take constructive criticism positively, adapt to the change and set a different approach to the same goal as yours. Embracing flexibility and continuously refining the techniques will eventually lead you to success.

Willingness to accept the mistakes and changing approach is a long process which empowers you to innovate new paths and techniques despite having initial psychological setbacks and is a main boost to motivation and reinforces the belief towards the possible progress.

Parth Mishra
(FE - EXTC)

The Cage that Never was

Almost every man living right now, or who has lived, or is living with his cage of expectations and desires. We all have certain expectations or desires, like 'I am going to be rich', 'I want to win this competition', 'I want everyone to be good to me or respect me', etc. But on pensive scrutiny, we do realise that these self-desires are the only ones that trap us, the cause of our anxiety and depression, and how foolish these materialistic desires are. How?

Firstly, we have to realise, or rather accept, that we do not control everything or everyone. For instance, can we truly control what someone is going through, believing, or what mood or mindset they are in? The simple answer is a big NO! Some lies we never heard, some epiphanies we never had, some thoughts we never thought, some emotions we never felt, some jokes we never laughed at yet how can we predict others to be in the same mindset as us? How can we expect everyone to be good to us because someone could be having a bad day or the opposite person just wants to act cool or dominating, or some other possibility? The other person might also be a slave to their own expectations. Similarly, if we have the expectation to be rich, we cannot truly control what will happen to us in the future, what factors may cause loss to our business, or what could go wrong; there are endless possibilities. We cannot even predict our own deaths; who knows if we will die today or what could happen to us in the next 10

minutes of our lives, yet we worry and are anxious about the future, which is not in our control, and are depressed about the past, which was also never truly in our control. For example, the city of Ayodhya was rejoicing in the night that the next morning Lord Ram would be crowned as king, but such a twist of events meant that he got exiled for 14 years the next morning.

So does this mean that we should be pessimistic or sad just because we are uncertain what will happen next? NO!! As the next moment or life, in general, is uncertain, we should just accept the fact that life is uncertain and learn to tolerate both the

pain and pleasure as they are both temporary, like the passing of day and night. We should be detached from the results of our work, i.e., simply not have diehard desires, and just be in the present and do our work, relish it, and live through every single moment of our life as a challenge and not worry about the future because we never know if we will have that tomorrow to enjoy. What you are is now, right now!

One should not be attached to these temporary pains and pleasures forever as we are not forever, as getting attached to the pleasure or success leads to ego or pride, and every ego can be broken, so this is the false ego we have, and getting attached to the pain or sad times leads to depression or self-doubt, but we should not forget that even these sad times are temporary. We should learn to stand up and face what comes ahead, as success might be waiting for us in the door of our cage, and even if we get success, we should not be attached to it again. You never know when a friend turns into an enemy, and when an enemy turns into a friend, you never know for sure what could happen, so this attachment to people or anything is just silly hope. It is just a cycle, and we should just learn to go through it, for even if we become the richest person, it is not guaranteed that we will always be happy, because you never know what might go wrong, and also that money and happiness from it are temporary, for even the great

Alexander died with bare hands. Happiness or peace is a choice, not something in the chase formed by our desires or in the destination or end of the chase.

When we contemplate these materialistic and temporary things like ranks, status, relations, etc., we develop an attachment to them; this attachment leads to the formation of desires and expectations around them, when these desires are not fulfilled; it leads to anger or sadness; this anger leads to delusion and confusion; this confusion leads to the loss of memory and knowledge; and from this finally comes the breakdown of one's self. So it is foolish to be too attached to these desires, whose fulfillment is not completely in our hands. In this grand universe, where millions of babies, stars, galaxies, etc are born while at the same time, millions of bodies, stars, galaxies, etc die while millions of these are living or being right now, we are just a small part of it, so we are here just to do the small part of us whatever it is, where our ego, pride, depression, anxiety, and nervousness look so insignificant and don't matter as everything at last again is just temporary. We have to accept this awe-inspiring cycle of creation, maintenance, and destruction, where nothing is permanent, and continue to live with it.

At last, it is upon us to accept the fact that we have to let go of these expectations to be truly free from everything, that we all make mistakes and do great things, that pain and pleasure both come and go, and that we have to accept whatever comes or is happening and not be attached to anything. George Lucas, the creator of the famous 'Star Wars' franchise, once said "We are living in cages with the doors wide open". So it is upon us to accept the truth and see the bigger picture, or live with our selfishness, which will always lead to depression, anger, delusion, etc., and be stuck with them.

Siddharth Chakravarty
(FE - CSE(DS))

Judge before Trust

Just now, I read Seneca's "Letters of a Stoic" book, and from this book, I have been reading letter 3, in which he mentions the following: "Certainly, you should discuss everything with a friend, but before you do so, discuss with your mind the man himself." He then addresses an amazing line, "Regard him as loyal, and you will make him loyal." He goes on to add, "Why shouldn't I imagine I am alone when I am in his company?" These sentences struck my mind and made me realize the entire content of this letter, which is trying to tell me to have a company that makes you feel as if it's you yourself, as if it's a part of you functioning for the betterment of you and your surroundings.

Being with somebody with whom you always have to resolve conflicts, with whom you always have to give time to resolve those conflicts, you should sit down and reflect on where these conflicts are coming from.

From reading the entire "Letters of a Stoic," specifically the third letter, I realized I am in no situation to judge once I have entered into a friendship. I am only in a situation to judge before I have started. This is very important because often we fall into shallow relationships and later find out that they do not serve us well. Instead, I should have assessed and judged these situations beforehand rather than after entering into them. This also supports the fallacy of being in a live-in relationship, where you live with each other, then judge if the

person is compatible for you, deciding whether to continue the relationship or end it.

Then how do you judge someone beforehand?

Here's how ;

1) We all are eternally wise .

We KNOW what's good, what's BAD. It's only the worldly pleasures that blinds us from our OWN wisdom. Thus we know by INTUITION of our Inner self about how someone is.

After all, isn't our wisdom what differentiates us from other animals?

2) Notice the small acts of kindness.

When someone is portraying, they won't bother to care for small things. And worst even if they succeed in portraying these small acts too, then, notice their CONSISTENCY.

When one sets the goal of running, they often MISS OUT the scenery they run by. (these sceneries are the small acts of kindness)

3) Friend in need is a friend indeed.

I don't feel I can elaborate on it much. The header is enough!

Not to deny real friends too often are absent in need at times.

But remember,

"I didn't find time, I forgot, I was busy"

These are never the ways of apologies of a true friend for their absence.

Their ways are ;

" I will do whatever helps at this instance"

" I am sorry for being absent, but from now on, I'm here"

" I will ensure that this doesn't ever happen again"

" I give no excuse for being absent, I accept I was absent and I'm sorry for it"

Further, when I continued to read, there is also something that says, "Trusting everyone is as much a fault as trusting no one."

Some men have shrunk so far into dark corners that objects in the broad daylight seem quite large to them. I have been amazed to find that the way I think is somewhere written in some books.

From Letter 3, I take this lesson:

Before you jump into anything, be CLEAR. Making clear decisions is in your hands. Once you have made the decision, it's neither wrong nor right. Understand that wrong and right are perspectives influenced by those around you and your environment. There is nothing inherently wrong or right in the decision you take universally. The decision can be right or wrong, but if you have made up your mind to not look back and continue ahead, you will be able to deal with whatever comes your way.

To simplify it, it's like choosing to study for the next 10 years of my life. I know this decision is very difficult because I have to put aside important work and daily activities to focus on studying. However, I made the decision, and now that I have made it official to my own inner self, that I am starting to study today and my 10-year count starts from today, I am determined to never look back and regret. If I made the wrong decision, it's my fault. Accept it! And if it's my fault, I can't sit and cry, because we cry when we are helpless. When I make a mistake, it's in my hands whether to see it as a mistake or try to derive something positive from it. So did you see?

We aren't actually helpless, but we await someone/something else to help us out.

It's Time we take our own charge and be CLEAR

Seneca is trying to convey that there are two phases in every friendship: before and after. Before is when you were judging, when there was no friendship. This stage is the pure state of judging whether a person is for your friendship. Then comes the other half, which is committing to the person irrespective of what they are. That's how he succinctly emphasizes the importance of clarity in decisions. When you are indecisive, you become stagnant. You sit down, overwhelmed by a clutter of ideas in your mind, and you fail to take any action. It is always better to declutter your mind, make a decision, and walk that path. If something goes wrong, be prepared to face it rather than sitting and regretting the other path you could have taken.

Manisha Kushwaha
(BE -MECH)

BE-IT (2019-2023)
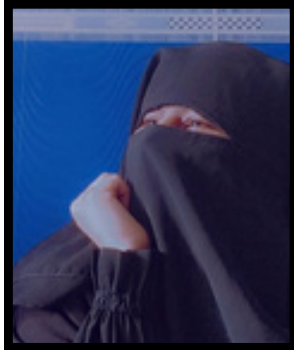
Back to August 2019 – our day one,
Packed our bags, wore good clothes and we were done.
We only had a little to lose,
A lot to look for, more to choose.

Many of us were hesitating for the first conversation,
But somehow ended up making friends in orientation.
Afraid of first engineering exams,
Still, singing in chorus, doing jams.

Semester exams left us confused,
Avahan'19 made us feel amused.
We showed teamwork for the first time,
We Cheered out loud, though our hands were covered with grime.

Back to the lectures for maintaining attendance,
But but Zeal'20 sparkled with its elegance.
Dressing up nicely, taking beautiful pictures,
Living our college life like a happy creature.

No longer willing to attend a single lecture,
Faceoff 8 brought another thrilling adventure.
We supported our department, shouted out loud,
Winning the first round took us to the 9th cloud.

And then, a sudden news broke out,
Lockdown was undoubtedly a topic of doubt.
Some started doing courses on Google, Coursera, and AWS,
While others installed Ludo, played Velorant and joined Among us.

Oh! The count of 64 increased to 72,
We got new companions out of the blue.
Summing up to eighty-one,
A fresh journey begun

What an era it was! Full of online games, online chats, and video calls,
But for some it was different – they buried their loved ones, their aunties and uncles.
Bored of sitting at home, we felt like a caged bird,
Some got used to it while others got injured.

Alas! We saw our college but in the colour green,
"Why did they change grey colour?" kept us wondering.
Nevermind, we had a lot more to be worried about,
Like appearing for exams without knowing what the lectures taught.

And then, we finally entered our final year,
With cheerful smiles and nostalgic tears.
Our friendship kept on getting stronger,
All of us had atleast one friend to rescue, our avenger.

From bunking class shamelessly,
To copying assignments seamlessly.
From appearing for placements,
To asking for reimbursements.
We managed everything beautifully!

Be it Avahan'23 or Zeal'23 or LitFest'23
From the cage we were locked in, we set ourselves free.
There maybe some regrets, some nasty scars,
But it's time to raise our bars!

No matter where we go, we'll definitely find peace,
These struggles will soon bring us ease.
The cool breeze of unity is yet not gone,
Let's take a vow to stay connected even after the dawn.

Insha Mulla
(BE -IT)

The Space You Need

Give yourself enough space.

Space to breathe in and be aware of your own breath. Space in your head to sort out all that runs in it all day long. All these thoughts are like unfinished tasks in my TO DO list, they clutter my mind and CAN make one feel like

1) You have alot of worthy ideas - they are not worthy. They are just unread and unclassified.
This develops fake ego and makes one feel they know ALOT.
True, its alot, but alot of WASTE
Remember, someone with alot of information or half information does more harm than someone who knows nothing.

2) Makes you feel disconnected from yourself -
You lose your emotional stability and try to draw power from everything and everyone around you. You complicate small tasks and act impulsively on them. You lose touch with your original self. The true self. You start looking at others.

You waste your time putting effort into FINDING yourself back. But that results in no use.
Did you just realise something while reading the above sentence?
You are FINDING yourself, doesn't that simply imply that you have lost yourself in the first place?
Yes, indeed it does.
But did you really loose yourself? Well, you have the same brain, body, and soul. So technically you didn't loose yourself.

You just happened to stop serving yourself as important and worthy of spending time with. Which resulted in a feeling of distantness from your simple, calm, and original self.

That's the self-talk we need to improve.
We could rather assert ourselves
" I feel I want to connect back to my inner self"
"I am missing the way I have been before"
It's okay to feel this way, this is just proof that we have been super involved in something big and fascinating which is taking up our time and energy.

What can you do?
Spend time in solitude.
Solitude means, being by your own self.
Cook food for yourself, read books to yourself, sing and dance for yourself (you can be even more graceful if you do these for someone you love dearly, GOD)
You can try writing relentlessly, Practicing speed typing, cleaning the house, washing clothes, watering plants, playing football, staring at the sky, observing the world around you, and much more.

LOGIC - when you spend time by yourself, you face the fears that otherwise you would have acted upon and found yourself in a troublesome situation.
Eg: you let your brain tell you that your loved ones are in danger, you get anxious and call them frequently or keep poking them, or worst even stop them from doing something that they love to do.

If you realize, you just did put your loved one in danger, danger of making them think that you are stealing their freedom and even rethink about your relationship. But when practicing solitude, you let these thoughts just come through your mind. You don't have anyone around you whom you can target now and pass on your anxiety to by restricting and debating. Thus you simply got to face it. Head on.
If not today, trust me while I write this, you have to face it someday.

Manisha Kushwaha
(BE - MECH)

Millions of Untold Stories

(The boy suddenly woke up in the middle of the night, he saw his kitten sitting on the window slit, staring at the moon intently. He left his bed and walked towards her)

Boy: What are you looking at?

Kitten: Observing this night, and that beautiful moonlight. This heavenly body (moon) is the warehouse of millions of untold stories.

Boy: You always seem enigmatic, why don't you say that straight?

Kitten: Because I know you won't get it straight.

Boy: Maybe you can try once?

Kitten: Okay tell me, what do you want to become in your life?

Boy: Astronaut! I'll become an astronaut one day and the first thing that I'll do is touch that gorgeous crescent.

Kitten: My little munchkin, this world is harsh, it is darker than this night and not every night has the same moon as a companion. There are times when it is supported by the full moon, there are times when it has a crescent, just like tonight and there are also times when the same night doesn't have a companion (moon). But was there a single day when you didn't see night? No, there wasn't.

Boy: I somewhat got you but I can't relate.

Kitten: Look dear, what I am trying to say is you need not worry about the end goal or future. The future will come if it is destined to but the present is what you've right now.

Boy (innocently): Ammmm, are you trying to say that I should enjoy this time without worrying about what will happen tomorrow?

Kitten: Now that's the reason why I love you ….. Yes.

Kitten: But remember one thing, never lose your innocence. Chase what you like but choose what gives you peace! Be happy but don't bother others. Enjoy to the fullest but don't forget your friends.

Boy (listening carefully and yawning at the same time): Okay, I'll keep that in mind kitty.

Kitten: Good boy, we'll discuss the rest tomorrow. Go and sleep now, you've to go to the kinder garden tomorrow, don't you?

Boy: Yes, going. Thank you again and good night!

(The boy returns to his bed)

Kitten: You heard our conversation, don't you?

Moon (smiling): Yes, another astronaut searching for its moon and another guide acting as a north star.

Kitten: What do you think will happen next?

Moon: Well, I'll wait until it happens. I hope this kiddo got what you said and he remembers when the time comes.

Kitten: Hopefully! I wish him a companion like you, moon. The people on earth might not see you on darker nights but I know, you never left the sky.
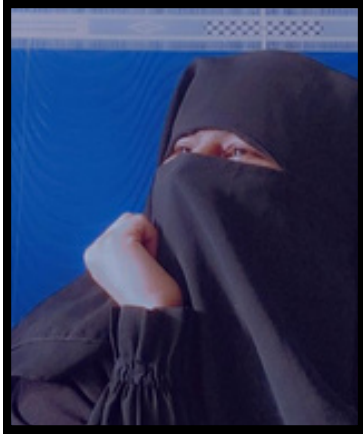
Moon: He has moonlight within him, he is enough for himself.

Moon (mysteriously): You were right, "I am the warehouse of millions of untold stories".

Anonymous

My People

Crazy, jolly, kind-hearted, irreplaceable and cute,
Some have loud voices and some like to stay mute.
We cry, we laugh, we hide, we fall, we grow together,
Irrespective of gender, almost everyone acts like a mother.

While some left the tribe, the rest chose to stay,
But the compassion between us refused to decay.
The memories we've made will forever remain,
Of the time that we've shared and the bonds that we've gained.

Day-long events, funny chats that stretched to dawn,
Planning and working hard before each new morn.
We've seen each other through our highs and lows,
As we continue forward, our friendship grows.

Started off not knowing how to connect,
This tribe shaped me with compassion and respect.
Lifted up with love from volunteer to chair,
Growth I could withstand with their tender care.

There's still much ahead for us left to explore,
More memories and moments for us all in store.
Seniors guided us with wisdom, patience and care,
While the juniors brought sparkling joy for all to share.

Spontaneous trips made our bonds stronger,
Distances apart only drew us closer.
Wherever life takes us when we leave this place,
We'll keep Literati's spirit held close in our hearts always.

We're a rainbow with bright, unique shades that astound,
Our differences make us "us", there's beauty abound.
These are my people, my other home, my unbreakable bones,
A family forged strong, though from different stones.

Insha Mulla
(A member of #LitFam)

2
हिंदी
विभाग

संपादकीय

हमारी राजभाषा हिंदी है। आज अगर हम हिंदुस्तानियों की कोई पहचान है तो वह हमारी भाषा की वजह से ही है। हिंदी भाषा ने हमें पूरी दुनिया में एक अलग ही पहचान दी है।

एक भाषा के रूप में हिंदी न सिर्फ भारत की पहचान है बल्कि यह हमारे जीवन मूल्यों, संस्कृति एवं संस्कारों की सच्ची संवाहक, संप्रेषक और परिचायक भी है। बहुत सरल, सहज और सुगम भाषा होने के साथ हिंदी विश्व की संभवतः सबसे वैज्ञानिक भाषा है जिसे दुनिया भर में समझने, बोलने और चाहने वाले लोग बहुत बड़ी संख्या में मौजूद हैं।

भारतीय विचार और संस्कृति का वाहक होने का श्रेय हिंदी को ही जाता है। आज संयुक्त राष्ट्र जैसी संस्थाओं में भी हिंदी की गूंज सुनाई देने लगी है।

हिंदी यहां एक भाषा ही नहीं परंतु सभी के विचारों का भावनाओं का सबकी अलग-अलग विचारों का एक समूह है |

हम कहीं प्रकार के विशेष दिन मनाते हैं और यही एक विशेष दिन जिसमें हम हिंदी का महत्व पूरे जग भर में प्रचलित करते हैं वह 14 सितंबर को मनाया जाता है|

हम भारतवासी है जिसका हमें पूर्ण रूप से गर्व है परंतु उसी राह वास के नाते हमें एक मूल रूप से भाषा जो आनी चाहिए वह एक हिंदी भाषा है|

भाषा वही जीवित रहती है जिसका प्रयोग जनता करती है। भारत में लोगों के बीच संवाद का सबसे बेहतर माध्यम हिन्दी है। इसलिए इसको एक-दूसरे में प्रचारित करना चाहिये।

सायली ठाकरे
Hindi Editor
TE - COMPS

मुस्कान

मुस्कान, दिल से निकलती है।
ओठो पर आती है।
जुबा से खनकती है।
छुपाये, फिरभी उभर आती है।

बगीयो में फूल, मुस्कुराते हैं!
निंद न आने पर, नाच-गाते है।
सुभह का उजाला शाम की रोशनी ।
सबके चेहरे पर मुस्कान ले आती'

मन कभी दुखी न होता,
यदि इस जीवन में कुछ कम न होता।
परंतु जो; कम में अच्छा कर जाए,
उसे मुस्कुराने की वजह मिल जाए।

चेहरे का सबसे प्यारा गहना है।
जिसे बाट, कभी न कोई थकता है।
एक छोटी मुस्कान, बड़ी बिमारी का इलाज़ बन जाए।
फिर क्यु न हम, हमेशा मुस्कुराए-
फिर क्यु न हम हमेशा मुस्कुराए ।

सयाली ठाकरे
(TE - COMPS)

हम कौन है ?

हम क्या हैं और क्या नहीं,
हम प्यार भी हैं, हम नफ़रत भी,
हम यार भी हैं, हम दुश्मन भी,
हम ख्वाब भी हैं, हम हकीकत भी,
हमारी नियत साफ और सीरत भी।
हम ख़फ़ा भी हैं, हम नज़दीक भी,
हम हैं और हम नहीं भी।

तो गुरुर किस बात का?
हमारे होने का कि ना होने का।
थोड़ा मुस्कुराया करो, अपनों से बतलाया करो।
अजनबियों को अपनाया करो।
प्यार, नफ़रत सब जताया करो।
थोड़ा जी लिया करो।
मरने को भी आजादी समज लिया करो।
भगवान पूछे कि क्या किये जिंदगी का,
तो थोड़ा शर्मा के कह दिया करो की ,
"जिंदगी साथ लेकर चले थे, अनुभव से बात करते
चले थे, पता तुम खुदा ये सवाल करेगा तो थोड़ी
जिंदगी जेब में भर ले आये, ये तौफा रखो और आप
भी थोड़ा जी लिया करो"

मयंक महाजन
(TE - IT)

कामयाबी का सफर

ये लम्हों का कोई जाल है,
या शाम ही ज़वाल है।
सोचो जरा तुम गौर से,
ये जिंदगी का सवाल है।

आज़माइश है ये सब्र की
तंज पे भी जमाल है,
ज़लज़ले भी हैं मगर
ये कयामत बेमिसाल है।

जिद्द है ये वजूद की
अँधेरो में मशाल है
कुर्बानी है ये नफ्स की
इस लौ का रंग लाल है।

क़िस्मत भी अब है चीख़ती
क्यों तुझको ये मलाल है,
ना होश है ना जोश है
यूं बे अदब सा हाल है।

एक आग सी सीने में है
नाकामी की क्या मजाल है,

मंजिल भी होगी कदमो में
मेरी चाहतों में कमाल है।

फराज़ अंसारी
(TE - COMPS)

आजभी

ये गम के रास्ते
तुम साथ ना मेरे फिर लगते क्यू पास मैं
ये मुझे एहसास है
कि सिर्फ मेरा खुदा ही तो मेरा खास है
एक नज़र है काफ़ी
ना कर मुझसे बात बस दिख जा तू आज भी
क्यू होती हैरानी
ताहिर ये मेरी तक़रीर क्यू आपकी
ना फ़िक्र है जात की
महरूम क्यू कर रही तू मुझको आज भी
ये बात है पुरानी
मेरी सच्ची मोहब्बत क्यू झूठी थी आपकी
ये तेरी आवाज़ थी
जो गूंज रही मेरे कानों में आज भी
बस इतनी सी बात थी
हर अल्फ़ाज़ मैं कैद है हमारे राज़ ही

चिंतन देसाई
(FE - EXTC)

मंज़िल

इस ज़िंदगी के सफ़र में हर कोई मुसाफ़िर है
किसी को मंज़िल तक पहुँचना है
तो किसी को अब-भी मंज़िल की खोज है

निकुंज कलसरिया
(TE - MECH)

वो पल दो पल का हमसफ़र

इस बेदर्द जिंदगी में वो हमें दिल दे गया,
उसका दिया हुआ दिल भी हमें दर्द दे गया ।
पहली दफ़ा किसी को अपने दिल से चाहा था,
ख़ुदा से ऊपर उस इंसान को माना था,
शायद इसी गुनाह की वो हमें सजा दे गया,
वो हमारे उगते सूरज का उजाला ले गया ।

सुहानी जिंदगी मैं ग़म तो बहुत दे गया,
पर मोहब्बत से मेरा भरोसा भी ले गया ।

जिंदगी के उन लम्हों में वो हमें सजा तो बहुत दे गया,
प्यार के सिढिया चढ़ाके,
वो हमें दोस्ती का बहाना दे गया ।
पता नहीं क्या कमी थी हमारे अंदर,
जो हमारा हमसफ़र कोई और ले गया ।

आपके पूछने से पहले ही बता देता हूँ
वो भले ही हमपे कई सितम कर गया,
पर जाते जाते वो ज़ख्मो के लिए मरहम दे गया,
इस आवारा शायर को वो कलम दे गया ।

बया नहीं कर सकता ये दर्द इसलिए लिख देता हूं,
अपनी कलाम के सहारे सबको ये सीख देता हूं की,
मेरे यार इन्हें समझना बड़ा मुश्किल है,
शायद इस मायाजाल में ऊपरवाले का हाथ भी
शामिल है ।

विनायक देवरे
(SE - CSE(DS))

तेरी यादों में

ये ख़ूबसूरत चाँद गवाह है!!
मेरीं वो हर रात का
जो मैंने गुज़ारी है
तेरी यादों में

निकुंज कलसरिया
(TE - MECH)

एक शायर का अफ़साना

हुज़ूर-ए-आला मेरी सुनले एक बार
यह तखाययुल की ज़िंदगी बचे है दिन चार
मयासर हू मैं यह दिल है बेक़रार
यह आतिश है मोहब्बत फिर भी करु तुमसे प्यार
मेह्फूस रखे है मैंने सारे असरार
यह ज़िन्दगी एक दायरा तू मेरा मर्कज़
हसास है तू काफी जानता मैं यह बात
मेरी सुखी जिंदगी तो बनके आये अबशार
फितूर तेरा जाना सर चढ़ गया है
बड़मस्त इश्क़ तेरा यह असर कर गया है
मुक़्क़दस अलफ़ाज़ यह हर दर्स एक बात के
महदूद हो गई है जिंदगी अब तेरे बाद में
कर दे रहम या देदे तू इनायत
नूर-ए-जहाँ तू मेरी लगती जैसी आयत
साफ़ साफ़ कहूँगा मैं तुझसे मेरी जान
कायम तू मेरी जिंदगी में जैसी एक रिवायत
सहर की वो आफ़ताब करु आफरीन
मौतज़ा है तू सिर्फ तुझपे है यकीन
सिफ़र लगती ज़िन्दगी अब तेरे बिना
अंत में मैं हो जाऊंगा तुझपे फ़ना

चिंतन देसाई
(FE - EXTC)

कृष्ण की दीवानी

तू कृष्ण की दीवानी,
और मैं दीवाना तेरा।
तू मीरा सी कृष्ण की पूजारण,
और मैं भोज राज सा प्रेम पूजारी तेरा।
तू जान लुटा कृष्ण की भक्ति में,
और मैं हर सांस पे नाम लिख दूं तेरा।
तू कृष्ण कृष्ण कृष्ण की नाम जपती रह,
मैं हमेशा साथ खड़ा रहूँगा तेरा।

आयुष झा
(TE - CSE (DS))

मैं कविताएँ लिखती हूँ

एहसासों को सरल शब्दों में बयान करती हूँ,
मैं कविताएँ लिखती हूँ।
कोहरे में भी रौशनी ढूंढ़ने की हिम्मत जताती हूँ,
मैं कविताएँ लिखती हूँ।
और कभी-कभी तो पिंजरों के पीछे कैद पंछियों की
आवाज बन जाती हूँ,
मैं कविताएँ लिखती हूँ।
जो आसानी से ना समझे, उसे भी तस्नीम करने की
कोशिश में लगी रहती हूँ,
मैं कविताएँ लिखती हूँ।

रिवायतों को नज़्मों में पेश करती हूँ,
मैं कविताएँ लिखती हूँ।
जजबातों को बड़े प्यार से अल्फ़ाज़ों में पिरोती हूँ
मैं कविताएँ लिखती हूँ।
वैसे तो हूँ कवयित्री मैं, मगर कभी-कभी खुद कविता
बन जाती हूँ,
हाँ! मैं कविताएँ लिखती हूँ।

एक साधारण कवयित्री

अनुभवों का दरीया

कही कहानियाँ सुनी,
कही कहानियाँ सुनाई,
तो कम्बखत कहीं खन्नियां हमने है यहां बनाई।

कहीं पे केटी का डर,
तोह कहीं पे बीटी का गद्दार,

किसी के लिए पहली इच्छा,
तोह किसी के लिए आखिरी रास्ता,
तू किसी के लिए खुद को खोजने का ज़रिया,
तो किसी के लिए ज़िम्मेदारियों को हल्का करने वाली
तू।

कहीं पे इवेंट्स के मजे,
तोह कहीं पे सबमिशन के सजे,
किसको बनाती तू,
तो किसी को खा जाती तू,

कितनो की पहली मुलाक़ात का कारण तू,
कितनो की आखिरी गुजारिश की ज़िम्मेदार तू,,
कितने सपने सजे हैं रे तुझ पर
कितने घर बसे हैं तेरे नाम की तकदीर पर,
तू उम्मीद है,
तू ज़रिया है,
तू तो अनोखे अनुभवो की दरिया है।

नाजाने क्यू तू यूं बदनाम है,
तेरे से बड़ा कोई शायद कोई ज्ञानवान है।

इसके लिए आज कहता हूं ऐ इंजीनियरिंग,
तुझसे बड़ा अनुभव भला कहा है !!!
भला कहा है !!!

आदित्य जोशी
(TE - CSE(DS))

इज़हार

रोज बातें होना जरूरी थोड़ी है,
इश्क बया करना जरूरी थोड़ी है,
कुछ बाते अनकहीं ही अच्छी लगती है,
जो अल्फाज दिल से दिल तक पहूँच जाए
उन्हें कहना जरूरी थोड़ी है...

दिशा पाटील
(FE - COMPS)

जीवन का मूल्य

फूल कभी दो बार नहीं खिलते,
जन्म कभी दो बार नहीं मिलते।
मिलने को तो हज़ार लोग मिलते हैं
लेकिन हज़ारों गलती माफ करने वाले
माँ बाप नहीं मिलते।

राजा शाहा
(SE - MECH)

सफ़र

खुद की एक छोटी दुनिया,
बस्ते में समेट के,
निकल पड़ते हैं, जनाब।

चाय, कड़क चाय की,
उस पुकार में,
खुद को खोजने,
निकल पड़ते हैं, जनाब।

मंजिल की ओर बढ़ते हुए,
उस छोटी सी खिड़की से,
भरा की दुनिया को,
निहारते हैं जनाब।

बीते दिन की तरह,
हर उस मुसाफ़िर से,
बातें करते हैं, जनाब।

किसी को हसाते,
तोह,
किसी की आँखों में,
खो जाते हैं जनाब।

ढलते सूरज की तरह,
वो भी निकल पड़ते हैं,
लेकिन हर उस आखिरी किरण की तरह,
कुछ सीख जाते हैं।

खैर, मंजिल पहुँचने पर,
समझ आता है,
की मंजिल से बेहद खूबसूरत,
था ये सफर।

इसलिए, कम्बख्त,
फिर उसी बस्ते में,
समेटे अपनी दुनिया,
निकल पड़ते हैं, जनाब।

आदित्य जोशी
(TE - CSE(DS))

3

मराठी विभाग

संपादकीय

महाराष्ट्राचे आराध्य दैवत श्री छत्रपती शिवाजी महाराजांनी जे हिंदवी स्वराज्य स्थापन केलेलं होतं ते कोणा एकट्याच्या जोरावर केलेलं नसून , ते त्यांनी संघटित केलेल्या हजारो मावळ्यांच्या साथीने शक्य झालेलं होतं हे आपण सर्व जाणतोच. ह्या उदाहरणाद्वारे आपल्याला एकतेचं महत्त्व पटलेलं असेलच.

"एकम्" म्हणजे "एकता". या वर्षीच्या आपल्या महाविद्यालयाच्या " विस्ता " मासिकाचं थीम आहे "एकम्". "आपण एकत्र का यावं ? " यासाठी एखादं कारण असावं लागतं. एखाद्या कारणाशिवाय जमलेली माणसं म्हणजे मेंढ्यांचा कळपचं जणू! आज आपल्या समोर हवामान बदलाचं, तापमान वाढीचं संकट उभ आहे. दिवसेंदिवस मानव आणि निसर्ग ह्या मधली फळी वाढत चालली आहे, मनुष्य आपल्या फायद्यासाठी या निसर्गाच्या नियमांचे उल्लंघन करत आहे. निसर्गाचे आपण सर्वच ऋणी लागतो. या निसर्गाचा समतोल राखण्यासाठी, आपल्या उज्ज्वल भविष्यासाठी आपल्याला एकत्र यावं लागेलच.

चला एकत्र येऊया आणि निसर्गासाठी लढूया !

लितराती समितीच्या माध्यमातून माझ्या माय मराठीला आणि इतर भारतीय भाषांना एक व्यासपीठ आपल्या महाविद्यालयात मिळाल्याचा मला आनंद आहे. मी लितराती समितीच्या सर्वांचे आभार व्यक्त करू इच्छितो, की त्यांच्या मेहनतीमुळे हे मासिक आपल्या सर्वांसमोर सादर झालेले आहे . ह्या लितराती समितीचा मला भाग होता आलं ह्याचा मला सार्थ अभिमान आहे.

धनल घनश्याम चौधरी
Marathi Editor
TE - MECH

मला सापडलेला 'मी'

भयावह रजनी सरता आली शुभ्र पहाट ,
कधी आनंदाने ,कधी धजावत केला पार् संकटांचा घाट.
तिमिराने माझ्यातल्या 'मी'ला हरवले,
तेजस्वी ज्योतीने अंतरातल्या गुणांना टिपले.
आत्मा विश्वासाने नव्या पर्वाचा दृढ संकल्प केला,
माझ्यातल्या मी ला निष्ठेचा मार्ग सापडला.

तेजश्री आनंद कारेकर
(FE - AI (DS))

आपण म्हणतो 'ती' शक्ती...

आपण म्हणतो 'ती' शक्ती...
पण ' तिला ' मात्र छळतो वेळोवेळी
'तिच्या' किती तरी इच्छा मारून,
'तिला' राहायला लावतो खाली मान घालून.

आपण म्हणतो 'ती' शक्ती...
पण 'तिचा' विचार कधी करतच नाही
'तिच्या' मनात काय आहे कधी विचारत नाही,
'तिच्या' मनाप्रमाणे कधी राहूच देत नाही.

आपण म्हणतो 'ती' शक्ती...
आणि 'तिला' समजतो आपलीच संपत्ती
'तिच्या' वर करून अत्याचार,
श्रेष्ठ मानतात स्वतःचे विचार.

आपण म्हणतो 'ती' शक्ती...
पण 'तिला' लाचार समजतो प्रत्येक वेळी
'ती' आणि 'तो' असा भेदभाव म्हणे आम्ही करत नाही,
'तिला' बोलून शक्ती , 'तिचा' सन्मान कधीच करत नाही.

आपण म्हणतो 'ती' शक्ती
पण आचरणात ते आणत नाही
'तिला' सदैव ठेऊन पाठीशी,
'तिलाच' समजतो चुकीची.

नियुक्ती पाटील
(SE - IT)

असेही एकदा व्हावे ....

असेही एकदा व्हावे ....
पक्षांसोबत उंच आकाशात उडावे,
नदी, डोंगर, सरोवरे सगळे काही पहावे ,
दुःख, खंत सगळ्यांना विसरुनी जावे ,
रोज रोज नाही पण असेही एकदा व्हावे ....
पावसाच्या सरी होऊन बरसावे,
फुला-पानांवर् हलकेसे तरंगावे,
ठरवून नाही तर अचानकच यावे,
रोज रोज नाही पण असेही एकदा व्हावे....
रात्रीच्या अंधारात तारे होऊन प्रकाशावे,
स्वतःसाठी नाही तर दुसऱ्यासाठी जगावे,
सुंदर आपली पृथ्वी आकाशातून ही पहावे,
रोज रोज नाही पण असेही एकदा व्हावे.....
निसर्ग खूप रमणिय आहे,
खरे सौंदर्य कळूनी घ्यावे,
यात मिसळून जाऊया आपण सारे,
रोज रोज नाही पण असेही एकदा व्हावे....

पुष्कर घैसास
(BE - MECH)

मी आणि इंद्रायणी

तुझ्या किनाऱ्यावर मला ,
मी जरा शांत वाटतो ,
इथंच की गं इंद्रायणी ,
मला माझा एकांत भेटतो .

तू येतेस की गं खळखळत ,
मी मात्र स्तब्ध असतो,
वेशात असलो माझ्या जरी ,
कुठंतरी मी मला शोधत असतो .

निखळ जगण्याचं मंत्र देतेस की तू ,
तरी मी तसाच उभा असतो ,
उत्तरे सारी तुझ्या हाती ,
मी प्रश्नांची रास चाळत असतो .

तरी ,
तुझा हा किनारा आणि हा एकांत,
मला जरा बरा वाटतो ,
तू करतेस मनाचं मंथन ,
तेव्हा माझ्यातला मी खरा वाटतो .

सौरभ पाटील
(SE - (CSE (DS))

प्रेमकविता

माझं आणि प्रेमकवितेचं ,
फारसं कधी जुळलं नाही ,
पण तिला पाहून माझी लेखणी चालते,
हे कधीच कसं मला कळलं नाही .

छे छे ,
प्रेमात चंद्रतारे तोडणाऱ्यांतला,
मी तरी मुळीच नाही ,
बाकी ती समोर असल्यावर,
चंद्रताऱ्यांची मला तशी गरजच नाही .

ही अक्षरांची-शब्दांची जुळवाजुळव ,
मला तेवढी रुचत नाही ,
कारण माझा कवितेचा अट्टाहास ,
तीला कधीच दिसत नाही ....

सौरभ पाटील
(SE - CSE(DS))

काळी आभाळाची नक्षी

काळी आभाळाची नक्षी
खोड काढी अवकाळ
मला हवीशी वाटते
एक एकटी संध्याकाळ

एक एकटी संध्याकाळ
वर कोसळत्या सरी
तुझ्या माझ्या विरहाचं
दुःख आभाळाला वरी

दुःख आभाळाला वरी
म्हणोनी का अंधकार
सये बाजूला तू कर
घेऊन उजेडाचे सार

घेऊन उजेडाचे सार
कर प्रेमाची तेलवण
तुझ्यावीणा माझी सखे
बघ किती झाली वणवण

किती झाली वणवण
जणू वाट चुकियेला पक्षी
तुझ्या काजळात गेला
तीच काळी आभाळाची नक्षी

सौरभ पाटील
(SE - CSE(DS))

सखये

किती न्याहाळू मी तुजला सखये?
किती सावरु मी मजला सखये?

असा कसा गुंतलो ग डोळ्यात तुझ्या मी ?
किती किती गं घायाळ ह्या नजरा सखये!

असा कसा आपसूक गाल लालावतो हल्ली?
किती किती जाहलो बघ मी लाजरा सखये !

असा कसा रेखू शब्दात तुला मी ?
तुझ्यापुढे तर फिक्या माझ्या गझला सखये.
(किती न्याहाळू मी तुझला सखये?
किती सावरु मी मझला सखये?)

सौरभ पाटील
(SE - CSE(DS))

बापलेक

तू पापणीआड होता
डोळ्यांची गंगामाई होई
तुझ्यासाठी तेव्हा बाळा
ह्या बापाची आई होई

ह्या तळहातावर माझ्या
तुच जुई जाई होई
चिंतेत जागी असतो तेव्हा
तुझी निरागसता अंगाई होई

आता खरी चिंता पडते
उद्या तुझी लगीनघाई होईल
सोबत असेल आठवण तरी
बाप नावाचा मांडव खाली होईल

सौरभ पाटील
(SE - CSE(DS))

फुल

आयुष्य जरी एक दिवसाचे
काम त्याचे लाख मोलाचे
सुख दुःखात असतो सोबती
फुलांची ही थोर महती
घेवू शिकवण आपण फुलांकडून
सुख दुःख वाटू सर्व मिळून
आयुष्यात असेल आपल्याही सुगंध
दृढ होतील ऋणानुबंध

राजा शाहा
(SE - MECH)

कातरवेळ

त्या एका कातरवेळी
सखे असा कसा मी फसलो ?
तू हसतेस किती सुंदर !
मी इथेच हरपून बसलो

त्या एका कातरवेळी
जाहला किती बघ घोळ
मी चाळत बसलो शब्द
पण तू तरंग लाघवी ओळ

त्या एका कातरवेळी
किती आक्रित घडले बघ !
तू नव्हतीस तिथे तरीही
बघ भरले माझे जग

सौरभ पाटील
(SE - CSE(DS))

रुसू नकोस रे पाखरा ...

रुसू नकोस रे पाखरा आकाश अजून संपले नाही,
झेप नवी घे तू आकाशी कारण आकाश अजून खुंटले
नाही;

चिव चिव करती पिल्ले तुझी साद तुला घालत आहेत,
कधी आणशील चारा तू वाट याची पाहत आहेत;

पाखरा रे पाखरा तू चारा शोधशील तरी कसा,
झाडे मरण पावत पाहता तुला रडतात ढसा-ढसा;

पाखरा रे पाखरा तू जाशील तरी कुठे,
माणसानं हिरावले तुझे सुखाचे आडोसे;

धका धकीच्या आयुष्यात आम्ही जुंपून गेलो सारे,
आठवत नाहीत आता आम्हां किलबिलणारी पाखरे;

रुसू नकोस रे पाखरा परत ये तुझ्या घरट्यापाशी,
इवलीशी पिल्ले तुझी वाट पाहत आहेत उपाशी;

पाखरा रे पाखरा तुला, रुसायचा हक्क आहे
आमच्यावर,
पण परत ये तू घरट्यात आता सांजेच्या प्रहरावर;

रुसू नकोस रे पाखरा आकाश अजून संपले नाही,
झेप नवीन पुन्हा उद्या घे तू कारण;
आकाश अजून खुंटले नाही.

चिन्मय साटम
(SE - AI&DS)

प्रिय बाबा

या समाजात आई विषयी फार बोललं जात पण वडिलांविषयी कोणीही बोलतं नाही, कारण या समाजानेच वडिलांचे मारझोड करणारा, व्यसनी, रागीट, तापट असं चित्र रेखाटलं आहे. समाजात एक दोन टक्के असे वडिल असतील पण चांगल्या प्रेमळ वडिलांबद्दल काय?

रोजच्या जेवणाची सोय करणारी आई आमच्या लक्षात राहते, पण आयुष्याच्या शिदोरीची सोय करणारा 'बाप 'आम्ही सहज विसरून जातो. देवकी यशोदेचे कौतुक अवश्य करा पण पुरातून कृष्णाला डोक्यावर घेऊन जाणार वसुदेव सुद्धा लक्षात ठेवावा.

वडिल आजारी पडले तरी लगेच दवाखान्यात जात नाहीत, कारण ते आजाराला घाबरत नाहीत पण डॉक्टर आराम करायला सांगतील याची त्यांना भिती वाटते. कारण मुलांच शिक्षण, मुलीचं लग्न बाकी असतं आणि घरात उत्पन्नचं दुसरं साधन नसतं.

"मुलाच्या नोकरीसाठी साहेबांसमोर लाचार होणारे वडिल मुलीच्या स्थळासाठी उंबरठे झिजवणारे वडिल घरच्या सुखासाठी स्वतःच्या व्यथा, दुःख लपवणारे वडिल खरंच, किती ग्रेट असतात ना!"

तनिष्का जयेश दास
(SE - COMPS)

युद्ध

युद्ध म्हटले, तर आपल्या डोळ्यांसमोर येते रणांगण, शस्त्रास्त्र आणि सैनिकं. कधी युद्ध आपल्याला विजय देऊन जातं, तर कधी पराजय. तुळशीचे पावित्र्य असणारे श्रीकृष्ण कोणत्याही प्रकारच्या युद्धाचे मुहताज नव्हते. हस्तिनापूरच्या रणांगणातील धर्मयुद्ध हे ते सुदर्शन चक्राच्या एकाच प्रहारात आटपू शकले असते, परंतु 'धर्मो जयति नाधर्मः' हा संदेश त्यांना या धर्मयुद्धाद्वारे सृष्टीला द्यायचा होता.

कैलाशापरी सामर्थ्य असणाऱ्या छत्रपती शिवाजी महाराजांनी दुष्ट अफजलखानाखचा वध केला. त्यांनी सोळाव्या वर्षी घेतलेली स्वराज्य स्थापनेची शपथ पूर्ण करून दाखविली. तसेच, संभाजीराजे हे त्यांचे सुपुत्र, 'बाप शेर तर मुलगा सववाशेर' अशी त्यांची ख्याती, परंतु तरी देखिल औरंगजेबाच्या कुनितीमुळे त्यांच्या देहाचे शेकडो तुकडे झाले.

वैकुंठाची निर्मळता असणाऱ्या बृजवासी, श्रीकृष्णांच्या प्रेमात पडून राधा, मीरा, गोपिकांनी स्वतःशीच युद्ध केले. एका चक्रवर्ती राजाची मुलगी, एका चक्रवर्ती राजाची पत्नी, एका चक्रवर्ती राजाची पुत्रवधू... सीता, तरीदेखिल शेवटी तिलासुद्धा द्यावी लागली अग्निपरिक्षा.

 भारतवर्षातील हे युद्धं, काही रणांगणातील, तर काही मनाच्या अथांग सागरातील. कधी आशा आहे, तर कधी निराशा, तर काय म्हणता येईल या युद्ध शब्दाची परिभाषा

कुणाल विकास पाटील
(SE - IT)

प्रवास

चला शाळा सुटली, आता कॉलेज सुरू झालं,
बघता बघता, सगळं जगच बदललं.
दप्तराचं ओझं अचानक कमी झालं,
दहा पुस्तकांच्या ऐवजी... आता एकच पुस्तक रहायला लागलं.

आता वर्गात कमी... आणि कँटीनमध्ये जास्त असतो,
त्या छोट्याशा कट्ट्यावर, एक वेगळीच दुनियादारी रमवतो.
आता काठावर पास होण्यातच आनंद असतो,
पहिली रँक आणण्याचा हव्यास कुणालाच नसतो.

त्या मागच्या बाकावरती आम्ही संपूर्ण विश्व रमवतो,
निळी वाली तुझी, आणि पिवळी वाली माझी अशा जोड्या जुळवतो.
कॉलेजलाईफ जितकं सोपं, तितकंच नागमोडी असतं
प्रत्येक वळणावरती सांभाळून चालायचं असतं

स्वप्न होतं की पडद्यावरची दुनियादारी... आयुष्यात आकारावी,
छोटीशी ग्रुप वाली मैत्री मला ही मिळावी,
हे माझं स्वप्न, कॉलेजला साकारलं,
माझ्या सरळ आयुष्याला, एक सुंदर वळण लागलं.

चुकीचं पाऊल पडण्यास कधी वेळ लागत नाही,
पाऊल जर पडलचं, तर मागे वळून बघता येत नाही.
चांगले मित्र...आणि शिक्षकांची साथ नेहमीच सोबत असावी,
आयुष्याच्या या नवीन टप्प्यावरती समजदारीची ही जाणीव असावी.

शाळा बालपण देते, तर कॉलेज तारुण्य देतं,
शाळा वाढवते, तर कॉलेज जगणं शिकवतं.
ही वेळ म्हणजे असते एक गोड स्वप्न, काही इच्छा पूर्ण... तर काही अपूर्ण,
प्रत्येक स्वप्न कधी ना कधी संपतचं, वेळ आली की, आयुष्य आपोआपच बदलतं.

ही वेळ कधी सरून जाईल कळणारही नाही,
कॉलेजच्या कट्ट्याच्या जागी... ऑफिसची खुर्ची असेल, समजणारही नाही,
म्हणूनच म्हणतो फक्त एकदा, इतकं जमवून पहा...
पुस्तकाच्या जगासोबत ह्या सुंदर दुनियादारीतही रमून पहा.

कुणाल विकास पाटील
(SE - IT)

मुंबईच्या उपनगरीय रेल्वे सेवा

"चर्चगेट करिता बारा डब्यांची जलद लोकल..." अशी घोषणा कानावर पडताच फलाटावरील उभ्या प्रत्येक मुंबईकराचं लक्ष्य वेधले जाते. गाडी येताच लगबग होते आणि सर्व लोक प्रयत्नांची पराकाष्ठा लावत रेल्वेच्या डब्यात चढतात आणि प्रवास सुरु होतो. जेमतेम असा होतो मुंबईकरांचा रोजचा प्रवास. पण तुम्हाला माहित आहे का आपल्या लाडक्या "मुंबईच्या लोकलचा" प्रवास कसा सुरू झाला. नाही! चला तर मग जाणून घेऊयात मग आपला पहिला भाग.

१६ एप्रिल १८५३ वेळ दुपारी सव्वा तीन ते साडे तीन दरम्यानची. बोरीबंदर स्थानक अगदी फुला-हारांनी सजवलेलं होतं. ब्रिटिश ईस्ट इंडिया कंपनीचे संचालक, नाना शंकरशेठ, आणि काही इतर मंडळी समवेत सोहळ्यासाठी उपस्थित होते. सोहळा! ह्यात सोहळा कसला फक्त एक आगगाडी तर चालू होणार आहे. पण हा क्षण काही सोहळ्यापेक्षा कमी न्हवता बरं
भारतातील न्हवे तर आशिया खंडातील पहिली वहिली अशी पॅसेंजर रेल वाहिनीचा शुभारंभ होणार होता. दुपारचे तीन पस्तीस झाले

आणि आगगाडी चे बिगुल वाजले आणि अशी पहिली आगगाडी बोरीबंदर (जे आजचे छत्रपती शिवाजी महाराज टर्मिनस आहे) ते ठाणे अशी रवाना झाली. सुमारे सव्वा तासात गाडी ठाण्याला पोहोचली गाडी ठाण्याला पोहोचताच आश्चर्याची आणि भीतीची उसळीच आली जणू. काही लोक तर धूर ओकणारा राक्षस म्हणत रेल्वे वर दगड मारू लागतील तर काहींनी तर चक्क इंग्रज लोकांची भुताटकी म्हणत मोकळे झाले. मग स्वतः नाना शंकरशेठ गाडीतून उतरून लोकांना धीर देत ह्या अभिनव प्रयोगाची सांगड घालून दिली.

पुढे १८५४ ला ह्या मार्गिकेचा विस्तार करून कल्याण पर्यंत वाढवण्यात आली आणि पुढे वर्षभरातच ही मार्गिका उत्तर दिशेला असणारे वाशिंद आणि दक्षिणेला असणारे पळसधरी स्थानाकापर्यंत विस्तारीत केले आणि अश्या प्रकारे कल्याण स्थानक हे पाहिलं "जंक्शन" ठरलं.

१८७८ पर्यंत ग्रेट इंडियन पेनिनसुला रेल्वे म्हणजे आताचं मध्य रेल्वे आणि १८५५ ला बॉम्बे बरोडा आणि मध्य रेल्वे जे पुढे जाऊन १९५१ ला पश्चिम रेल्वे आणि सौराष्ट्र रेल्वे या मध्ये दुभंगण्यात आले.

१८७८ तोवर पाहता पाहता दादर, वांद्रे, महालक्ष्मी, करी रोड, दिवा, घाटकोपर असे अनेक स्थानक उभारण्यात आले. त्यावेळी स्थानक वाढवण्याचा मूळ हेतू म्हणजे व्यापारात सुलभता आणणे आणि वेळ वाचवणे पण आगगाडीच्या वेगात भर टाकण्यासाठी विद्युतीकरण आणि सिग्नल यंत्रणा स्थापित करणं गरजेचं होतं. १८७८ ला बोरीबंदर स्थानकाची पुनर्बांधणी होऊ लागली आणि त्याचे

बोरीबंदर ते ठाणे दरम्यान धावलेली पहिली आगगाडी

नामांतर करून व्हिक्टोरिया टर्मिनस (व्ही. टी.) असे करण्यात आले. तोवर (व्ही. टी.) ते कल्याण मध्ये चौपदरीकरण देखील झाले.

१९२० ला विद्युतीकरणाचे काम सुरू झाले आणि आता त्यावर कार्यरत व्हायला इलेक्ट्रिकल मल्टीपल युनिट (ई. एम. यु.) दाखल व्हायला लागल्या.

३ फेब्रुवारी १९२५ ला (व्ही. टी.) ते कुर्ला अशी पहिली विद्युत (ई. एम. यु) लोकल सेवेत आली. हार्बर लाईन विद्युत लोकल सेवा देणारी पहिली मार्गिका ठरली. १५०० व्होल्टेज आणि डायरेक्ट करंट (डी. सी.) ट्रॅक्षण वर ह्या गाड्या धावायच्या ६ डब्यांची गाडी आता प्रवाश्यांच्या पसंतीस पडू लागली होती. १९२८ पर्यंत कल्याण पर्यंत विद्युतीकरणाचे काम पार पाडण्यात आले. १९५० ला परत कुर्ला ते मानखुर्द असा पुढील टप्पा पूर्ण करण्यात आला पण विद्युतीकर्नाआभावी ह्या मार्गावर आगगाड्या चालविण्यात आल्या.

१९५२ पर्यंत ह्या मार्गावर देखील विद्युत सेवा सुरू करण्यात आली. त्या नंतर खुप वर्ष पश्चिम, मध्य आणि हार्बर मार्गावर विशेष असे बदल झाले नाही.

काही तात्पुरते बदल काही प्रमाणात नक्कीच झाले असावेत. १९९० हा नवी मुंबई चा उगम होता मानखुर्द ते वाशी असा १.८ की.मी लांबी चा रेल्वे पूल बांधण्यात आला आणि या पुढे मग सी.एस.टी ते वाशी आणि सी.एस.टी ते पनवेल.

श्या ९ डब्यांच्या लोकल सेवा सुरू झाल्या. ज्याने करून दोन भूखंड देखील एकत्र आले आणि दळण-वळणाच्या दृष्ट्या बघता मुंबई आणि रायगड जिल्हा चांगल्या प्रकारे एकत्र जोडला गेला. दरम्यान बॉम्बे बरोडा आणि मध्य रेल्वे इंडिया आताचे (पश्चिम रेल्वे) तर्फे १२ एप्रिल १८६७ ला पहिली आगगाडी सुरू झाली जी बॅकबे ते विरार अशी धावली. सुरुवातीला काही मोजकेच अशी स्थानके होती ज्यात प्रामुख्याने निला (नाला सोपारा), बॅसेन (वसई), पंजू, बेरेवली (बोरिवली), पहाडी (गोरेगाव), दादूरे (दादर), गिरगाव (ग्रांट रोड). ह्या पुढे १८७० ला बॅकबे नंतर एक स्थानक अजून बनविण्यात आले ज्याचे नाव चर्चगेट ठेवण्यात आले आणि त्या काळात कुलाब्याला बंदरे होती. ब्रिटिश सरकार ने व्यापार वृद्धी साठी आणि कापसाच्या माल वाहकी साठी १८७३ ला कुलाबा स्थानकाची उभारणी केली. ५ जानेवारी १९२८ ला म्हणजेच हार्बर मार्गिकेच्या तब्बल ३ वर्ष नंतर पहिली विद्युत प्रवाहित लोकल कुलाबा ते बोरिवली दरम्यान धावली.

१प९२९ साली बॅकबे वसाहतीचे काम काढण्यात आलं ज्यात जागेच्या अडचणी मूळे साल १९३० ला कुलाबा स्थानकाला कायमस्वरूपी टाळे लावण्यात आले. पुढे चर्चगेट स्थानक पश्चिम रेल्वेचे दक्षिणे कडून वसलेलं पाहिले स्थानक बनले.

१९६१ साली ९ डब्यांच्या इलेक्ट्रिकल मल्टीपल युनिट (ई. एम. यु.) सेवा सुरू झाल्या त्या पुढे वाढत्या लोकसंख्येचा विचार करून साल १९८६ साली १२ डब्यांच्या सेवा सुरू झाल्या.

तपकिरी आणि पिवळी अशी रंग संगत असलेली सोबती आता मुंबईकरांचा अविभाज्य असा भाग बनली. आधुनिक तंत्रज्ञानाचा वापर करता पश्चिम आणि मध्य रेल्वेने सर्व लोकल गाड्या (डी.सी.) ते (ए.सी) म्हणजे डायरेक्ट करंट ते अल्टरनेट करंट वर परिवर्तित करण्याचा निर्णय घेतला. त्या दरम्यान बऱ्याचदा वेग वेगळ्या रंग संगतीत जसे निळी-पिवळी, लाल-चंदेरी रंगाच्या गाड्यांचा समावेश झाला. (ए.सी) गाड्याचे मुख्य बांधकाम हे जेसोप आणि भारत हेवी इलेक्ट्रॉनिक लिमिटेड ह्या कंपन्या करायच्या.

२००७ साली सेमेन्स कंपनीच्या शुद्ध (ए.सी.) अल्टरनेट करंटच्या गाड्या पश्चिम रेल्वेच्या ताफ्यात आल्या. स्टेनलेस स्टील चे मजबूत बांधकाम, २५,००० व्होल्ट्स ने सज्ज आणि सुधारित वेगमर्यादा असलेली गाडी प्रवाश्यांच्या उपयोगीस आली.

२०१५ ला बोंबारडीएर कंपनीची "बोंबारडीएर" आणि (आय.सी.एफ.) "मेधा" ह्या गाड्यांची मालिका सुरू झाली. अलीकडे हार्बर मार्गवर सगळ्या कारभरच गळून पडला मध्य रेल्वे प्रशासनच दुर्लक्ष आणि वेळो वेळी नवे बदल न घडवून आणणे ज्याचा परिणाम हार्बर मार्गवर सर्वात उशीरा (डी.सी.) ते (ए.सी.) परिवर्तन झाले.

१० एप्रिल २०१६ हा प्रत्येक मुंबईकरांच्या आणि माझ्या सारख्या रेल्वे रसिक माणसासाठी अतिशय दुःखद दिवस होता ह्या दिवशी सकाळी ११ वाजुन ३० मिनिटांनी कुल्याहून सी.एस.एम.टी कडे "शेवटची" डी.सी) लोकल रवाना झाली आणि १२ वाजून १५ मिनिटांनी

सी.एस.एम.टी. ला पोहोचताच इतिहासात जमा झाली. ह्या शेवटच्या प्रवासाची तिकीट तब्बल १०,००० रुपये इतकी होती. ४ सप्टेंबर २०१६ ला सर्व ९ डब्यांच्या उपनगरीय गाड्या १२ डब्यांनी परिवर्तित केल्या. वाढती लोकसंख्या लक्षात घेता २००९ साली पश्चिम रेल्वे वर १५ डब्यांची पहिली सेमेन्स (डी.सी.) ते (ए.सी) प्रवाहित लोकल धावली. २०१२ अखेर येईस सर्व (ए.सी) माध्यमांच काम पूर्णत्वास आले आणि सर्व गाड्या आजच्या लोकल सारख्या (ए.सी) लोकल झाल्या.

दरम्यान रेल्वे महामंडळातर्फे किती तरी नवीन सेवा सुरू करण्यात आल्या
जसे
· २००४ साली ठाणे - वाशी - पनवेल,
· २०१३ साली विरार- डहाणू,
· २५ डिसेंबर २०१७ साली पश्चिम रेल्वेवर पहिली वातानुकूलित लोकल.

खरंच! किती रूपात आपण आपल्या लोकल ला पाहिलंय.

सदर उपस्थित मार्गिका
पश्चिम रेल्वे, मध्य रेल्वे, हार्बर लाईन, ट्रान्सहार्बर

(भेल) कंपनीने उत्पादन केलेली पश्चिम रेल्वे मार्गावरील पहिली वातानुकूलित लोकल

लाईन, वसई-दिवा-पनवेल मेमु आणि आता २०१८ साली नेरूळ / सी.बी.डी. बेलापूर - उरण रेल्वे मार्गिका सुरू झाली जिचं पहिल्या टप्प्यात नेरूळ/ सी.बी.डी. बेलापूर ते खारकोपर पर्यंतच लोकार्पण करण्यात आलं.

आज मुंबई लोकल च्या उपनगरीय सेवेला १७० वर्ष पूर्ण झाली खरंच खूप कमाली चा टप्पा आहे. ह्या दरम्यान अनेक चांगले वाईट दिवस मुंबईच्या लोकलने आणि मुंबईकरांनी पाहिले. चित्रपटात एखादा अॅक्शन सीन असुदेत किंवा २६ जुलै २००५ चा महापूर असुदेत मुंबईची लोकल अगदी भक्कम स्थितित उभी ठाकत राहिली. आशा आहे ह्या पुढे देखील मुंबईकरांच प्रेम आपल्या लाडक्या लोकल ला मिळत राहील.

आशा आहे तुम्हाला हा लेख नक्कीच आवडला असेल. तोपर्यंत पुन्हा भेटू पुढच्या वर्षी ह्या मालिकेचा पुढचा भाग घेऊन "गोष्ट मुंबईची भाग २"
धन्यवाद.

चिन्मय साटम
(SE - AI&DS)

६० व्या वर्षाच्या जन्मदिनानिमित्त !!

आज वर्षामागून वर्ष ६० संपली
तरीही आठवणींच्या गाठी काही
सुटत नाही
वारंवार आपल्या माणसांशी
सुख दुःख बोलल्याशिवाय
मनावरचं ओझंच
कमी काही होत नाही
माझा २०-६० वर्षांचा जीवन प्रवास
कसा झाला, कसा गेला
ते मला कळलंच नाही
बालपण गेलं, तरुणपण गेलं
मध्यम वय पण गेलं
म्हातारपण कधी आलं
ते मला कळलंच नाही
काही लोक मला म्हणतात
तो विक्षिप्त आहे
तो बेपर्वा आहे
तो स्वार्थी आहे
सत्य काय ते मला कळलंच नाही
अगोदर आई-बाबांचं चालायचं
नंतर बायकोचं चालायचं
आता मुलाबाळांचं चालतंय
माझं कधी चालायचं
ते मला कळलंच नाही

केस गळले, चष्मा लागला
गाल लटकले
रूप कधी बदललं
ते मला कळलंच नाही
प्रियजनांनी प्रेम दिलं
प्रियजनांनी दुःखही दिलं
नंतर घरातील घरपण हरवलं
विधात्याने असं का केलं
ते मला कळलंच नाही
काल परवा पर्यंत मित्रांसोबत
खेळायचो,बसायचो,खायचो,प्यायचो
नंतर जेष्ठ नागरिकांच्या पंगतीत कधी आलो
ते मला कळलंच नाही
काळ बदलला मी बदललो
मित्र सुद्धा बदलले
आता काही राहिले किती गेले
ते मला कळलंच नाही
आता हृदय म्हणते मी तरुण आहे
वय म्हणते तु थोडं धीराने घे
मन सांगते तु थोडं पथ्यपाणी सांभाळ
पण औषधावर मी नित्य कधी आलो
ते मला कळलंच नाही
हे देवा हे परमेश्वरा
सर्वांना सुख दे, समृद्धी दे
आरोग्याचं सर्वांना वरदान दे
मला मात्र त्यांच्या आरोग्याचा
कायम शुभ संदेश दे
आणि हो कधीच विसरू नका
मनापासून जगा, पुन्हा असं म्हणू नका
मला काही कळलंच नाही !

अशोक वर्तक
(IT DEPARTMENT)
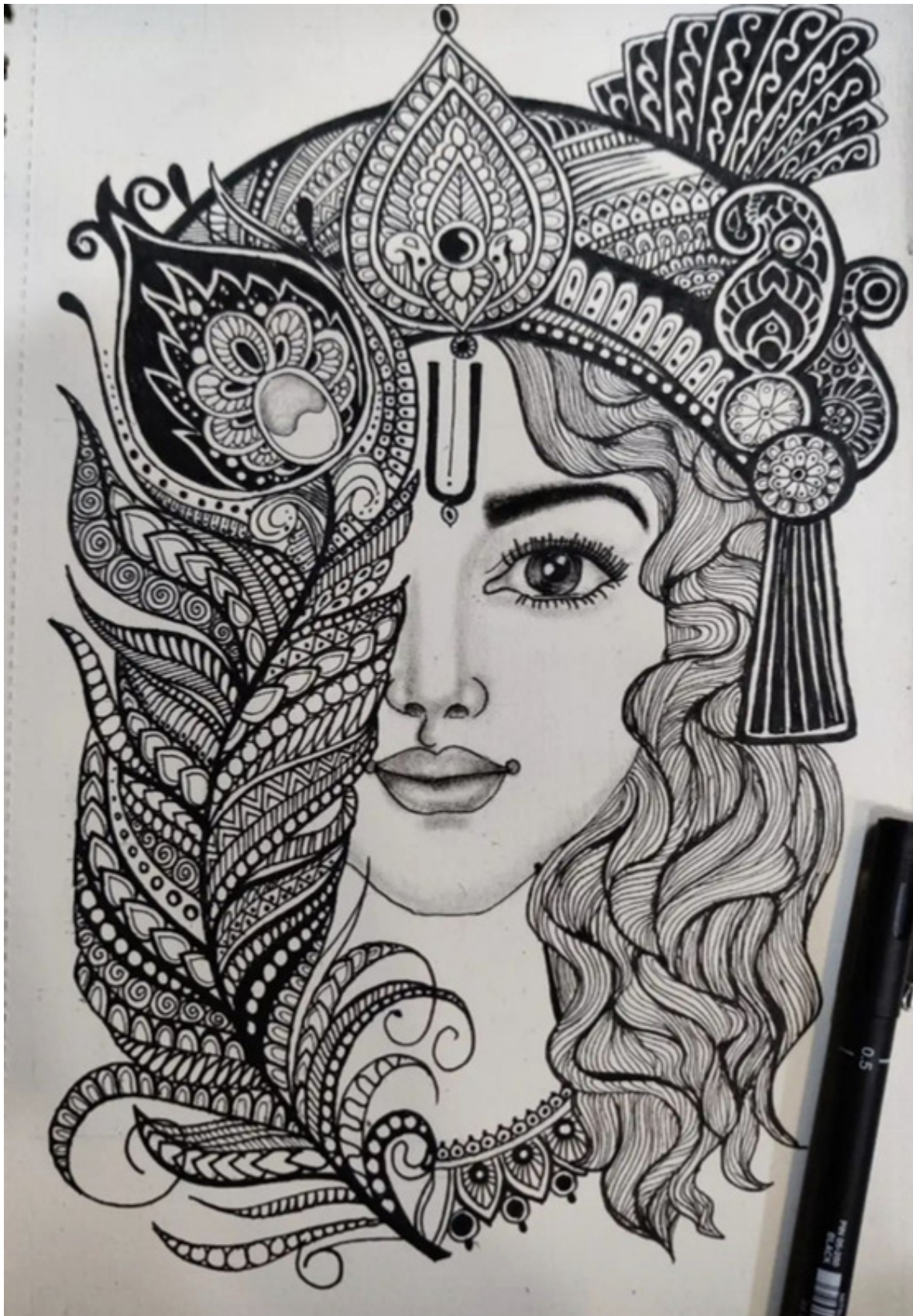
Aditi Rathod
(BE - MECH)

4

Report Section

DEPARTEMENT OF MECHANICAL ENGINEERING

It gives me immense pleasure and honor to present the annual report of Department of Mechanical Engineering for the academic year 2022-23. Departmental achievements and activities are summarised below:

Faculty Achievements:

1. Dr. Uday Aswalekar was the Convenor of ISTE-approved FDP on "Reforms & Innovation in Examination System" and "Industry 4.0 Paradigm shift in Technology".
2. Dr. Uday Aswalekar was the Session chair for the International Conference organized by DJ Sangvi COE.
3. Dr. Ashish Chaudhari was an Expert speaker at STTP on Research Potential in the field of solar energy at SFIT Mumbai.

Industrial Consultancy:

1. Dr. Ashish Chaudhari and Mr. Vinay Patel did consultancy for playground equipment for New Mumbai Municipal Corporation by M/s. Fun Play Systems, Kaman.
2. Ms. Madhumita Dutta did consultancy for M/S Venus Corporation.
3. Mr. Swapnil Mane and Mr. Vishwas Palve did Energy Audit at Bhandara Ordnance Factory, Agarwal Sponge, Faze3 Auto Fab Dadra, ARS Energy Solution Ltd.

Paper Publications/Conference attended:

- Dr. Uday Aswalekar, Mr. Ganesh Wahile, " CFD Analysis of Absorber Tube Using Phase Change Materials", Materials Today Proceeding (Scopus), Elsevier, December 2022.
- Dr. Ashish Chaudhari, Mr. Vinay Patel, Dr. Uday Aswalekar "Compressed Biogas Fuel Performance Enhancement Under Variable Compression Ratio Accompanied with Variable Ignition Location Spark Ignition Engine", Recent Trends in Thermal and Fluid Sciences, Lecture Notes in Mechanical Engineering SPRINGER
- Dr. Ashish Chaudhari, Mr. Vinay Patel, "Evacuated Tube Solar Collector Performance with Combined Effect of Triple Integrated Helix and Thermal Energy Storage", Recent Trends in Thermal and Fluid Sciences, Lecture Notes in Mechanical Engineering SPRINGER.
- Dr. Ashish Chaudhari, Mr. Vinay Patel, "Performance Study of Titanium di-oxide Nanomaterial based Perovskite Solar Cell and comparison with organic Dye Sensitized Solar cell", International Conference on Innovations in Clean Energy Technology (ICET-2023), MANIT Bhopal, 8th -10th April 2023.
- Dr. Ashish Chaudhari, "Design and development of a system for enhancing the life of WEDM filter", International Conference in materials, manufacturing, and automation (AMMA-2023), Amrita University, Chennai, 7th -8th April 2023.
- Mr. Dipak Choudhari, "Performance, combustion & Emission analysis of rubber seed extract & Palm oil as biodiesels", Third international conference on intelligent robotics, mechatronics, and automation system 2023, VIT Vellore, 5th May 2023.
- Ms. Madhumita Dutta, "Design & Analysis of a drone for reforestation", International Conference on Adv materials, 7th -8th April 2023.
- Mr. Swapnil Mane, "Experimental investigation of different diameter solar evacuated tube collectors", EPPM Journal, Scopus, May 2023.
- Mr. Sanjay Lohar, "An Enhancement of Machine Maintenance strategy through IoT to Improve Productivity for Indian SMEs" and "Application of Augmented Reality for Engineering Graphics", (IRMAS 2023), VIT, Chennai, May 2023.

- Ms. Priti Vairagi, "Segregation of plastic bottle using AI" and "Automatic sorting and packaging of moulded parts", National Conference on advances in material and processes for sustainable application 2023, Gharda Institute of Technology, March 2023.

- Mr. Kamlesh Bachkar, "Real-time monitoring & prescriptive maintenance of refrigeration system using machine learning", Researches and Evolutionary Challenges (ICMech-REC) NIT Warangal, Jun 2023.

- Mr. Kamlesh Bachkar, "Performance analysis of air conditioning system utilizing condensate", International conference on multidisciplinary approach in technology and social development (icmatsd-2023), May 2023.

- Mr. Mukund Kavekar, "Design and Fabrication of Fire Fighting Robot", International Journal of Scientific Research in Engineering and Management (IJSREM), Volume: 06, Oct 2022.

- Mr. Mukund Kavekar, Design and Development of Wheelchair for paraplegic and Quadriplegic Patients", Researches and Evolutionary Challenges (ICMech-REC) NIT Warangal, Jun 2023.

- Mr. Raahul Krishna, "Design & Analysis of Subsonic Wind Tunnel", 3rd International Conference on IRMAS-2023 by VIT, Vellore in association with COEP and Asia Pacific University of Technology and Innovation, Malaysia, May 2023.

- Mr. Ganesh Wahile, "Design and Development of Robotics Arm", MATHED 2022, NIT Hamirpur, Feb 2023.

- Dr. Umeshchandra Mane, "Effect of lubrication on contact thermoforming: Thermal aspect", Materials Today: Proceedings, Elsevier, Aug 2022.

FDPs and STTP/Training attended:

- Dr. Uday Aswalekar completed the AICTE 5-day online FDP on "Inculcating Human Values in Technical Education" from 19th -23rd September 2022.

- Dr. Uday Aswalekar, Ms. Priti Vairagi, Mr. Raahul Krishna, Mr. Rishabh Melwanki, and Ms. Avantika Prabhu completed the online IP Awareness/Training Program under the National Intellectual Property Awareness Mission on 19th April 2023.

- Dr. Uday Aswalekar, Dr. Ashish Chaudhari, Mr. Dipak Choudhari, Mr. Vinay Patel, Ms. Madhumita Dutta, Mr. Swapnil Mane, Mr. Sanay Lohar, Mr. Tusharkumar Raut, Ms. Priti Vairagi, Mr. Kamlesh Bachkar, Mr. Mukund Kavekar, Mr. Raahul Krishna, Mr. Rishabh Melwanki, Mr. Ganesh Wahile, Dr. Umeshchandra Mane, Ms. Avantika Prabhu completed ISTE approved STTP on "Reforms and Innovations in Examination System" from 8th Jul -13th Jul 2022.

- Dr. Ashish Chaudhari, Mr. Vinay Patel, and Ms. Avantika Prabhu completed the AICTE 5-day online FDP on "Inculcating Human Values in Technical Education" from 30th Jan -3rd Feb 2023.

- Dr. Ashish Chaudhari completed FDP on "Innovations In Engineering Design and Management" at Alliance College of Engineering and Design from 20th -25th Feb 2023.

- Mr. Dipak Choudhari completed STTP on "Research Methodology: Tools and Techniques", SVNIT, Surat from 5th -9th Sept 2022.

- Mr. Dipak Choudhari, and Mr. Vinay Patel completed STTP on "Research potential in the field of solar Energy", SFIT, Mumbai from 2nd -6th Jan 2023.

- Mr. Sanjay Lohar and Mr. Mukund Kavekar completed two days of FDP on "Condition Monitoring and Fault diagnostic", FCRIT, 29th -30th Jul 2023.

- Mr. Sanjay Lohar completed IQAC – 3-day Training Program on "Industrial 4.0 and IoT" at K J Somaiya.

- Mr. Vishwas Palve completed NITTT modules on "Instructional Planning and Delivery" and "Technology Enabled Learning and Life long Self Learning", Feb-March 2022.

- Mr. Vishwas Palve completed ATAL FDP on "Framework for Online Assessment" and "Augmented Reality And Virtual Reality In Pioneering Application Domains".
- Mr. Tusharkumar Raut completed NITTT modules on "Orientation towards Technical Education and Curriculum Aspects" and "Professional Ethics and Sustainability".
- Mr. Rishabh Melwani, and Ms. Priti Vairagi completed NITTT module on Student Assessment and Evaluation from 1st Oct- 30th Nov 2022.
- Mr. Ganesh Wahile completed 6 days of FDP on "Research Methodology from Problem Formulation to Report Writing", Ram Meghe Inst. Tech. Amravati.
- Mr. Ganesh Wahile completed 6 days FDP on "Recent Advancement in Materials, Micromachining & Characterization", Dr. D. Y. Patil College Pimpri, Pune.

NPTEL/Coursera Courses:
- Mr. Sanjay Lohar completed the NPTEL online certification 12-week course on "Machinery Fault Diagnosis and Signal Processing" from January to April 2023.
- Mr. Raahul Krishna completed the NPTEL online certification 8-week course on "Numerical Methods" from Jul-Sept 2022.
- Expert Lectures organized:
- Mr. Swapnil Mane, Expert session on Energy Conservation at the Social Service Camp.
- Mr. Kamlesh Bachkar organized a Training Workshop on Creo Design Software at VCET from 10th Jan-14th Jan 2023.

Industrial Visit:
- Mr. Rishabh Melwanki, and Mr. Swapnil Mane arranged an Industrial Visit to Alok Textiles, Silvassa for third-year students on 18th March 2023.
- Mr. Mukund Kavekar arranged a visit to St. Vincent Pallotti College of Engineering and Technology, Nagpur for the Maintenance Engineering laboratory.

- Mr. Ganesh Wahile arranged a visit to Sunil Enterprises Pvt. Ltd, Vasai (E).
- Mr. Sanjay Lohar arranged an Industrial Visit to M/s VARDHAMAN INDUSTRIES, Vasai on 21st March 2023.
- Dr. Ashish Chaudhari and Mr. Vinay Patel arranged an Industrial Visit to M/s Synergy Water Park Rides Pvt. Ltd. Vasai on 4th April 2023.
- Mr. Ganesh Wahile arranged an Industrial Visit to Sunil Enterprise on 30th Oct 2022.
- Mr. Vinay Patel and Mr. Raahul Krishna arranged an Industrial Visit to Airo Tech Compressors, Vasai East on 27th March 2023.

Student's Achievements:

Result for Academic Year 2022-2023:

SE Toppers

Rank	Name	Pointer
1	Bhatkar Ved Mahesh Vandana	9.29
2	Patil Neha Prakash Manisha	9.06
3	Churi Yuta Prashant Shubhangi	8.08

TE Toppers

Rank	Name	Pointer
1	Mishra Vinayak Suryanath	8.68
2	Yadav Harsh Ashok	8.24
3	Sachin Girjashankar Pal	8.23

BE Toppers

Rank	Name	Pointer
1	Shikhare Yash Dilip Neeta	9.71
2	Tanavade Bhushan Rajesh Rashmi	9.67
3	Damodar Vidhit Chandrasekhar Poonam	9.12

Campus Placements:

64 students are placed in companies like TCS, Mahindra & Mahindra, Mahindra Lifestyle, Thermax, TECHNIMONT, Kumar Metals Pvt Ltd, L&T Infotech, and Godrej Infotech. Placements are still ongoing for the remaining students of BE Mechanical. Also, 7 students have been admitted to higher study in various universities abroad. 87 students did internships in 23 companies.

Students Other Achievements:

- Rajendra G. Gujar, Vidhit C. Damodar, Chinmay N. Honakhande, and Yash S. Sarfare received 2nd prize in Technical Project Presentation competition in April 2023.
- Anangha Francis and Sakshi Tilwankar received 2nd prize in the Technical Project Presentation competition held at A P Shah COE Thane in March 2023.
- Anangha Francis and Sakshi Tilwankar, have presented a paper at the International conference PFAM 2023 organized by IIT Tirupati
- Udesh Kuste Shubham Irkar, and Suyash Hoskote won Judge Choice Award at
- eYantra Innovation Challenge 2022-23 organised by IIT Bombay

Dr. U.V. Aswalekar
HOD, (Mech. Engg.)

DEPARTMENT OF ELECTRONICS & TELECOMMUNICATION ENGINEERING

It gives me immense pleasure and honour to present the annual report of the Department of Electronics and Telecommunication Engineering for academic year 2022-23. The Department is accredited by the NBA and is always striving to contribute the best for students. The various activities and achievements of the Department are summarized below:

Faculty Achievements:

- Dr. Vikas Gupta has published a paper "Smart Vehicle Security Black Box" at ICCD on

- February 24th & 25th 20233 at TCET, Kandivali (E), Mumbai.
- Dr. Amrita Ruperee has published a paper "Automated Waste Segregation System" in the journal, ICRAEST-2023, Jalgaon.
- Dr. Sunayana Jadhav's "BMS for Electric Vehicle" paper was published in the Book series on Artificial Intelligence and Communication Systems, pp 669 to 676.
- Dr. Sunayana Jadhav has published a paper "An Enhanced Spatial Correlation Framework for Heterogenous Wireless Sensor Networks" in the IJSWC&C.
- Mrs. Shaista Khanam published a paper "Enhanced Zero-shot learning using deep neural network ResNet50" at the IEEE 4th INCET in 2023 at Belagavi, Karnataka.

- Mrs. Shaista Khanam presented a paper "Image Classification using Visual Sematic Embedding" at the 2nd ICSEGT held on 23rd and 24th June 2023 RKGIT, Ghaziabad, U.P.
- Ms. Neha Gharat published a paper "Source Location Privacy Protection Algorithms in IoT Sensor Networks: A Survey, in Springer 3rd - ICSCS April 17th and 18th 2023.
- Neha Gharat presented a paper, "Hybrid Lightweight Cryptography using AES and ECC for IoT Security" at ICRDCS, co-sponsored by Springer, on June 16th and 17th 2023.
- Mrs. Ashwini Katkar published a paper "The Influence of Distance on Reception in Molecular Communication" at ICCD on February 24th & 25th 20233 at TCET, Kandivali (E), Mumbai.
- Mrs. Ashwini Katkar presented the paper "Semi-integrated Solar Street Light" at the 4th National Conference on Green Technology and Science for Sustainable Development NCGTSD-2023.
- Ms. Neha Gharat and Mr. Ashwini Katkar completed the NPTEL course with Elite on "Cryptography and Network Security "July-Oct 2022.

Activities/Webinar/Workshop/Events:
1. Mrs. Sandhya Supalkar conducted a one-day workshop on "Introduction to EAGLE Software" for SE students on 3rd October 2022.
2. Dr. Sunayana Jadhav and Mrs. Sandhya Supalkar conducted a two-week Students Development Program on CPLD for TE students from 13th to 23rd December 2022.
3. Mrs. Shaista Khanam and Mrs. Trupti Shah conducted training in Texas (E-Yantra) in December 2022.
4. Mrs. Shaista Khanam, Mrs. Trupti Shah, and Ekta Naik conducted Hands-on training on Arduino on 2nd January 2023.
5. Mrs. Trupti Shah and Mrs. Ashwini Katkar conducted a two-day training on MATLAB Software for second-year students on the 5th and 6th of January 2023.

- The department EXTC has organized one ISTE-approved STTP on "Industry 4.0: Paradigm Shift in Technology" conducted from 26th June to 1st July 2023.

Alumni Interaction:
- Mr. Rajas Patil working as an Embedded Software Engineer at Faurecia Clarion Electronics conducted a "30-hour workshop on STM32" from 5th September 2022.
- Dr. Suyog Patil working as a Senior DFT Engineer at Qualcomm India Pvt. Ltd. Conducted the session on "VLSI: Emerging Applications" on 8th October 2022.
- Mr. Nandkumar Nair working as a Physical Design Engineer at Alpha Wave IP, Canada, delivered the session on "Emerging Trends in VLSI" on 2nd January 2023.
- Mr. Ashutosh Nerkar working as General Manager New Products and Capabilities Lead, at Vodafone Idea Ltd delivered the session on "Making a Career in the Telecommunications Industry" on 20th January 2023.
- Mr. Arun Nambiar working as a Tech consultant at Accenture conducted the session on "Machine Learning and its Industrial Applications" on 27th February 2023.

VCET IEEE SB Activities:
- "Digital Poster Making" on 12th August 2022. and the Judge for the event was Dr. Ashish Vanmali.
- "Stem Project" at Sheth Vidya Mandir and "Isaac Newton" by Dr. Amrita Ruperee, Dr. Sunayana Jadhav & and Mrs. Ekta Naik, and Mrs Shraddha Gosavi, Introduction of Electronics Engineering to students.
- "ENGINEERING DAY" was celebrated with an extempore event on 15th September 2022.
- "ANVESHAN" a product showcase on 23rd September 2022.
- Seminar on "EXPOSURE TO DSP" on 21st October 2023 conducted by Dr. Ashish Vanmali.
- Group discussion competition, "Think Aloud" on 22nd February 2023,

Group discussion competition, "Think Aloud" on 22nd February 2023, and Judges for the event were Mr. Chandan Kolvankar, Ms. Shobhna Shrisath, and Dr. Madhavi Waghmare.

- Oscillations'23 - Technical Paper Presentation on 17th March 2023.
- VNPS'23- VCET'S National level Project Showcase on 6th April 2023.
- Industrial visit to TIFR on 25th March 2023.
- "Techxellence" on 12th September 2022.

VCET IETE SF Activities:

- Industrial Visit to Loqiq Embedded Systems on 14th October 2022.
- Seminar on "Introduction to Latex" conducted by Mrs. Shraddha Gosavi on 21st October 2022
- SDP: Hands-on Arduino & MATLAB conducted by Ms. Shaista Khanam, Ms. Trupti Shah, and Ms. Ekta Naik.
- Industrial visit to BSNL Earth Station, Yeur, Thane on 18th January 2023.
- "Quizzards of Techno 14th February 2023.
- Workshop on "RPI" conducted by Mr. Manoj S. Kavedia (Professor at TSEC, Bandra) on 9th March 2023.
- Oscillations'23 - Technical Paper Presentation on 17th March 2023.
- ETA published the annual technical magazine "Pulse 23" on 6th April 2023.

Result for Academic Year 2022-2023:

SE Toppers

Rank	Name	Pointer
1	Solanki Harsh S.	9.09
2	Mote Rashmi Prakash	8.57
3	Wadekar Kaushal Prakash	8.32

TE Toppers

Rank	Name	Pointer
1	Patil Vijay R.	9.25
2	Kargatia Nikhil P.	8.92
3	Tandel Dhanashree A.	8.77

BE Toppers

Rank	Name	Pointer
1	Raut Kushal Dipak	9.38
2	Dodiya Harsh Nitesh	9.34
3	Nalanda Patil	8.98

Campus Placements:

Company Name	Students Placed
Zeus Learning	2
LTI	6
TCS	6
Capgemini	4
FeedSpot	3
Bristlecone	1
Newfold Tech	1
Azcet Pvt Lts	2
Sirius CleanTech,	1
Qspiders	5
Securizen Systems Pvt Ltd	1
ACRNS Analytical Technologies Pvt. Ltd.	1
PPI	3
Sick India Pvt Ltd	1
IXAR Robotic Solutions pvt. Ltd	1
Siemens	1
Frootle	4
Prolite Autoglo Ltd	1

Placements are still ongoing for the remaining students of BE EXTC. 106 students completed internships in 30 various companies.

Achievements in Co-curricular Activities:

- The XCoders ETX Team led by Samriddhi Dubey along with Mitali Bose, Riddhesh Vanjara, Harsh Dodiya, Yash Barot, and Amey Morye was the Grand Finalists team at Smart India Hackathon 2022, at Puducherry
- Jayesh Nakashe, Nikhil Rane, and Vivek Patil won the Third Runner-up prize in poster presentation in Prastut 2.0 Igniting Young Minds as Inter-Collegiate Technical Paper cum Poster Presentation Competitions organized by SJCE&M, Palghar.
- Harsh Dodiya, Yash, Barot, and Amey Morye participated in the 17th AAVISHKAR 2022 Zonal Round and got selected for the final round which was held at K.M. Kundani College of Pharmacy, Colaba.
- Riddhesh Vanjara, Varad Vartak, Kushal Raut, and Karan Singh published a paper with the title, "Automated Waste Segregation System" at ICRAEST-2023, Jalgaon.
- Janhavi Jadyar, Rohit Chavan, and Aniruddha Mane presented a paper with the title, "Multiband frequency reconfigurable antenna for wireless communication" at ICARICT 2023, organized by Anuradha Engineering College Chikhli.
- Barudgar Nomaan Varad Marathe, Nidhi Lad, and Sairaj Dhangar presented a paper with the title, "Semi-Integrated Solar LED Street Light" at the IJSRST, organized by Anuradha Engineering College Chikhli.
- Harsh Dodiya, Yash Barot, and Amey Morye won 1st prize in Oscillations 2023 Technical Paper Presentation and won 1st prize in the VNPS'2023 National level Project Showcase at VCET, Vasai.
- Shivani Kamble, Jayshree Mhatre, and Shruti Kuvekar won the 2nd prize in the VNPS'23 National Level Project showcase at VCET

- Omkar Sadadekar, Chinmay Raut, Ashwin Nair Won 2nd Prize in track 2 in the VNPS'2023 National level Project Showcase.
- Shreya Malewade, Sumukh Tiwarekar, and Sarvesh Sant Won 1st Prize in track 2 in the Oscillations 2023.
- Vijay Patil, Pradnyesh Patil, and. Shraddha Kobnak, and Sourabh Teli won 1st Prize in sub-track 2 in the Oscillation 2023.
- Vaidehi Gohil, Kimaya Shejwalkar, and Vishal Vaishnav won the 2nd Prize in sub-track 2 in the Oscillations 2023.
- Mayank Patil, Omkar Joshi, Manthan Patil, and Chandan Thakur won 2nd prize in the 48-hour Hardware Hackathon organized by TSEC Bandra. Also won 2nd prize at the Intercollegiate Technical Symposium organized by Datta Meghe College of Engineering, Navi Mumbai.
- Mayank Patil, Omkar Joshi, Manthan Patil, and Chandan Thakur won 2nd prize at the Intercollegiate Project competition organized by the PICT, Pune.
- Mihir Gosavi, Ritik Gharat, and Sahil Gorivale won the 2nd Prize in Inter-collegiate Black Hole Space Tech 2023 organized by IEEE-DBIT CAN SAT.

Achievements in Extra-curricular Activities:

- Varun Parab won the 1st Prize in Badminton Singles at L.R. Tiwari College of Engineering. And 1st Prize in Badminton Doubles with Sanidhya Raut at SFIT College, Dahisar
- Sanidhya Raut won the 1st Prize in Badminton Singles at L.R. Tiwari College of Engineering.
- The Department won 1st Prize in Tug of War in AVAHAN'23 organized by VCET, Vasai.
- BE EXTC students won 2nd prize in Tug of War Class wise in AVAHAN'23.
- Aryan Kore and Varun Parab won 2nd prize in Badminton Men's Doubles in AVAHAN'23.
- Devisha Shetty, and Varun Parab won 1st Prize in Badminton Mixed Doubles in AVAHAN'23.
- Harsh Shimpi, Ayush Kilpady, Likhit Kumar, and Varun Parab won 1st Prize in Footvolley in AVAHAN'23 organized by VCET.

- Varad Marathe, Ayush Kilpady, Likhit Kumar, and Varun Parab won 1st Prize in the Footvolley in AVAHAN'23.
- Chinmay Raut won 1st Prize in the Marathi Kavi Sammelan organized by the Literati committee, VCET.
- Pinanshu Surve won 1st Prize in the Prompt Writing event organized by the Literati committee, VCET.

- Harmish Bhavsar, Shrushti Rane, Harsh Shimpi, and Parth Mishra won 1st Prize in Faceoff organized by the Literati committee, VCET.
- Harsh Shimpi won 2nd Prize in Raise the Voice organized by the NSS committee, VCET.

Dr. Amrita Ruperee
HOD, (EXTC Engg.)

DEPARTMENT OF INSTRUMENTATION ENGINEERING

It gives me immense pleasure and honor to present the annual report of the Department of Instrumentation Engineering for the academic year 2022-23. Department is always striving to contribute the best for students. The various activities and achievements of the Instrumentation Engineering Department are summarized below:

Paper Publications/Conference attended:
- Mr. Vishal Pande has published a paper at 5th International Conference on Smart Systems and Inventive Technology (ICSSIT), Tirunelveli, India, 23rd January 2023

NPTEL Courses
- Mr. Praffula Patil completed the NPTEL course on "Introduction to Internet of Things" in July-Oct 2022 and "Teaching and Learning in Engineering (TALE)" in January-February 2023.
- Activities/Webinar/Workshop/Events conducted by the department:
- Mrs. Mugdha Salvi organized a virtual industry visit to Allied Electronics and Shri Nidhi Rubber Pvt. ltd under the ISA-SC on Engineers Day 15th September 2022

- Department has organized a seminar by Ms. Poonam Surange, consulting psychologist, VCET for final-year students on 16th January 2023.

Alumni Interaction:
- Mr. Amit Manjrekar, Director of MSS Powertech Pvt Ltd discussed "Carrier opportunities after graduation" with final-year students on 12 October 2022.

ISA Students chapter
ISA Students chapter organized various events for students under the supervision of ISA Faculty advisor Mrs. Mugdha Salvi. The details are as follows:
- On the auspicious day of "Engineer's Day" on 15th September, ISA SC organized the Yantra 2022 in which Dr. D. D. Gawali was the eminent judge to select the best stall award during Yantra 2022.
- Virtual industrial visit on 15 September 2022 to Allied Electronics and Shri Nidhi Rubber.
- On 17th March 2023, VCET hosted "Oscillations", an intercollege technical paper presentation competition. Track 3 which included Automation based on PLC, SCADA & DCS, Biomedical Instrumentation, and so on was managed by the Department of Instrumentation ISA SC. Dr. Satyanarayan Sadala, Assistant Professor, RGIT & and Dr. D D Gawali were eminent judges in selecting best paper award during Oscillations 2023

- On 6th April VCET hosted its 8th National level Project Showcase VNPS23. Track 3 was managed by the Department of Instrumentation Engineering ISA SC. Mr. Rajesh Acharya, Proprietor, of Setpoint Engineering & and Mrs. Bharati Gondhalekar, Assistant Professor of Information Technology were eminent judges to select the best project award during VNPS 2023.

Student's Achievements:

Result for Academic Year 2022-2023:

TE Toppers

Rank	Name	Pointer
1	Vishal Purushu	8.22
2	Riya Dutta	8..17
3	Varun Tatkare	7.83

BE Toppers

Rank	Name	Pointer
1	Rohan Patil	8.91
	Tejal Pednekar	8.91
2	Shraddha Mestry	8.81
3	Peeyush Chaurasia	8.79

Campus Placements:

Company Name	Total No ofStudents Placed
TCS	2
Johnson Controls	5
Schneider Electric	1
SP Ultraflex	2
NM Technocraft	6
Allied Electricals	2
Deep Electronics	1
PM Electro-Auto Pvt. Ltd.	1
Ambetronics Engineering Pvt Ltd	1
Tecnik Fluid Controls Pvt Ltd.	1
Marine Electrical (I) Ltd	1
Broadcast Engineering Consultants India Limited	1

Placements are still ongoing for the remaining students of BE Instrumentation Engineering. 17 students did internships in 11 different companies.

Students Other Achievements:

1. Ritik Rai, Vinayak Jikamade, Manish Bhagwat & and Sahil Kadam presented the paper titled, "Sign Language Recognition Using DL & CNN", at Bharati Vidyapeeth, Delhi, 15th-17th March 2023.
2. Ms. Urmiksha Tawde was runner-up in Carrom of the annual sports fest "Avahan" held on 15th January 2023.
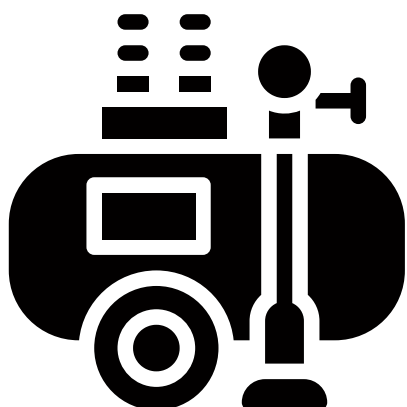
Dr. Amrita Ruperee
HOD, (Instrumentation Engg.)

DEPARTMENT OF COMPUTER ENGINEERING

It gives me immense pleasure and honor to present the annual report of the Department of Computer Engineering for the academic year 2022-23. The various activities and achievements of the Computer Engineering Department are as follows.

Faculty Achievements:

- Dr. Tatwadarshi P. N. and Mrs. Sneha Mhatre, with students, completed a consultancy project for HKI Infotech, and ₹ 10000/- was awarded as the consultancy fees to the college for the same.
- Dr. Tatwadarshi P. N. and five students developed an application called 'Digital Orbit' for HKI Infotech.
- Dr. Tatwadarshi P. N. conducted a session on "Research Trends in Machine Learning" for faculty at ISTE Approved STTP on 'Data Science and Machine Learning by Python' by the Department of Mechanical Engineering of VIVA Institute of Technology, Virar on 6th July 2022.
- Dr. Tatwadarshi P. N. worked as an Editor of a Book titled "Cyber Security Threats and Challenges Facing Human Life" published by CRC Press, Taylor & Francis Group, in September 2022. ISBN: 9781032111285, e-ISBN: 9781003218555.
- Dr. Tatwadarshi P. N. worked as a Session Chair at the National Conference on the Role of Engineers in Nation Building - 2023 organized by VIVA Institute of Technology on 3rd March 2023.
- Dr. Tatwadarshi P. N. conducted a session on Intellectual Property Rights at VIVA Institute of Technology on 20th March 2023.
- Ms. Swati Varma conducted a session on "Fuzzy Systems" during ISTE-approved STTP

- on "Artificial Intelligence towards Data Science Applications" organized by the Department of Information Technology, VCET Vasai
- Dr. Megha Trivedi was a reviewer for IEEE NMITCON-2023 organized by Nitte Meenakshi Institute of Technology, Bengaluru, IEEE-ICDSNS 2023 organized by Kalpataru Institute of Technology, Tiptur, and THEEM 2023 conference organized by Theem College of Engineering, Boisar.
- Ms. Swati Varma was a reviewer for the conference ICACTA 2023, the 3rd International Conference on Advanced Computing Technologies and Applications organized by SVKM's Dwarkadas J. Sanghvi College of Engineering.

Paper Publications/Conference attended:

- Mr. Sunil Katkar published a paper titled 'Centralized KYC- Secure Platform' in the International Scientific Journal of Engineering and Management in Volume 02 Issue 03 March 2023.
- Mrs. Swati Varma published a paper titled "Predicting chronic diseases using clinical notes and fine-tuned transformers," in the IEEE Bombay Section Signature Conference (IBSSC), Mumbai, India, 2022.
- Mrs. Sneha Mhatre published a paper "A Review of Image Super-Resolution using Deep Learning" in the International Journal on Recent and Innovation Trends in Computing and Communication, May 2023.
- Mr. Anil Hingmire, Ms. Ayushi Butani, Mr. Dinesh Lakshman, and Ms. Nidhi Mehta published a paper titled "Comparative Analysis of Naive Bayes, Decision Tree, and XG-Boost for Crop Recommendation System" in Gradiva Review-Journal (UGC Care).
- Mr. Anil Hingmire, Mr. Rahul Shah, Mr. Saurabh Shukla, Mr. Onkar Suryavanshi, and

Mr. Aman Sheikh published a paper titled "Comparing Effectiveness of GAN and CLAHE for enhancing underwater images," in the IEEE, 7th International Conference on Trends in Electronics and Informatics (ICOEI 2023), PPG Institute of Technology, Coimbatore in April 2023.

- Mr. Anil Hingmire, Ms. Nidhi Karulkar, Ms. Ruchali Mhatre, and Mr. Yash Patil published a paper titled "A Novel Approach to Audio Steganography on Audio Input for Secure Communication," at the IEEE 8th International Conference on Communication and Electronic Systems (ICCES 2023), PPG Institute of Technology, Coimbatore, in June 2023.

- Mr. Anil Hingmire, Ms. Nidhi Karulkar, Ms. Ruchali Mhatre, and Mr. Yash Patil published a paper titled "Fake Product Restriction using Blockchain," in the IEEE 8th International Conference on Communication and Electronic Systems (ICCES 2023), PPG Institute of Technology, Coimbatore, India, June 2023, IEEE Xplore, 979-8-3503-9663-8, by x.

- Mr. Anil Hingmire published a research paper titled, "A Review on Urban Flood Management Techniques for the Smart City and Future Research", International Conference on Intelligent Cyber-Physical Systems and Internet of Things, ICoICI 2022: Intelligent Cyber-Physical Systems and Internet of Things, pp 303–317, vol 3. Springer, Cham.

- Mr. Anil Hingmire published a paper titled, "Building a Smart City: A Conceptual Approach to Real-Time Urban Flood Control System," 2023 International Conference on Intelligent Data Communication Technologies and Internet of Things (IDCIoT), Bengaluru, in March 2023.

- Mr. Anil Hingmire published a research paper titled, "Urban Flood Control System using Fuzzy Logic and Internet of Things (IoT) for Smart City", Neuro Quantology 2022; Volume 20, Issue 19:115-122.

- Mr. Anil Hingmire published a research paper titled, "Advance Urban Flood Control System Using Fuzzy Logic and Internet of Things

(IoT) For Smart City", International Journal on Recent and Innovation Trends in Computing and Communication ISSN: 2321-8169, Volume 11, Issue: 6s, May 2023.

- Mrs. Swapna Borde, Ms. Kritika Khandelwal, Mr. Atul Mishra, and Mr. Shreyash Seth published a research paper titled, "Breast Cancer Detection Using ML", International Journal of Advance Research and Innovative Ideas in Education.

- Mrs. Swati Varma, Ms. Samiksha Rawool, Mr. Yuga Vasaikar, and Ms. Neha Vijaykumar published a research paper titled, "E-commerce using Geo-Navigation", International Conference on Sustainable Computing and Smart Systems, June 2023.

- Mrs. Smita Jawale, Mr. Altaj Virani, Mr. Rakesh Yadav, and Ms. Prachi Sonawane published a research paper titled, "Automatic Question Answer Generation using T5 and NLP", International Conference on Sustainable Computing and Smart Systems, June 2023.

- Mr. Sunil Katkar, Mr. Shivam Sawant, Mr. Darsh Thakor, and Mr. Dhruv Khandelwal published a research paper titled, "Bike Skid Detection and Smart Alert System with Route Condition Assistance", 8th International Conference on Communication and Electronics Systems ICCES-2023.

- Dr. Tatwadarshi P. Nagarhalli, Ms. Prachi Patil, Ms. Sakshi Raul, and Ms. Dhanisha Raut published a research paper titled, "Hate Speech Detection using Deep Learning and Text Analysis", 7th International Conference on Intelligent Computing and Control Systems (ICICCS 2023)

- Dr. Tatwadarshi P. Nagarhalli, Mr. Shravin Dedhia, Mr. Pritish Mair, and Mr. Soham Waghmare published a research paper titled, "TraceX: a tax tracking application", 7th International Conference on Intelligent Computing and Control Systems (ICICCS 2023).

- Dr. Swapna Borde, Mr. Chandan Patil, Mr. Chinmay Sonawane, and Mr. Mankrit Singh published a research paper titled, "Object Recognition based on Deep Learning Algorithms using Embedded IoT", 7th International Conference on Intelligent Computing and Control Systems (ICICCS 2023)
- Dr. Tatwadarshi P. Nagarhalli and Mrs. Sneha Mhatre published a research paper titled, "Optimal PID Control of a Buck Converter using MOBA and IMOBA", International Conference on Smart Systems and Inventive Technology (ICSSIT).

Books published:
- Mrs. Smita Jawale published a book on Software Engineering for Computer Engineering /Semester V by Nirali Publication.
- Mrs. Smita Jawale published a book on Data Warehousing and Mining for Computer Engineering /Semester V by Nirali Publication.
- Mrs. Sneha Mhatre published a book on Machine Vision for Computer Engineering /Semester VII/R-19 by Technowledge Publication.
- Mrs. Sneha Mhatre published a book on Deep Learning for Electronics & Telecommunication /Semester VII/R-19 for Savitribai Phule University, Pune by Technowledge Publication.
- Mrs. Sneha Mhatre published a book on Deep Learning for Computer Engineering/Semester VIII/R-19) for Savitribai Phule University, Pune by Technowledge Publication.
- Dr. Tatwadarshi P. N. authored a Book titled "Natural Language Processing" for Sem - VII, B.E. Degree course in Computer Engineering, University of Mumbai, Published by Tech-Neo Publications, 2022.
- Dr. Tatwadarshi P. N. authored a Book titled "Natural Language Processing" for Sem - VIII, B.E. Degree course in Electronics and Telecommunication / Electronics and Computer Science, University of Mumbai, Published by Tech-Neo Publications.

- Dr. Tatwadarshi P. N. authored a Book titled "Natural Language Processing" for Sem - VIII, B.E. Degree course in Computer Engineering, Savitribai Phule Pune University, Published by Tech-Neo Publications.
- Dr. Tatwadarshi P. N. authored a Book titled "Cyber Security" for the Sem - VII, B.E. Degree course in Artificial Intelligence and Data Science, Savitribai Phule Pune University, Published by Tech-Neo Publications, 2022 Edition.
- Mrs. Smita Jawale published a book titled "Advance Database Management System" by Nirali Publication.
- Mrs. Smita Jawale published a book titled "Advanced Database Management Technologies" by Nirali Publication.
- Mrs. Smita Jawale published a book titled "Internet Programming" published by Techknowledge Publications.
- Mrs. Smita Jawale published a book titled "Internet Programming" published by Easy-Solutions

Book Chapters published:
- Dr. Tatwadarshi P. N. authored a Book Chapter titled "Analysis of Recurrent Neural Network and Convolution Neural Network Techniques in Blood Cell Classification" in "Next Generation Healthcare Systems Using Soft Computing Techniques" to be published by CRC Press, Taylor & Francis Group in September 2022
- Dr. Tatwadarshi P. N., Mrs. Sneha Mhatre, and Mr. Sanket Patil authored a Book Chapter titled "Evaluating the Effectiveness of Convolution Neural Network in Detecting Brain Tumor" in "Next Generation Healthcare Systems Using Soft Computing Techniques" to be published by CRC Press, Taylor & Francis Group in September 2022.

Copyrights:
1. Dr. Tatwadarshi P. N., Manish Nayak, Mr. Yash Patil, Mr. Altaj Virani, and Mr. Rakesh

Yadav has registered a software copyright titled "AUTOQA AI: A Question Answering Application for Human Language Understanding" with the Indian Copyright Office

- Dr. Tatwadarshi P. N., Mr. Harshil Patel, Ms. Nidhi Karulkar, Mr. Omkar Ghanekar, and Ms. Ruchali Mhatre have registered a software copyright titled "Travel Buddy: A Tourist System" with the Indian Copyright Office
- Dr. Tatwadarshi P. N. has registered a software copyright titled "Tatwa-Darshi: A Mahabharata Question Answering System" with the Indian Copyright Office
- Dr. Megha Trivedi, Mr. Aditya Lawate, Mr. Sarvesh Singh and Mr. Mohak Tamore registered a software copyright titled "FAQ Chatbot" with the Indian Copyright Office
- Mrs. Sneha Mhatre, Mr. Amey Chaudhari, Ms. Anushka Supe, and Mr. Aditya Bhandare have registered a software copyright titled "Online Resume Builder" with the Indian Copyright Office
- Dr. Tatwadarshi P.N has applied for a copyright titled "A Journey Through the Hidden Heavens" with the Indian Copyright Office
- Dr. Tatwadarshi P. N., Ms. Shreya Chitre, and Ms. Ritu Awasthi have registered a software copyright titled "Sentence Auto Complete using NGram" with the Indian Copyright Office
- Dr. Megha Trivedi, Mr. Sharvin Dedhia, Mr. Pritish Mair and Mr. Soham Waghmare have registered a software copyright titled "An Application for Communication for the Unspoken" with the Indian Copyright Office
- Mrs. Sneha Mhatre, Mr. Adarsh Kumar Dubey, Mr. Suyash Shingte, and Mr. Muhammed Shahid Siddiqui have registered a software copyright titled "An Application for Face Recognition and Clustering" with the Indian Copyright Office

Patents:

A patent entitled "A Novel Approach for Developing A Question Answering System" by Dr. Tatwadarshi P. N. on 29/07/2022 with application no. 202221039047

A has been published with the Indian Government.

- A patent entitled "A Machine Learning Model for Providing Recommendation on Mental Condition Based on Real Time Data" (Application No. 202221051148 A) was filed with the Indian Government by Mr. Sunil N. Katkar on 7/9/2022.
- A patent titled "Method for Human Product Interaction System using Graphical Code for Customer Retention" is published by Mr. Anil Hingmire, at the Indian Patent Office, Mumbai. (Application No. 20322108013 A dated 07/04/2023)
- A patent has been published with the title "A novel approach to detect malicious insider" by Dr. Dinesh Patil on 12/05/2023, with application number 202321026779.

Activities/Webinar/Workshop/Events conducted:

Event	Resource Person
Webinar on 'Introduction to Computational Neuroscience'	Dr. Srinivasa Chakravarthy V., IIT Madras
Two-day workshop on Web Development organized by Department of Computer Engineering and BitByteGo-Codechef VCET chapter	Mr. Dharmendra Jain Founder of HKI Infotech.
Two-day workshop on Parallel Programming using Open MP and CUDA from	Dr. Tausif Diwan IIIT, Nagpur Mr. Sandip Mane Rajarambapu Institute of Technology, Rajaramnagar
Guest Lecture on 'Blockchain: The Future"	Ms. Sonali Gorade, CEO, Sumago InfoTech Pvt Ltd.

National Webinar on 'Digital Forensics Challenges and Future'	Lt. Col. Santosh Khadsare
Career Guidance Seminar on Higher Studies	Mr. Gautam Gandhi, Founder, Mission Career, Mumbai
Expert lecture on "Test of Hypothesis" for Quantitative Analysis Course	Dr. Teena Trivedi, Universal College of Engineering, Kaman
Two-Week Student Development Program on 'Chatbot Development'	Dr. Tatwadarshi P. N., VCET,Vasai
Two-Week Student Development Program on 'Android Application Development'	Mrs. Sneha Mhatre
Two weeks internship programme on 'Web Development'	Dr. Dinesh N. Patil, Mrs. Aarthi Putharan, VCET, Vasai Mr. Ahmed Shaikh, Rigel Infotech, Mumbai

Bit- Byte-Go - CodeChef Student chapter:

Faculty Advisor: Dr. Tatwadarshi Nagarhalli
A two-day workshop on 'Web Development' was conducted for students on 11th and 12th October 2022 by Mr. Dharmendra Jain Founder of HKI Infotech.
A session on 'Linux Uncovered' was conducted by Mr. Chinmay Sonawane (BE) and Mr. Kshitij Patil (TE) on 15th March 2023.
The International Coding competition 'Codethon 2023' was hosted on the Codechef Platform on 24th June 2023. 176 teams across the globe participated in the same.

WebX MetaClub Student Club:
Faculty Advisor: Mrs. Sneha Mhatre

- Seminar on 'Web 3.O Technologies' taken by Mr. Manhar Garegrat, Cofounder and CEO Panthera Web3 Wallet on 23rd February 2023.
-
- Android Development Club(ADC):
- Faculty Advisor: Mrs. Sneha Mhatre
- Seminar on 'Android Development' taken by Students Committee members for SE students on 28th March 2023.
- Two-week Summer Internship Program on Android Application Development using Kotlin was organized by the Android Development Club (ADC) of the Department of Computer Engineering & Industry Institute Interaction Cell of Vidyavardhini's College of Engineering and Technology in association with Auto Strings Pvt. Ltd from 12th June 2023 to 23rd June 2023.
-
- BYTE newsletter:
- Faculty Advisor: Mr. Vikrant A. Agaskar
- Two editions of Byte - Technical Newsletter of the Computer Engineering Department showcasing the articles on the latest technological advancements contributed by students were published
-
- e-Magazine:
- Faculty Advisor: Mr. Vikrant Agaskar
- The technical e-Magazine of the Computer Engineering Department was released as a digital flipbook in September 2022, dedicated to the robotic era.
-
- BYTE Wall Magazine:
- Faculty Advisor: Mr. Vikrant Agaskar
- Two editions of BYTE Wall Magazine, the Wall Magazines of the Computer Engineering Department were published. The articles were related to the latest technologies and their implementations. Wall also displayed a brief layout of departmental activities and placements.

Student's Achievements:

Result for Academic Year 2022-2023:

Sem III Toppers

Rank	Name	Pointer
1	Ms. Swara Gharat	9.61
2	Ms. Bramheti Patil	9.25
3	Mr. Nishant Bhandigare	9.22

Sem V Toppers

Rank	Name	Pointer
1	Ms. Akhila Anilkumar	9.72
2	Ms. Dimple Khuman	9.22
3	Mr. Kshitij Patil	9.09

Sem VII Toppers

Rank	Name	Pointer
1	Ms. Prachi Patil	9.62
2	Ms. Dhanisha Raut	9.57
3	Ms. Mohit Singh	9.55
	Ms. Sarvesh Kale	9.55

Campus Placements:

Company Name	Total No of Students Placed
Cisco	01
Mastek	01
BDO	09
Zeus Learning	06
OMP	02
TCS	12
Dolat Group	01
Citius Cloud Service LLP	07
Capgemini	05
Feedspot	02
ROW2 Technologies	01
Bristlecone	03
Quantum Phinance	04
Raw Engineering	02
LTI	17
Qspider	02
Media.net	02
Deloitte	01
Wipro	01

127 students did internships in 32 companies.

Students Other Achievements:

- Mr. Mankrit Singh, Mr, Chandan Patil, Mr. Altaza Virani, and Mr. Chinmay Sonawane (BE) secured 3rd team rank in the BITNBUILD Hackthon event organized by Shah & Anchor Kuttchi Engineering College from 28th-29th January 2023.

- Ms. Akhila Anilkumar, Ms. Polomi Adak, Mr. Onkar Suryavanshi, Mr. Pratham Ingawale, and Ms. Riya Khot secured 2nd position in the Hackathon competition held at Vidyavardhini's College of Engineering & Technology during 7th-8th October 2023.

- Mr. Vipul Bhoir (SE Computer) has secured 1st Rank in the Ek Bharat Shreshta Bharat-Rangoli Making event held on 29th September 2022 at Vidyavardhini's College of Engineering & Technology.

- Mr. Mankrit Singh (BE) and Mr. Anish Patil (TE) have secured 92 rank among 150 participating teams in the final round of the ICPC-International Collegiate Programming Contest Kanpur-Mathura Regional Contest 2022.

- Mr. Sharvin Dedhia (BE) and Mr. Mankrit Singh (BE) secured 840 rank among 5000+ participating teams in the preliminary round of the ICPC-International Collegiate Programming Contest Amritapuri Regional Contest 2021.

- Mr. Rohit Redekar (TE Computers) secured 1st position in the Website designing competition held at Techzone Fest of BMN College of Home Science

- Mr. Vrusharth Nirmal (SE), Mr. Aditya Lawate (SE), Mr. Pritish Mair(BE) and Mr. Sharvin Dedhia (BE) secured 3rd position in Pragati '23 the Business plan competition organized at St. Francis Institute of Technology

- Mr. Rishabh Tripathi, Ms. Sanika Patil, and Mr. Taher Barwaniwala (TE) won first prize at Inter Institute Business Plan Competition organized by Institute Innovation Council, VCET on 31st May 2023

- Mr. Anmol Prajapat, Mr. Jugal Salariya, and Mr. Varun Surti (BE) were 2nd runner-up at the

- Projectathon-National Level Project Competition organized by Atharva College of Engineering on 3rd April 2023
- Mr. Pritish Mair (BE) was the winner of the 'Think Aloud' Group Discussion competition organized by IEEE VCET
- Mr. Kshitj Patil (TE) has been selected for Google Summer of Code 2023 for a project assignment with The Oppia Foundation, US
- A team comprising of Mr. Rishabh Tripathi, Ms. Sanika Patil, and Mr. Taher Barwaniwala (TE) ranked 122 out of 4898 teams that participated in Amazon ML Challenge 2023
- A team comprising of Mr. Aman Sheikh, Mr. Rahul Shah, Mr. Saurabh Shukla, and Mr. Pratham Ingawale (TE) ranked 165 out of 4898 teams that participated in Amazon ML Challenge 2023
- Mr. Chinmay Sonawane (BE), Mr. Rishabh Tripathi, Mr. Taher Barwaniwala, and Mr. Kshitij Patil (TE) won first prize in AI/ML domain in Hackstellar Hackathon organized by K J Somaiya College of Engineering on 16th April 2023
- Mr. Pritish Mair (BE) was the winner and Mr. Sharvin Dedhia (BE), Mr. Shubham Nakashe, Ms. Riya Khot, and Ms. Akhila Anilkumar (TE), were runner-ups in Engineer's Day Quiz organized by CSI, VCET on 18th September 2022
- Mr. Prathamesh Malvi, Mr. Sahil Pawar, and Mr. Sahil Kabir (TE) were runner-ups in Code-O-Feista coding competition organized by CSEDS and AIDS Department, VCET
- Mr. Pratham Ingawale (TE) was selected for the FOSSEE internship at IIT Bombay for Arduino on Cloud project
- Team VCET Solecthon won the championship at the Asian Level Event ESVC 3000 held at Galgotias University, Greater Noida from 14th -21st April 2023. Mr. Pritish Mair and Mr. Sharvin Dedhia (BE) were part of the team.
- Team VCET Solecthon won the championship at the SEVC held at Hindustan College of Engineering, Coimbatore, Tamil Nadu from

9th March to 2nd April 2023. Mr. Sahil Kulabkar, Mr. Vrusharth Nirmal (SE), Mr. Aman Sheikh, and Mr. Pratham Ingawale (TE) were a part of the team.

Oscillations -Paper Presentation:

Sr. No.	Name	Class	Position
1.	Mr. Omkar Ghanekar, Mr. Omkar More, Mr. Harshil Patel	BE	Winner
2.	Mr. Sarvesh Kale, Mr. Avdhoot Jadhav, Mr. Mohit Singh	BE	Runner-up
3.	Mr. Atul Mishra, Ms. Kritika Khandelwal, Mr. Shreyash Seth	BE	Runner-up
4.	Mr. Sharvin Dedhia, Mr. Pritish Mair, Mr. Soham Waghmare	BE	Runner-up
5.	Mr.Archa Jadhav Ms. Sanika Patil Mr.Suyash Shelar Mr. Vedant Chaskar	TE	Runner-up
6.	Ms. Riya Khot, Ms. Akhila Anilkumar Ms. Polomi Adak	TE	Winner
7.	Mr. Kshitij Patil, Mr.Pratham Ingawale, Mr. Rishabh Tripathi, Mr. Hrushikesh Shetty	TE	Runner-up
8.	Mr. Samarth Pandey, Mr. Mohit Raje, Mr. Rohit Redekar	TE	Runner-up
9.	Ms. Aditi Sawant, Ms. Divya Patil, Ms.Vaishnavi Tatkare	TE	Runner-up
10.	Ms. Prachi Parab Ms.Vedika Sankhe	SE	Winner

Vidyavardhini's National Level Project Showcase:

Name	Class	Remark
Mr. Prashant Karande, Mr. Rutvik Kulkarni, Ms. Ruchika Kumbhar	BE	Winner
Ms. Kritika Khandelwal, Mr. Atul Mishra, Mr. Shreyash Seth	BE	Runner-up
Mr. Dhruv Khandelwal, Mr. Shivam Sawant,Mr. Darsh Thakor	BE	Winner
Mr. Vaishnav Kanhirathingal,Mr. Vaibhav Kharat, Mr.Adil Khan	BE	Winner
Mr. Sarvesh Kale, Mr.Avdhoot Jadhav, Mr.Mohit Singh	BE	Winner
Mr.Yash Patil, Ms.Ruchali Mhatre, Ms.Nidhi Karulkar	BE	Runner-up
Mr. Kshitij Patil, Mr. Bhupeksha Patil, Mr.Onkar Suryavanshi	TE	Winner
Mr. Pratham Ingawale, Mr. Akhila Anilkumar, Ms. Polomi Adak, Ms. Riya Khot	TE	Runner-up
Mr. Anish Patil, Mr. Parth Gharat, Mr. Pranit Patil, Mr. Siddharth Dhodi	TE	Runner-up
Mr. Onkar Suryavanshi, Mr. Saurabh Shukla, Mr. Rahul Shah, Mr. Aman Sheikh	TE	Runner-up
Ms. Vaishnavi Gaikwad, Mr. Paarth Baradia, Ms. Pratima Bombe	TE	Runner-up

Dr. Megha Trivedi
HOD, (Computer Engineering)

Department of Information Technology

Academic year of 2022-23 started with a lot of experience of online and offline execution after pandemic. Also, the NBA accreditation visit was scheduled in February. IT Department obtained the highest marks among the department and accredited for 3 years, So it is now our responsibility to perform better and better. This was all possible due to faculty , staff, students, parents and management support. We take this opportunity to thank all of them and present the activities and achievements of staff and students, which brought laurels to the Department and the Institute.

Faculty Achievements:

1. Dr. Ashish Vanmali received EduTech Leadership Award at 11th World Education Congress held at Taj Lands Ends, Bandra, Mumbai, India on 7th July 2022.
2. Ms. Vaishali Shirsath : Patent Application- Intelligent Waste Collector Bin,Patent Type: UK Design Patent

Books Published:

- Dr. Ashish Vanmali, Sainath Patil: Book Chapter- "Cyber Security Concerns for IoB," In R. Dhaya, R. Kanthavel (Eds.), Internet of Behaviors (IoB), CRC Press, Taylor & Francis Group, UK, pp. 140-155, May 2023.
- Dr. Madhavi Waghmare, Ms. Vaishali Shirsath: Software Engineering For Computer Engineering, Third Year (Sem V) Book published in Nirali Publication, 2022-23.
- Dr. Madhavi Waghmare, Ms. Vaishali Shirsath: Computer Network For Computer Engineering, Second Year (Sem III) Book published in Nirali Publication, year 2022-23

- Dr. Madhavi Waghmare: Theoretical Computer Science For Computer Engineering, Third Year (Sem V) Book published in Nirali Publication, year 2022-23 ISBN 978-93-5451-822-5
- Dr. Madhavi Waghmare: Automata Theory For Information Technology, Second Year (Sem IV) Book published in Nirali Publication, year 2022-23 ISBN 978-81-19115-70-9
- Ms. Vaishali Shirsath: Automata Theory For Information Technology, Second Year (Sem IV) Book published in Nirali Publication, year 2022-23 ISBN 978-81-19115-70-9
- Ms. Vaishali Shirsath: Theory Of Computer Science For Computer Engineering, Second Year (Sem IV) Book published in Nirali Publication, year 2022-23 IISBN-978-93-5451-822-5
- Ms. Vaishali Shirsath: Data Warehousing & Mining For Computer Engineering, Third Year (Sem V) Book published in Nirali Publication ,year 2022-23. ISBN-978-81-19115-09-9
- Ms. Vaishali Shirsath: Book Chapter- "An Assessment on Game-Based Cyber Defense Strategy for SDN"chapter in "ChapterCyber Security Threats & Challenges Facing Human Life: A Comprehensive Study", CRC Press ,Ebook ISBN: 9781003218555
- Mr. Sainath Patil: Book Chapter-"Cyber Security Concerns for IoB," In R. Dhaya, R. Kanthavel (Eds.), Internet of Behaviors (IoB), CRC Press, Taylor & Francis Group, UK, pp. 140-155, May 2023.
- Ms. Anagha Patil: Computer Network and Network Design July 2022 ISBN-978-93-5451-146-2 Nirali Prakashan Mumbai
- Ms. Anagha Patil: Artificial Intelligence & Data Science II July 2022 ISBN-978-93-5583-098-2 Tech-Neo Publications
- Ms. Anagha Patil: Cryptography and System Security Jan 2023 ISBN-978-93-89926-66-8 Tech-Neo Publications

- Ms. Anagha Patil: Data Warehousing and Mining Jan 2023 ISBN-978-93-89926-68-2 Tech-Neo Publications

Papers Published:

- Dr. Ashish Vanmali: Paper published "Insights on coding gain and its properties for principal component filter banks," Sadhana- Indian Academy of Sciences, Vol. 48, No. 76, May 2023.
- Dr. Archana Ekbote: Paper Published "Scene Recognition Using Deep Learning" International Journal of Research Publication and Reviews, Vol 4, no 4, pp 5461-5468 April 2023
- Ms. Vaishali Shirsath: An Assessment on Game-Based Cyber Defense Strategy for SDN"chapter in "ChapterCyber Security Threats & Challenges Facing Human Life: A Comprehensive Study", CRC Press ,Ebook ISBN: 9781003218555 Dr. M.M. Chandane,"An Assessment on Game-Based Cyber Defense Strategy for SDN"chapter in "ChapterCyber Security Threats & Challenges Facing Human Life: A Comprehensive Study", CRC Press ,Ebook ISBN: 9781003218555
- Ms. Vaishali Shirsath: Paper published "Attack Detection and Prediction Using Machine Learning"Indian Journal of Computer Science (ISSN 2456 - 4133) DOI: 10.17010/ijcs/2023/v8/i2/172775
- Ms. Anagha Patil: "A Comprehensive Review on Social Botnet Detection Techniques," 2022 International Conference on Augmented Intelligence and Sustainable Systems (ICAISS), Trichy, India, 2022, pp. 950-957, doi: 10.1109/ICAISS55157.2022.10010877.
- Ms. Anagha Patil: "Heatmap Analysis on Webpages", Indian Journal of Computer Science, Volume 7, Issue 4, July-August 2022, DOI: 10.17010/ijcs/2022/v7/i4/172375.

Revision of Syllabus for University of Mumbai:

- Ms. Vaishali Shirsath: Member in syllabus setting committee for the revision of syllabus for the subject "Information Retrieval Systems" IOTDO8013-Sem-VIII with Rev-2019 'C' Scheme for Engineering Program (UG) in Internet of Things branch for Final Year with effect from Academic Year 2023 -24 onwards.
- Ms. Anagha Patil: Member in syllabus setting committee for the revision of syllabus for the subject "Linux Administration Lab" with Rev-2019 'C' Scheme for Engineering Program (UG) in Internet of Things branch for Final Year with effect from Academic Year 2023 -24 onwards.

Resource Speaker for Workshops/Seminars/FDPs/STTPs/FOPs:

- Dr. Ashish Vanmali: Resource Person for Faculty Orientation Program for the subject ECCDLO 7024: Advanced Digital Signal Processing of revised syllabus of Semester VII of B. E. EXTC on 15th July 2022 organized by Fr. C. Rodrigues Institute of Technology, Vashi on behalf of University of Mumbai.
- Dr. Ashish Vanmali: Resource Person for Faculty Orientation Program for the subject ECCDLO 7012: Deep Learning of revised syllabus of Semester VII of B. E. EXTC on 15th July 2022 organized by Thadomal Shahani Engineering College, Bandra on behalf of University of Mumbai.
- Dr. Ashish Vanmali: Expert Lecture on "Recent Trend in Image Processing" at IT Department, Vidyavardhini's C.O.E & Tech., on April 5, 2023.
- Dr. Ashish Vanmali: Guest Lecture on "Exposure to DSP Applications in Speech Processing" at Vidyavardhini's C.O.E & Tech., on Oct. 21, 2022 organized by IEEE-VCET Students Branch.
- Ms. Anagha Patil: Session on "Machine Learning and Implementing classifiers using python" in Hands-on Workshop on Machine Learning from 13th July -16th July 2022 for Computer Department at TSEC, Bandra.

- Ms. Anagha Patil: Sessions on "Deep Learning-ANN" and "Implementing classifiers using python" in two weeks ISTE approved STTP on "Artificial Intelligence towards Data Science Applications" from 27th June – 8th July 2022 at VCET.

Distinguished TCP Member/Reviewers:

- Dr.Thaksen Parvat: Reviewer for Elsevier, Social Science & Humanities Open Journal
- Dr. Thaksen Parvat: Reviewer for Journal of Engineering Education Transforms, JEET-2022-430
- Dr. Thaksen Parvat: TCP Member for CICN 2023
- Dr. Thaksen Parvat: Reviewer for "Challenges and Solutions in Internet of Things-Based Smart Applications" by Taylor & Francis (CRC Press)
- Dr. Ashish Vanmali: Reviewer for ICACTA-2023 – 3rd International Conference on Advanced Computing Technologies and Applications, SVKM's Dwarkadas J. Sanghvi College of Engineering, Mumbai.
- Dr. Ashish Vanmali: Reviewer for THEEM-2023 – 3rd International Conference on "Trends n Herald in Engineering Excellence and Metamorphosis, Theem College of Engineering, Boisar
- Dr. Ashish Vanmali: Reviewer for CSCITA-2023 – 4th International Conference on Communication Systems, Computing and IT Applications, St. Francis Institute of Technology, Mumbai.
- Dr. Ashish Vanmali: Reviewer for IBSSC-2022 – 4th IEEE Bombay Section Signature Conference, SVKM's NMIMS MPSTME, Mumbai. for IBSSC-2022 – 4th IEEE Bombay Section Signature Conference, SVKM's NMIMS MPSTME, Mumbai.
- Dr. Archana Ekbote: Reviewer for IEEE International Conference on Interdisciplinary Approaches in Technology and Management for Social Innovation (IATMSI-2022)
- Dr. Archana Ekbote: Reviewer for Indiacom 23 International Conference

- Dr. Archana Ekbote: Reviewer for CSCITA-2023 – 4th International Conference on Communication Systems, Computing and IT Applications, St. Francis Institute of Technology, Mumbai.
- Dr. Madhavi Waghmare: Reviewer for Springer Journals ,Iranian Journal of Science and Technology, Transactions of Electrical Engineering
- Dr. Madhavi Waghmare: Reviewer for CSCITA-2023 – 4th International Conference on Communication Systems, Computing and IT Applications, St. Francis Institute of Technology, Mumbai.
- Dr. Madhavi Waghmare: Reviewer for Indiacom 23 International Conference
- Dr.Madhavi Waghmare: Judge for Oscillations-23 Technical Paper Presentation
- Ms. Vaishali Shirsath: Paper Reviewer for"IEEE 10th International Conference on Computing on Sustainable Global Development_ INDIACOM23
- Ms. Vaishali Shirsath: Reviewer for (CSCITA-23) 4th International Conference on Communication Systems, Computing and IT Applications co-sponsored by IEEE Bombay, SFIT Borivali
- Ms. Anagha Patil: Reviewer at the 4th International Conference on Communication Systems, Computing and IT Applications (CSCITA-23) organized on March 31st - April 1st, 2023 by the St. Francis Institute of Technology (SFIT), Mumbai, and technically co-sponsored by IEEE Bombay Section.

Courses Attended:

Staff members of the IT Department have always made an effort to keep their knowledge up to date by participating in different STTPs, FDPs, Webinars, Seminars, FOPs, Online courses, etc. A total 45 such programs were attended by IT Department faculty members in the last academic year. The statistics of the same are as follows:

Name of Faculty	No. of Courses Attended
Dr. Thaksen Parvat	3
Dr. Ashish Vanmali	2
Dr. Archana Ekbote	2
Dr. Madhavi Waghmare	2
Mrs. Vaishali Shirsath	5
Mr. Sainath Patil	3
Mrs. Anagha J. Patil	10
Mrs. Bharati Gondhalekar	3
Ms. Snehal Mhatre	8
Ms. Pragati Patil	7
Total	45

SE Toppers:

Rank	Name	Pointer
1	Meet Dodiya	8.74
2	Shruti Gharat	8.69
3	Akash Mourya	8.48
3	Harsh Shah	8.48

TE Toppers:

Rank	Name	Pointer
1	Shobhit Singh	8.76
2	Abhishek Jani	8.64
2	Zaid Khan	8.64
3	Kedar Malap	8.53

BE Toppers:

Rank	Name	Pointer
1	Aaditi Kadam	9.37
2	Tejas Kolwankar	9.27
3	Insha Mulla	8.85

This year IT department students have 74 total number of offers to 47 students.

Company	No. of offers received	No. of students placed
Capgemini	6	
CitiusCloud	17	
Contentstack	2	
DeepThought	1	
Feedspot	2	
Integreon	1	
LTI	15	
Mastek Ltd	2	
Media.net	1	47
NeoSoft	1	
OMP	3	
Oren	1	
Sogolytics	1	
TCS	15	
Ukti	1	
Vistaar	1	
Zeus Learning	4	
Total	74	

Students' Achievements:

- Tushar Mittal, Dhruvil Mehta, Shreyas Manoti secured 2nd position in Avishkar'22 project titled "Optimized Wi-Fi based control System for Pond Aerators in Shrimp Farming"
- Anish Dalvi, Jayesh Khandare, Abhishek Jani, Harsh Churi, Zaid Khan, Shravani Gavali, and Vaishnavi Deokar secured 1st place in Oscillations a technical paper presentation 2023.
- Jayesh Wadhe secured 1st place in Code O Fiesta "a coding competition" at VCET in September 2022.

- Akshay Hegde, Tejas Kolwankar and Nilesh Yadav secured 1st place in VCET'S National Level Project Showcase 2023.
- Mrunmayi Patankar, Harshita Madane and Insha Mulla secured 1st place in VCET'S National Level Project Showcase 2023.
- Aesha Mahida, Sanskruti Sankhe and Isha Kule secured 2nd place in VNPS'23
- Prem Bhanushali, Aniket Khanjode and Ruchika Gaikwad secured 2nd place in VNPS'23
- Aditya Shah, Karan Gandhi, Rehman Khan, and Sahil Chalke secured 1st place in VNPS'23.
- Kedar Malap, Shobhit Singh, Aman Yadav, and Rakesh Zore secured 2nd place in VNPS'23.
- Kedar Malap, Tanuj Bordikar, and Saurabh Jagtap secured 2nd place at VCET HACKATHON 2022.
- Kedar Malap, Shobhit Singh, Aman Yadav, Fawaz Shaikh, Aditya Shah secured 2nd place in Oscillations a technical paper presentation 2023
- Aditi Khambe and team secured 1st place in Throwball at AAVAHAN 2023.
- Girls of BE-IT won gold and silver in Avahan'23.
- Insha Mulla and her team secured 2nd prize in intercollege debate competition, Faceoff 11.
- BE-IT won Street Play in Zeal 2023.

Students' Performance in competitive exams:

Name of the student	Exam	Score
Kashiya Bhargav	IELTS	8.0
Patil Tanay	GRE	313/340
	IELTS	7.5
Vartak Viditi	TOEFL	81/120
Shah Ajay	MAH-MBA / MMS-CET	98.868 percentile
	CAT	97.06 percentile
Mehta Dhruvi	GRE	301/340
	TOEFL	87/120
Gholap Mahati	IELTS	6.5
Parmar Mrunal	IELTS	6.5

Meher Siddhant	IELTS	7.0
Manthan Sarfare	MAH-MBA / MMS-CET	96 percentile
Shah Jainil	GRE	283/340
	TOEFL	83/120
Yash Raut	GATE	29.33/100

Activities Conducted by the Department:

Name of the Activity	Date
Two-Week ISTE-approved STTP on "Artifical Intelligence towards Data Science Application	27/06/22
Faculty Orientation Program for the subjects AI&DS-II & Data Science Lab Sem VIII (R-19)	04/07/22
Guest Lecture on "Deep Learning & ANN" for AI & DS-II	17/9/22
Industrial Visit "PPI Industry Vasai (East)"	21/9/22
Expert Lecture on " Software Engineering"	22/9/22
Elixir- Product Showcase 2022	23/9/22
VCET Hackathon 2022	07/10/2022 & 08/10/2022
Student Development Program on Java & MERN Stack	12/12/2022 - 23/12/2022
Seminar on "Secure the Unsecured"	09/01/2023
Expert Lecture on "applications of Image Processing	05/04/2023
Guest Lecture on " Data Visualization using Tableau"	07/04/2023
Guest Lecture on"UI/UX Design	08/04/2023

Prof. Thaksen J. Parvat

HOD - (IT)

DEPARTMENT OF CIVIL ENGINEERING

It gives me immense pleasure and honor to present the annual report of the Department of Civil Engineering for the academic year 2022-23. Dedicated with the objective of maintaining and nurturing the status of Civil Engineering, the department of Civil Engineering has worked hard throughout the year to make sure that the students achieve determined knowledge in the field along with their complete development. The various activities and achievements of the Civil Engineering Department are summarized below:

Faculty Achievements:
1. Mr. Viren Chandanshive was awarded with the degree of Doctorate oh Philosophy (Ph.D) in Civil Engineering on 05th April 2023.
2. Mr. Arbaz Kazi and his guided students received the Best Paper Award for the paper "Suitability study of Foundations for On-shore and Off-Shore Wind Turbine", at International Conference on Advance in Mechanical and Civil Engineering (IC-AMCE-2023) organized by Thakur College of Engineering and Technology, Kandivali (E), Mumbai.

Paper Publications
1. Mr. Vikrant Kothari published a paper on "Sustainable Planning and Design of Kelthan Village" in the International Journal of Innovative Science and Research Technology, Vol 8, Issue 3, 2023

Sr. No.	Name of the Faculty	Title/Topic	Name of the Conference
1	Dr. Ajay Radke	Study of Confined and Unconfined Structural members as Column	International conference on "Trends n Herald in Engineering excellence and metamorphosis (THEEM 2023), organized by Theem College of Engineering, Boisar (E), Palghar
		A review of affordable Mass Housing of G+3 Building using Sustainability approach	
2	Mr. Prakash Panda	Prefabricated Wall Panels using red soil for low-cost housing	
3	Mr. Vikrant Kothari	Review of Existing Pothole Repair System for Flexible Pavement	
4	Mr. Jaydeep Chougale	Effect of GGBS on Durability Properties of Concrete	
5	Mr. Viren Chandanshive	Planning and Development of Water-ways Transportation along coastal cities-A review	International Conference on Advance in Mechanical and Civil Engineering (IC-AMCE-2023) organized by Thakur College of Engineering and Technology, Kandivali (E), Mumbai
6		Planning, Scheduling and Resource Allocation of Residential Building using Microsoft Project-A review	
7		Selection of Construction Equipment using Analytical Hierarchy Process (AHP) & Analytical Network Process (ANP)	

8	Mr. Jaydeep Chougale	Study of Planning & Design of a Commercial Structure Alignment and Design of Elevated Railway Track at Dahisar-A Review	International Conference on Advance in Mechanical and Civil Engineering (IC-AMCE-2023) organized by Thakur College of Engineering and Technology, Kandivali (E), Mumbai
9	Mr. Vikrant Kothari	A Review on Sustainable Planning and Design of Kelthan Village	
10	Mr. Arbaz Kazi	Suitability study of Foundations for On-shore and Off-Shore Wind Turbine	
11		Development of MS Excel software for civil engineering problems	
12	Ms. Puja C. Kadam	Rain water harvesting and Waste Management for Community building- A Review	
13		Redesigning of Water distribution Network of Region of Virar using Water Gem software	International Conference on Environmental Sustainability (ICES-2023) organized by Veermata Jijabai Technological Institute, Matunga, Mumbai

| 14 | Mr. Jaydeep Chougale | Study of Planning & Design of a Commercial Structure | International -Conference on Advance in Mechanical and Civil Engineering (IC-AMCE-2023) organized by Thakur College of Engineering and Technology, Kandivali (E), Mumbai |

NPTEL Courses

1. Ms. Puja Kadam completed 12 weeks NPTEL course on Integrated Waste Management for A Smart City
2. Mr. Vikrant Kothari completed 4 weeks course on Teaching and Learning in Engineering.

FDP/STTP/Workshops Attended

Sr. No.	Name of the Faculty	FDP/STTP/WorkshopAttended
1	Dr. Ajay Radke	ISTE Approved STTP/FDP Programme on " Reforms and Innovation in Examination System" Organised by VCET, Vasai
		AICTE-NITTT Module 3:Communication skills, Modes and Knowledge Dissemination
		AICTE-NITTT Module 4:Instructional Planning and Delivering
		AICTE-NITTT Module 8:Institutional Management and Administrative Procedure

3	Mr. Vikrant Kothari	AICTE-NITTT Module 2: Professional Ethics and Sustainability
		AICTE-NITTT Module 4:Instructional Planning and Delivering
		AICTE-NITTT Module 8:Institutional Management and Administrative Procedure
		NPTEL FDP on Teaching and Learning in Engineering
		ISTE Approved STTP/FDP Programme on " Reforms and Innovation in Examination System" Organised by VCET, Vasai
4	Ms. Puja Kadam	NPTEL FDP Integrated Waste Management for A Smart City
		AICTE - NITTT - Module 3- Communication skills, modes and Knowledge Dissemination
		ISTE Approved STTP/FDP Programme on " Reforms and Innovation in Examination System" Organised by VCET, Vasai
	Mr. Viren Chandanshive	ISTE Approved STTP/FDP Programme on " Reforms and Innovation in Examination System" Organised by VCET, Vasai
5	Mr. Arbaz Kazi	ISTE Approved STTP/FDP Programme on " Reforms and Innovation in Examination System" Organised by VCET, Vasai
6	Ms. Aishwarya Anil	One-week STTP organized by NITTTR-Kolkata on "Commentary Is:456-2000 With Expected Modifications in The Forthcoming Revision
		One-week STTP organized by NITTTR-Kolkata on "Application of Auto-Cad"

Activities/Webinar/Workshop/Events conducted by the department:

- IGBC Student's Chapter organized a Panel Discussion on "Bridging the Gap between Industry and Institute" on 31st March 2023.
- Mr. Vikrant Kothari organized a one-day workshop on " Structural Audit and Testing" on 1st April 2023.
- Ms. Puja Kadam organized an Expert session on the Green Building Movement in India and a Case Study on "Operational Excellence in Managing Green Campus" on 8th April 2023.

- Mr. Vikrant Kothari arranged a One Day workshop on "Total Station - Hands-on Training" on 4th May 2023.
- Mr. Jaydeep Chougale organized Expert sessions in Developments in Structural Engineering from 3rd Feb to 12th Feb 2023.
- Mr. Aishwarya Anil organized an expert lecture on the Design of Bridge Substructures and Superstructures and their Application on 03rd April 2023.
- Mr. Nikhil Gavad organized Hands-on Training on Analysis and Design of Structure in E-TABs Software from 29th May to 3rd June 2023.
- Mr. Ashutosh Dabli organized an Expert session on the Importance of Research and Lab Teaching on 24th May 2023.
- Ms. Puja Kadam organized an Expert lecture on Expert lecture on Plastic Waste Management on 11th October 2022.

Site Visits organized by the department:
1. Mr. Prakash Panda organised site visit to Gargoti Museum, Nashik on 23/12/2022.
 2. Mr. Jaydeep Chougale and Mr. Vikrant Kothari organized a site visit to Crushing Plant and RMC plant in Vasai on 03/04/2023.
3. Ms. Puja Kadam organized a site visit to Wastewater Treatment Facility, Gokul Township, Virar on 14/02/2023.
4. Ms. Puja Kadam organized visit to IFAT Exhibition, Bombay Exhibition Centre, Goregaon on 27/09/2022.
5. Mr. Nikhil Gavad organized a Site Visit for Inder construction Pre-stressed Bridge, Vaitarna on 13/03/2023.
6. Mr. Jaydeep Chougale organized visit to under construction commercial centre, Vasai on 07/10/2022.
7. Ms. Puja Kadam organized a site visit to Energy efficient lighting manufacturers industry, 3SDM Business Solutions, Pvt. Ltd, Vasai on 08/04/2023.

Alumni Interaction:
Ms. Riya Raut, Civil Engineering Intern at AECOM, Austin, Texas, U.S. discussed

U.S. discussed "Preparation for Higher Studies Abroad (MS)" on 21st July 2022
- Mr.Laukik Dongre, Project Engineer at BEST Geotechnics Pvt. Ltd., discussed "Role of Civil Engineer in Project Management" on 21st July 2022
- Ms. Rutuja Naik works at the Public Work Department (PWD), Government of Maharashtra discussed the "Preparation for Government Competitive Exam" on 28th July 2022.

Committees under Civil Engineering department:
- 1. The Indian Green Building Council (IGBC) is a technical committee of civil engineering department for the development of the student.
- The IGBC student chapter actively organizes various technical events, Product Showcase, Project Showcase, and different workshops related to civil engineering for the awareness of advancement in technologies.
- 2. "Gandhaar"- Music Club is formed in the department to give every individual the chance to learn and grow in their understanding of music via performances, listening, and activities.
- 3. "PICTURE PERFECT" -Photography and Art Club of the department aims to create the opportunities for everyone to discover the artist within themselves and gives them the platform to paint their dreams into reality.

Student's Achievements:
Result for Academic Year 2022-2023:
Sem III Toppers

Rank	Name	Pointer
1	Pratham Solanki	9.74
2	Krutesh Arekar	8.67
3	Apurva Jagtap	8.59

Sem V Toppers

Rank	Name	Pointer
1	Sagun Parab	8.96
2	Deeksha Shetty	8.92
3	Kimaya Salunkhe	8.54

Sem VI Toppers

Rank	Name	Pointer
1	Roshani Salunkhe	9.05
2	Alston Cerejo	8.95
	Rohit Sharma	
	Ujala Yadav	
3	Pooja Dhanawade	8.90

Campus Placements:

Company Name	Total No of Students Placed
KEAN Construction, Mumbai	06
Supreme Arts Civil and Interiors, Thane	01
Amiand Consulting Pvt. Ltd, Mumbai	03
Detailed Steel Solutions India Pvt. Ltd., Vasai (W)	04
FEC India	03

Students Other Achievements:

- 12 groups of B.E. project participated in the International Conference on Advances in Civil & Mechanical Engineering organized by Thakur College of Engineering out of which one group of Mr. Rahul Ray, Mr. Yogesh Mishra, Mr. Raj Naik, Mr. Hardik Mhatre won Best Paper Award titled "Design of Foundations for On-shore & Off-shore
- Wind Turbines — A state of the Art" at the International Conference on Advances in Civil & Mechanical Engineering organized by Thakur College of Engineering.
- Mr. Yash Bamania, Mr. Sachin Pal, and Mr. Harshad Pawar presented a paper on "Redesigning the Water Distribution Network of a region of Virar using WterGems software" at the International Conference on Environmental Sustainability organized by VJTI, Matunga, Mumbai.
- Ms. Asmita Dethe, Ms. Vaishnavi Patil, Mr. Lingraj Birajdar secured First Place in Cube Testing competition organised by American Concrete Institute.

- Ms. Shreya Bari, Ms. Prerna Kasar secured Second Place in Cube Testing competition organised by American Concrete Institute.
- Mr. Bhushan Malvi, Mr. Sagun Parab, Mr. Chiraj Patil secured Third Place in Cube Testing competition organised by American Concrete Institute.
- Ms. Prajakta Borse secured Second Place in VVCMC Rainwater Harvesting Poster Making Competition.
- Ms. Kimaya Salunkhe secured Third Place in VVCMC Rainwater Harvesting Poster Making Competition.
- Ms. Kanchan Chauhan, Ms. Pooja Dhanwade, Ms. Vaidehi Dombare and Ms. Nazreen Khan received an appreciation letter from Navkar City, Dahanu for their contribution of designing rainwater harvesting system as a part of their B.E. Project
- Mr. Faraz Ansari, Ms. Harshita Patil, Mr. Nitish Kambli, received an appreciation letter from Kelthan Grampanchayat for submitting proposal of smart village construction to the Gram panchayat committee members.
- Mr Bhushan Malvi, Ms. Asmita Dethe, Ms Vaishnavi Patil received an appreciation letter from Jambulpada Gram panchayat for submitting proposal of Ferrocement Tank Construction to the Gram panchayat committee members.
- 5 groups of B.E. project participated in international conference on "Trends n Herald in Engineering excellence and metamorphosis (THEEM 2023), organized by Theem College of Engineering, Boisar (E), Palghar.

Dr. Ajay S. Radke
HOD, (Civil Engg.)

DEPARTMENT OF CSE (DS)

It gives me an immense pleasure and honor to present the annual report of the Department of Computer Science and Engineering (Data Science) for the academic year 2022-23. The Department of CSEDS came into existence in 2020-21 academic year with initial intake of 60. From the 2023-24, the department holds the capacity of 180 seats of intake. The CSEDS department is dedicated to fostering a dynamic and inclusive learning environment that empowers students with the knowledge, skills, and practical experience required to excel in the ever-evolving world of Data Science specifically. The various activities and achievements of CSE(DS) Engineering Department are as summarized below:

Faculty Achievements: (Faculty upgrade to be explicitly mentioned - if any faculty has recently completed another degree (PG/Research)) :
1. Mr. Yogesh Pingle is pursuing a PhD.
2. Mrs. Komal Champanerkar pursuing a PhD.

Paper Publications/Conference attended:
1. Mr. Yogesh Pingle published a research paper at an IEEE International Conference, in March 2023.
2. Mr. Yogesh Pingle published a book on Computer Networks, in Feb 2023.
3. Mr. Yogesh Pingle published a book on Data Warehousing and Mining, in March 2023
4. Mr. Sumeet Shingi participated in the Extramural Lecture Series - NT009 "Incorporating Python Computation in Classroom Teaching for Mechanical Engineering Subjects" conducted in December 2022 Department of Mechanical Engineering, RIT, Rajapalayam.

Courses/FDP/STTP/Workshops attended:

1. Mr. Yogesh Pingle, Mrs. Maya Varghese, Ms. Krunali Vartak, Ms. Janisa Pereira, and Ms. Carmelita Dabre attended STTP on "Reforms and Innovation in Examination System" in July 2022.
2. Mrs. Komal Champanerkar attended STTP on "Exploring Recent Trends in Data Science using IoT" in June 2023.
3. Mr. Yogesh Pingle, Mrs. Maya Varghese, and Ms. Krunali Vartak attended STTP on "Artificial Intelligence Towards Data Science Applications" in July 2022.
4. Mr. Yogesh Pingle completed his Internship at L&T Skills Trainers Academy, Madh in July 2023.
5. Mrs. Maya Varghese, Ms. Krunali Vartak, Ms. Janisa Pereira, and Ms. Carmelita Dabre attended STTP on "Building Solutions using No Code AI and Machine Learning" in January 2023.
6. Mr. Sumeet Shingi attended an All India Council for Technical Education (AICTE) FDP on "Inculcating Universal Human Values in Technical Education" in February 2023.
7. Mr. Sumeet Shingi completed a Great Learning course on ANOVA in October 2022.
8. Mr. Sumeet Shingi completed a Great Learning course on ChatGPT in June 2023.

Activities/Webinar/Workshop/Events conducted by the department:
1. Mr. Yogesh Pingle and Mr. Sumeet Shingi organized a seminar on "Current Trends in Industry" on 26th August 2022.
2. Department Staff organized a Product Showcase named as "ProductVidya 2022" on 23rd September 2022.
3. Department Staff organized a coding event "Code-O-Fiesta 2022" on 28th September 2022.
4. Department Staff organized a Project Showcase named as "Vidyavardhini's National Project Showcase (VNPS) 2023" on 23rd September 2022.

5. Mr. Yogesh Pingle and Mr. Sumeet Shingi, arranged an Industrial Visit to Accurate Springs for third year students.

6. Ms. Maya Varghese and Mr. Yogesh Pingle arranged an Industrial Visit to the Divisional Railway Manager (DRM) office, Mumbai central for third year students.

7. Ms. Maya Varghese organized a seminar on "An Introduction to Drones and the various Avionics Technologies involved" for computer allied branches on 14th March 2023.

8. Department Staff organized a One Week Short Term Training Program on "MLOps: A Modern Approach to Design, Develop and Operate Machine Learning Models" from 12th-17th June 2023.

Committees under the particular department (if any):
1. German Club
2. Computer Society of India (CSI)

Student's Achievements:
Result for Academic Year 2022-2023:
SE Toppers (Sem III)

Rank	Name	Pointer
1	Laxman Sawant	10
2	Viraj Wadke	9.74
3	Mukeshkumar Prajapat	9.35

TE Toppers (Sem V)

Rank	Name	Pointer
1	Abhay Shukla	10
2	Jayesh Berde	9.59
3	Hritik Pathak	9.27

Campus Placements/Internship Record:
- 87 students completed internships in 20 various companies.

Students Curricular Achievements:

1. Prabhatkumar Rahi won the First Prize in the Engineer's Day Technical Quiz competition held on 15th September 2022.

2. Harshkumar Devmurari, Gautham Kuchian, and Prajjwal Vishwakarma won First prize in the paper presentation competition "Oscillations 2023" held on 17th March 2023.

3. Sairaj Varawadekar, Shravani Vartak, and Sakshi Dagur published a research paper at the IEEE conference in March 2023.

4. Harshkumar Devmurari, Gautham Kuchian and Prajjwal Vishwakarma won first position in Vidyavardhini's National Project Showcase (VNPS) held on 6th April 2023.

5. Prajjwal Vishwakarma was awarded as Best Design Report in the national level technical festival organized by SCEM in November 2022.

6. Shwet Tiwari won the championship at ESVC 3000 organized by ISIEINDIA in April 2023.

Dr. Vikas Gupta
HOD (CSE(DS)

DEPARTMENT OF AI & DS

It gives me an immense pleasure and honor to present the annual report of the Department of AI&DS Engineering for the academic year 2022-23. Department is always striving to contribute the best for students. The various activities and achievements of AI&DS Engineering Department are as summarized below:

Paper Publications/Conference attended:

1. Mrs. Sejal D'mello published an IEEE paper with students titled "Navigation Assistance for the Visually Impaired: An Image Segmentation-based Web Application", 10th International Conference on Computing for Sustainable (INDIACom), New Delhi, 2023

Activities/Webinar/Workshop/Events conducted by the department:

1. Organized a Seminar on "Data Wrangling with Python" on 27th March 2023 by Mr. Siddharth Shah, Founder, Fafadia Tech.
2. Arranged an Industrial Visit to the DRM Office for third year students on 21st March 2023.
3. Arranged an Industrial Visit to Accurate Helical Springs for second year students on 17th September 2022.
4. Organized Product Showcase on 23rd September 2022.
5. Organized Code-O-Fiesta Coding competition on 28th September 2022.
6. Organized Internship on Data Science in association with TechCryptors from 12th June 2023 to 23rd June 2023.

Student's Achievements:

Result for Academic Year 2022-2023:

Sem III Toppers

Rank	Name	Pointer
1	Devharsh Jagdanand Jha	9.74
2	Amulya Chandayya Shetty	8.96
3	Hemani Ramakant Maurya	8.7
	Ryan Sujith Chulliyil	8.7

Sem V Toppers

Rank	Name	Pointer
1	Nair Amrita Sreekumaran Rajeshwari	8.77
	Pawar Devashree Kiran Mugdha	8.77
	Kadam Prachi Sadanand	8.77
2	Pawar Devashree Kiran Mugdha	8.73
3	Kadam Prachi Sadanand	8.64

Internship:

Company Name	Total No of Attended
TechCryptors	24
VCET	6
CodeClause	1
MedTourEasy	1
Oasis Infobyte	1
Skylark Global BPO services Pvt Ltd	1
Rigel Infotech Pvt. Ltd.	3
Autostrings Pvt. Ltd.	4
Oasis Infobyte	1
World Invent Scientific Technology Pvt. Ltd.	1
KPMG	2
TECHQCONNECT	11
Intabs Solutions	1
Kodacy	1
AP INFOSYS	1
Shree Balaji Agency	1

Students Other Achievements:

- Mr. Karan Patra and his team secured first prize in Coding Competition Code-O-Fiesta organized by CSE(DS) and AI & DS Department, Vidyavardhini's College of Engineering and Technology, on 28th September 2022
- Mr. Hirenkumar Vyas, Mr. Vivek Prajapati, Mr. Naveen Arora and Mr. Arpit Mishra (Team CodeX) secured second prize in an international open-source competition held by openCV
- Mr. Vivek Prajapati won first prize in a solo singing competition organized at L.R. Tiwari College of Engineering, Mira Road
- Ms. Anaum Sharif, Mr. Pritesh Verma, Mr. Varun Soni, and Mr. Harshavardhan Surve (Team EXE Developers) secured first place in the 24-hour Hackathon "Avalon", organized by Terna College of Engineering and Technology.
- Mr. Chinmay Satam secured first position in Unscripted- The Extempore Speech Competition (Marathi) and in Dialogue writing, organized by Literati Club, Vidyavardhini's College of Engineering and Technology.
- Hiren Vyas (TE AI&DS) part of the Solecthon Team secured 3rd position in Pragati'23 the Business plan competition organized at St. Francis Institute of Technology,
- Parth Puri, Karan Patra, Divyah Mandavia, Karthik Joshi, Winners in Oscillations.
- Vivek Prajapati winner in a solo and Duet Singing competition in Zeal, organized by Vidyavardhini's College of Engineering and Technology.
- Choudhury Suryanarayan Runnerup in instrumental competition in Zeal, organized by Vidyavardhini's College of Engineering and Technology.
- Ojasi Prabhu, Arya Bhosle, Shalaka Kadam Winners in Tug of War in Avahan, organized by Vidyavardhini's College of Engineering and Technology.
- Omkar Bhikle, Aryan Darade, Suryanarayan Choudhury, and Omkar Mhatre winners in a Football match in Avahan, organized by Vidyavardhini's College of Engineering and Technology.
- Omkar Bhikle, Aditya Bobade, Devharsh Jha,Smit Padsala, Omkar Mhatre, Winners in Vollyball match in Avahan, organized by Vidyavardhini's College of Engineering and Technology.
- Krishna Chavhan secured first prize in a 200-meter running competition in Avahan, organized by Vidyavardhini's College of Engineering and Technology.
- Vivek Prajapti and Shubham Waghmare secured first prize in VNPS, organized by Vidyavardhini's College of Engineering and Technology.
- Shalaka Kadam, Neha Sing secured second prize in VNPS, organized by Vidyavardhini's College of Engineering and Technology.

Dr. Vikas Gupta
HOD (AI&DS)
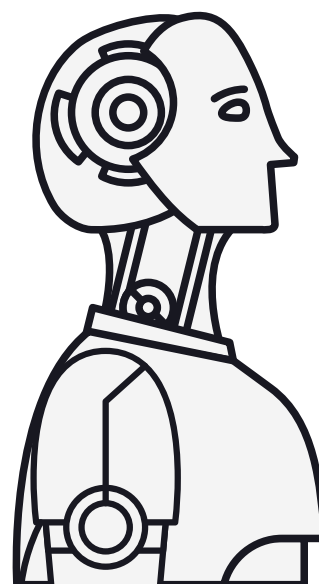
FIRST YEAR ENGINEERING

It is with great pleasure and contentment that I present the following report of the activities which have taken place in the First Year Engineering Department for the academic year 2022–23.

When the first-year engineering students enter Vidyavardhini's College of Engineering and Technology beaming with enthusiasm and aspiration, they are welcomed by the First Year Engineering Department. The Department aims to acquaint the students with the fundamental knowledge that serves as the basis for all the different branches of engineering.

The faculty members of the Department assist the students in comprehending primary conceptual knowledge and awareness in the fields of Applied Mathematics, Applied Physics, Applied Chemistry, and Professional Communication Skills and Ethics. Moreover, the department conducts refresher/orientation courses, counseling sessions, and seminars by faculty members and external experts on various relevant topics. It also organizes several curricular and extra-curricular activities for the students. With the help of expert guidance and the sincere efforts of faculty members, the Department aims to successfully scaffold and mitigate the students' four-year academic journey in engineering and their future beyond.

DEPARTMENTAL EVENTS

FE Orientation Program

On the first day of commencing their journey at Vidyavardhini's College of Engineering and Technology, the students and their parents are invited to the Orientation Program. During the program, the Principal, Deans, HODs, and the F.E. Co-ordinator introduce the parents and their wards to the first-year faculties and the various infrastructural facilities available at the institute.

The parents and their wards are informed about the academic prerequisites including details about the coursework, credit points and assessment system that the institute follows in affiliation with the University of Mumbai and AICTE. Moreover, they are briefed about and encouraged to participate in the myriad of co-curricular and extra-curricular activities organized at the campus.

FE Induction program

A three-week induction program for First-Year Engineering students in adherence to the AICTE norms is organized every year to acquaint them with the faculty members and students of the other departments and assist them in getting acclimated to the new environment. Moreover, they are presented with the opportunity to meet and interact with industry experts during the various seminars conducted during the induction program. This enables them to realize the various industrial prerequisites and the importance of campus placement. The students gradually develop a special bond with the institute and feel motivated to begin their engineering journey with optimism, confidence, and a sense of purpose.

The students are introduced to the various Committees of the campus including the Sports Committee, the Students Council Committee and the NSS Committee. They are notified about the various sports facilities and motivated to participate in routine sports activities and events. In addition, the numerous events conducted by the Students Council Committee are disclosed to them. The elemental ethos of the NSS Committee is explained to them and they are made aware of the many NSS activities like Fit India, Cycling, Beach Cleaning, and the Blood Donation Camp.

The faculties, experts and student representatives worked diligently to ensure that the induction program was a success.

Faculty Achievements:

Courses Attended:

- Mrs. Praiza Gonsalves completed an 8-week NPTEL (SWAYAM) Online Course on "Introduction to Abstract Group Theory" during 25th July–25th Sept. 2022.
- Mrs. Chandrakishori Sonarkar and Mrs. Beauty Ansari completed a 12-week NPTEL (SWAYAM) Online Course on "Concepts of Chemistry for Engineering" during 25th July–1st Oct. 2022.
- Dr Pradip Gulbhile completed an NPTEL Online Certification Course "Developing Soft Skills and Personality" during 25th July–25th Sept. 2022.
- Mrs. Shobhana Shirsat completed an Online Course on "Professional Communication and Soft skills" in Sept. 2022, organized by the Electronics and ICT Academy, the Ministry of Electronics and Information Technology, Govt. of India, Jabalpur.

FDP/STTP attended/organised:

- All faculties have attended a One Week Online Capacity Building Workshop on "Education 4.0: Tools for Effective NEP 2020 Implementation" conducted from 27th June–2nd July 2022.
- All faculties have attended a One Week ISTE Approved SF-STTP/FDP Program on "Reforms and Innovations in Examination System" held during 8th–13th July 2022, organized by the Departments of Computer Engineering and Mechanical Engineering, and the Internal Quality Assurance Cell (IQAC) of Vidyavardhini's College of Engineering and Technology, Vasai (W).
- Dr. Pradip Gulbhile and Mrs. Shobhana Shirsat attended an International Conference on "Indian ELT – Imitative or Generative" at C. K. T. College, New Panvel from 8th–10th Dec. 2022.

Mrs. Chandrakishori Sonarkar attended and successfully completed:

1. Attended a Week Online FDP on "Recent Trends in Environment, Health and Safety Aspects in Industries" organized by D. Y. Patil CET, Kolhapur from 27th–31st March 2023.
2. Attended a 7-Day Online FDP on "Quality Teaching in HEIs" organized by IOT Academy, Tamil Nadu from 20th–28th April 2023.
3. Attended a 7-Day Online FDP on the theme "Advanced Teaching Skill" organized by IOT Academy, Tamil Nadu from 24th–31st May 2023.

Ms. Prachee Shah attended and successfully completed:

1. A Five-Day Online FDP on "Inculcating Human Values in Technical Education" organized by AICTE held during 16th–20th Jan. 2023.
2. A self-paced online course on Business Analytics with Excel by SimplyLearn.
3. A self-paced online course on Python for Data Science.

Dr. Suraj Vishwakarma attended and successfully completed:

A presentation on a research paper titled "Structural and Functional Studies of SiO_2 Thin Films" at a National Conference organized by the Department of Physics, Guru Nanak Khalsa College of Arts, Science and Commerce, Matunga, Mumbai during 16th–17th Dec. 2022.

Mrs. Kamini More attended and successfully completed:

1. A One Week AICTE Recognized FDP on "Stress Management" conducted by the Department of Education and Educational Management at NITTTR, Chandigarh during 14th–18th Nov. 2022.
2. A One Week AICTE Recognized FDP on "Team Building, Motivation and Creativity" conducted by the Department of Education and Educational Management at NITTTR, Chandigarh during 12th–16th Dec. 2022.

Mrs. Beauty Ansari attended and successfully completed:

A Five-Day Online FDP on "Recent Trends in Chemistry" organized by the Department of Chemistry, School of Advanced Sciences (SAS), VIT-AP University, Amravati during 19th–23rd June 2023.

Mr. Mayur Gohil attended and successfully completed:

1. A One Week National Online Workshop on "Biostatistical Data Analysis and Research Methodology" conducted by the Science Tech Institute, MKS Educational Society, Lucknow during 21st–27th Dec. 2022.
2. A One Week National Online Workshop on "Advance Statistical Data Analysis using SPSS" conducted by the Uttar Pradesh University of Medical Science, Saifai Etawah, Science Tech Institute, Lucknow during 21st–27th Jan. 2023.
3. A National Workshop on "Mathematical Tools MATLAB and Mathematica" conducted by the Division of Mathematics, School of Advanced Sciences, Vellore Institute of Technology, Chennai during 30th–31st Jan. 2023.

Awards Received:

Dr. Pradip Gulbhile and Mrs. Shobhana Shirsat were awarded a certificate by the Makunsar Village Gram Panchayat, Saphale for the Social Service Activities conducted in their village in Feb. 2023.

Dr. Pradip Gulbhile was awarded:

1. The Third Prize as a Programme Officer of NSS VCET in Palghar District by the University of Mumbai.
2. Certificates for the NSS Annual Orientation and Evaluation programmes for the Academic Year 2022–23.
3. A certificate for participation in National Level G-20 Adhiveshan Summit at Pune University.

Dr. Sunayana Jadhav
F. E. Coordinator

Literati - The Literary Club

Literati – The Literary Club of Vidyavardhini's College of Engineering and Technology is responsible for promoting and supporting literary activities within our esteemed institution. Over the past year, the committee has made significant progress in achieving its objectives and goals and as such this report outlines the committee's activities, achievements, and challenges during the academic year 2022-23.

We begin each year by welcoming creative and interested members to our committee, who pour their heart and soul into this committee and infuse the coming years with insight and enthusiasm. The theme for Vista 2022-23 "Atraaf - Giving life a new direction" showcased outstanding literary works from various students, ranging from readers and writers to novelists and poets across our college. The committee organised events in multiple languages - Hindi, Marathi, and English - fostering increased participation and zeal.

With our motto of promoting literature, Marathi and Hindi Kavi Sammelan were two poetry recitation competitions hosted consecutively. The competition shed light on some of the finest poets in the college and their magical compositions. The committee also encouraged faculty participation through MBD (Marathi Bhasha Divas), an initiative aimed at unveiling the literature enthusiasts among the teaching staff.

The ultimate and most-anticipated event of the year Litfest'23 capped off the glorious work put forward by the committee members. This year, Litfest'23 was held from 6th March 2023 to 16th March 2023. As a regular trend that has been seen over the years Faceoff 10 and Unscripted - The Extempore competition attracted curiosity and delight throughout the students, faculty, and management of VCET.

Event Name	Event Date
Seminar on Soft Skill	19/09/2022
Hindi and Marathi Kavi Sammelan	03/10/2022 - 04/10/2022
Summit on Learning Leadership & Life	10/10/2022
International Mother Language Day	21/02/2023
Marathi Bhasha Divas	24/02/2023
Unscripted - The Extempore Speech Competition(Eng, Hin & Mar)	06/03/2023 - 07/03/2023
Faceoff(Intra)	09/03/2023 - 10/03/2023
Faceoff(Inter)	13/03/2023
Litfest'23	12/03/2023 - 16/03/2023

While the year had its share of ups and downs, the committee members' unity and sheer determination turned every challenge into a grand success, earning accolades and praise.

Ms. Swati Varma
Staff In-charge
Literati - The Literary Club

Students' Council

The Student Council plays a crucial role in shaping the overall student experience on the VCET campus. The Student Council is responsible for organising various events and activities that promote extracurricular participation and holistic development. It encourages students to showcase their talents, hone their skills, and interact with their peers, thereby creating a vibrant and inclusive campus culture. The Student Council actively organises various events throughout the academic year, starting right from the orientation for the newly admitted students to organising the main cultural fest called ZEAL.

The Orientation for the fresher's is conducted by the council giving them an overview of the events lined up for them throughout the academic year and also opening the doors of the council for them. The Fresher's party is organized at the beginning of the academic year to welcome the new batch of students. It provides an opportunity for them to get to know their peers and interact with them. To honour and appreciate the hard work and dedication of the faculty members council also celebrates Teacher's Day with fun and interesting activities. It is a day of gratitude, respect, and recognition for the valuable contribution made by the faculty members in shaping the students' future.

A high-energy event like the Garba Night is also arranged by Students' Council during the Navratri festival. The event is open to all students, and participants are encouraged to dress in traditional attire. To mark the end of the academic journey of the final year students, Students' Council organises a Farewell party bidding them a formal goodbye. Farewell serves as a symbolic closure for the graduating students' college life and helps them strengthen their bonds with their peers and the college community. "ZEAL" being the most awaited event by not only the students but also the faculties of VCET is organised by the Students Council. It is a three-day event that brings together everyone to participate in various cultural activities. The event includes dance performances, music concerts, drama, and other cultural activities which kindle the creative side of each participant.

In conclusion, the Student Council of VCET has been organising various events that promote student engagement and involvement. The events help to create a vibrant and inclusive campus culture that caters to the diverse interests of the students. These events provide an opportunity for the students to develop their skills, interact with their peers, and celebrate their cultural diversity.

Dr. Sunayana Jadhav
Staff Coordinator
Students' Council

Sports Committee

Sports are a crucial part of everyone's life for the growth, development of mental health, and physical fitness of the body. So, come to the annual sports festival AVAHAN, which is an inter-college youth event, engulfed in sportsmanship, enthusiasm, and determination. AVAHAN is conducted every year, where we aim to culminate our sports celebration, into grandeur of enthusiasm and thrill, and

participants show their skills by performing various strategies.

This academic year 2022-23, Avahan was finalised to be held from 4th January to 15th January 2023 on both intra-level and inter-level. Avahan is an emotion to every VCETian. A wave of joy and excitement sparked among the students of VCET.

Students from various colleges from all over Mumbai came to participate in this event.

Student testimonials of AVAHAN 2023 returning to its main scenario which usually used to happen for 15 days before Covid 19 made the spirits of the VCET Sports Committee work and made the comeback of the main event a grand success. AVAHAN - 'NextGenChamps' is not just an event but it's beyond that for everyone. The whole aim of AVAHAN is to inculcate a sense of teamwork, sportsmanship, and respect among the students.

This year the registration process was online through portal. Number of participants registered and participated in the event. The winning teams were awarded with certificates, medals and cash prizes.

On 4th January, the day finally arrived which was there to shower everyone with the spirit of discipline and sportsmanship. AVAHAN'23 was there to be enlightened by the inauguration ceremony at 10:00 AM at the college ground. The whole aura and charisma of the surroundings were uplifted by our beloved chief guest Mr. Aslam Inamdar national athlete and pro-kabaddi player. Also, our guest of honour Senior PI Sampatrao Patil graced us with his presence in the event. The opening was graced by the traditional folk dance group 'Chende Drums'. The honorable chief guest addressed all the visitors with his motivating speech. Later on, all the respective department representatives along with their fellow mates were established in precise columns holding the flag with pride and dignity. Surpassing this, the march past was conducted resembling the strength and dedication towards their respective departments. This year a skipping show was also crafted showing the different skills and balance of the rope with the body performed by the team 'Rising Skippers'.

The Sports Secretary, Mr. Nitheesh Kulal introduced everyone to the challenges and the support for this grand sports event and The Treasurer Mr. Jay Wanjari gave a vote of thanks to all the dignites, the committee members, and our sponsors with whose support the event was a great success. Since every year, an event is a perception of a new beginning, this year too AVAHAN'23

was unveiled with a different theme. The mighty letters of AVAHAN were holding the energy of this year's participants and the team of supporters all tied with the foil balloons carrying the logo of it. On the count, these boxes were opened and everyone was able to see the new reflections, a fresh start as soon as the logo started flying high in the sky with the glittering essence of those balloons.

All the participants who had registered were contacted by the event coordinators a day prior to the event for updates and reporting time on the basis of their category for the respective sport. A leaderboard was generated for the leading teams for the participants to keep track of their competitors. The events were well co-ordinated due to remarkable co-ordination by the committee members. All the events were conducted on the basis of the decided schedule.

Indoor events along with outdoor events were conducted throughout the span of 15 days. This year arm wrestling and foot volley events were introduced after two years and in these events, many students showcased their talents. Inter-events were held on the 7th, 8th, 12th, and 14th of January where students competed with other students. Overarm cricket was conducted in the Suncity ground on the 13th and 14th of January. Day 15 of Avahan concluded with the Tug of War finals and Football Departmental Finals. The Avahan 2023 was concluded on a very different note with a farrago of emotions amongst the students.

Sport is not always about winning. It is about fair play and believing in equality and justice. Through participation in sports, we gain various skills, experience, and confidence which is helpful in developing our personality. Constructive use of time and discipline is a characteristic gained by participation in such events.

To encapsulate it all, Avahan 2023, was a great success. As we continue to rebuild the

legacy of this amazing event and take it a step further in the following years.

Ms. Neha Gharat
Staff In-charge
Sports Committee

ETA

ETA, which stands for Electronics and Telecommunication Engineer's Association, serves as the literature committee for the EXTC department, offering students a platform to stay informed about current and future technology trends. One of ETA's key objectives is to foster students' research, writing, and editing skills, providing them with valuable opportunities to hone these abilities. Over the years, ETA has made significant progress in fulfilling its core mission, not only focusing on technical skill development but also emphasizing the importance of teamwork and the skills needed to create a magazine from the ground up. ETA lives and breathes its dynamic motto: "Belief in the power of knowledge and the magic of teamwork." By nurturing technical and soft skills, ETA contributes to the holistic development of students in the EXTC department, preparing them for success in their academic and professional journeys.

ETA has been on a knowledge-sharing spree in the academic year 2022-23, released its captivating first newsletter of the year on 'Edge Computing' a distributed computing paradigm that brings computation and data storage closer, the origins of edge computing lie in content distributed networks to serve web and video content from edge servers that were deployed close to users.

The second newsletter of the academic year was based on 'System On Chip (SoC)' a single integrated chip that includes the factors typically set up in a standard computer system.

But the crown jewel is undoubtedly the 13th edition of PULSE Magazine, PULSE'23, with its electrifying theme, 'Electric Vehicle (EV)' - this magazine shows that in a world where environmental protection and energy conservation are growing concerns, electric and hybrid vehicles (EV/HEV) development has accelerated. An electric vehicle is a multi-disciplinary subject that covers broad and complex aspects. This magazine also gives insights into the world of Electric Vehicles and a treasure trove of career opportunities. Along with the core topic of the magazine, it also includes departmental events, inspiring alumni talks, remarkable student achievements and expert articles. ETA's commitment to knowledge is truly electrifying! ETA has maintained its tradition of excellence by publishing that is not only informative but also captivating. We've gone the extra mile by providing continuous updates for the ETA wall which gives awareness to the students about new technologies and opportunities. The new relentless pursuit of technological excellence is grounded in this principle, forging a future where innovation thrives, and success is inevitable. A profound and heartfelt thank you extends to our visionary HOD, Dr. Amrita Ruperee, and our guiding light, Ms. Ashwini Katkar. Their unwavering support and wisdom have been our compass in this journey.

Ms. Ashwini Katkar
Staff In-charge
ETA

ISHRAE

The ISHRAE Mumbai Chapter (IMC) had scheduled the ISHRAE VCET Student Chapter installation ceremony on Thursday, 29th September 2022, from 3:30 pm to 4:30 pm at the Ground Floor Seminar Hall. The installation ceremony was arranged to mark the official establishment of

VCET's ISHRAE VCET student chapter for the year 2022-23. The guests from IMC, office bearers Mr. Sanjay Varma (Zonal Chair, SA-West), and Mr. Devdatta Kadlak were invited for the event, while faculty members from the Mechanical Engineering Department attended the installation ceremony. The guests were welcomed by the faculty in charge, Mr. Vinay Patel, and Dr. Uday Aswalekar, HOD of Mechanical Engineering. This year, a total of 42 students registered for the ISHRAE VCET student chapter. The 12 students selected as core committee members include Mr. Chintan Patel as President, Varad Takke as Secretary, Shubham Irakar as Treasurer, and the remaining 30 students as members.

The ISHRAE VCET student chapter also participated in the national-level product showcase ECH EXPO, conducted on 23rd September 2022 from 10:00 AM to 5:00 PM.

The ISHRAE student activities launched the National Student Design Competition (NSDC) for 2022-23 for ISHRAE student members. Four teams participated in NSDC for 2022-23 from our chapter. ISHRAE Mumbai chapter organized a T-shirt design competition for ISHRAE Student members on 15th October 2022. One team from our chapter participated in the event. Additionally, ACREX India returned for its 22nd edition in Mumbai with a mega event on 14th - 16th March at the Bombay Exhibition Center. Mr. Anish Rathod, a member of the ISHRAE VCET student chapter, participated in the 75F APAC quiz and won the first prize. Moreover, eight students from the ISHRAE VCET student chapter participated as student volunteers in the ACREX event.

Varad Takke
Secretary
ISHRAE

German Club

In today's academic and professional landscape, students who possess proficiency in multiple languages are often recognized as exceptionally talented individuals. Such students are highly sought after by reputable companies, and this is precisely why our college initiated the establishment of the 'German Language Club' in 2016—a move that has been warmly embraced by students across various departments. Learning a foreign language can be a transformative experience for students, offering a multitude of benefits for both personal development and career advancement. This is particularly pertinent as a considerable number of core companies operate in Germany, presenting an excellent opportunity for students to secure employment there through the acquisition of the German language.

Furthermore, for students aspiring to pursue higher education in foreign countries, mastering this language can prove to be a significant

asset in gaining admission to prestigious institutions abroad.

Upon joining this club, students embark on a journey to acquire German vocabulary, ultimately leading to the development of fluent communication skills in German. Remarkably, German-based companies actively seek individuals who possess proficiency in this language, making our club an excellent avenue for students to enhance their employability. The course structure has been meticulously designed to equip students with the necessary skills to attempt the A1 certification successfully.

Another compelling advantage of this course is its affordability. While other training institutes typically charge around Rs. 15,000 for similar programs, our students can access the same course for approximately Rs. 3,000, ensuring accessibility

for a wider range of learners.

Here are some key reasons why learning German is a valuable endeavor:

• Travel and Mobility: Proficiency in German eases transitions for engineers involved in international work or travel, enhancing their job mobility and overall work experience.

• Admission to German Universities: Many universities in Germany offer Master's programs in engineering and related fields. While some programs are taught in English, knowing German can broaden your options. Proficiency in German can make you eligible for a wider range of programs, including those with German as the primary language of instruction.

• Multinational Companies: Proficiency in German is valuable in Indian engineering jobs because it enables effective communication with German-based multinational companies like Siemens, Bosch, and Volkswagen, enhancing collaboration and client interactions.

• Global Collaboration: Knowing German aids in seamless communication with international engineering teams and clients, as it's widely spoken in Europe, facilitating smoother collaboration and project execution.

• Engineering Excellence: Germany is renowned for its global leadership in the field of engineering, making proficiency in German highly desirable for engineering students seeking international career opportunities.

In summary, acquiring a new language, such as German, can unlock a world of opportunities and broaden your perspective in ways you may not have encountered otherwise. Beyond personal growth, proficiency in German can significantly enhance students' professional, economic, and social prospects, making it a worthwhile investment in their education and future careers.

Our students studying in Germany:

- Samruddha Mhatre
- Batch 2019-20
- Completed master's in cyber security TU Berlin in 2022-23
- Working as a Cybersecurity Analyst
- Krima Shah
- Batch 2020-21
- Doing MS in Data Science in Dortmund.

Course Objectives:

- To educate students in the German Language.
- To teach a foreign language for students to improve their skills.
- To prepare students for A1 Certification.
- To enable students to get into German-based core companies.

Batch 2022-23:

No. of students registered: 26.

Declaration of course session: 5th April 2022

Commencement of Course: 30th July 2022

Maintenance of attendance, assignments, and quizzes of students.

Prof. Yogesh Pingle
Grundstufe -II Certified
(German Language)

Team Airnova

Team Airnova is the official Aeronautics and aerospace team of Vidyavardhini's College of Engineering & Technology; the main motto of the team is to spread awareness about technological advancements in the Aviation and Spacecraft sector. The team was established in 2019 and made an official part of the college in 2020. The team functions under the guidance of our faculty in-charge, Prof. Vishwas Palve and, along with them, has had support from our other college faculties. The team has participated in several competitions during this time.

The team is currently working on the Gesture Control Drone. The drone is capable of being controlled by the hand gestures of the pilot. This is the team's research project. We have created a machine-learning model to detect gestures from the camera with over 96% accuracy. The drone is currently under testing.

Seminars and workshops to raise awareness about Aeronautics and Aerospace
- A webinar was held on Opportunities in Aerospace & Aeronautics Industry
- A Seminar was held on Types of Drones & and their applications.

Teams Participation/Achievements:

Sr. No.	Event Participated/ Achievements	Dates
1	Aerophilia	2022
2	Technoxian	2023

Teams Motto and Mantra:

The team provides a platform for all engineering students to come together and design and manufacture RC aircrafts and UAVs to participate in competitions regarding the designing of UAVs and aircrafts that can be implemented in the industry with regard to recent developments.

Shreenand Pandere
(Team Airnova)

Hackathon

Short Description of the Committee:
The Hackathon Committee of the Information Technology Department has been the driving force behind our college's prestigious technical event for the past six years.

With a commitment to foster innovation and technical prowess, this dedicated team orchestrates an intense 30-hour coding marathon that challenges participants to push their limits and unleash their creative potential.
Their unwavering dedication and organizational skills have consistently delivered an event that fosters collaboration, learning, and the pursuit of groundbreaking solutions. The committee continues to inspire and challenge participants to push the boundaries of technological innovation.

Details of organised event

Sr. No.	Event Name	Dates
1	VCET Hackathon 2022	07/10/2022 & 08/10/2022

Committees Motto and Mantra:
1. To Orient Students Towards Building A Team.
2. To Orient Students Towards Innovative Thinking.
3. To Expose Students to Professional Business Applications.
4. To Drive Students Towards Tireless Pursuit of Problem-Solution

Mr. Sainath Patil,
Staff In-charge
(VCET Hackathon 2022)

ISA

The main motto of the VCET ISA Students Chapter is to provide a platform for the students to become better Instrumentation Engineers.

The committee emphasizes the commitment to inspiring students, fostering innovation, and advancing the field of instrumentation and automation. Bringing together students, professionals, and academics to collectively advance the field of automation. It focuses on imparting knowledge, encouraging practical application, and striving for excellence in the instrumentation field.

The goal is to imbibe relevant professional skills in students to meet the prevalent demands of the industry, academia, and society in the multidisciplinary field of Instrumentation and Control engineering. To accentuate collaborations with industry and academic institutes to inculcate real-time learning in the automation industry in line with the future needs of globalization. Thus contributing to awakening the spirit of research and higher studies among students and faculty close to it for global developments and encouraging contemplative thinking in students in regard to their prospective career in futuristic technologies.

Details of organized events :

Event Name	Event Date
Virtual Industrial Visit	15/09/2022
Yantra: The Product Showcase	23/09/2022
Oscillation: The Technical Paper Presentation	17/03/2023
VNPS 23: VCETs National Level Project Showcase	06/04/2023

ISA Student's Chapter in the Instrumentation Department of VCET serves as a bridge between academia and industry, promoting learning, research, and professional development in the field of instrumentation and automation. It helps students gain practical exposure and stay updated with the latest trends and technologies in this dynamic field.

ISA committee serves as a student chapter of the International Society of Automation (ISA). It provides a platform for students to engage with industry professionals, share knowledge, and network with like-minded individuals. The committee organizes technical workshops, seminars, and conferences by inviting industry experts and professors to deliver guest lectures on topics related to instrumentation and automation. This provides students with insights from experienced professionals. The committee arranges visits to industrial plants and facilities where students can observe real-world applications of automation technology. This practical exposure is invaluable for engineering students. ISA committee hosts technical competitions like YANTRA and is also a part of the VNPS (VCET National Level Product Showcase) and OSCILLATIONS related to instrumentation and automation. These events encourage students to apply their knowledge and compete in a fun and educational manner. The committee also assists students in career development by providing information about job opportunities, internships, and guidance on building a successful career in the field of instrumentation. ISA committees also provide guidance on newsletters, magazines, or technical journals where students and faculty can contribute articles, research papers, and case studies related to instrumentation and control systems. This encourages research and knowledge sharing within the department, and induces the entrepreneurial spirit of the automation industry required by industry and society. **Mrs. Deepti Patne**
ISA-SC Faculty Incharge

IGBC

Short Description of the Committee:

The Indian Green Building Council (IGBC) is a technical committee within the civil engineering department for the development of students. The IGBC student chapter has been a part of the department since its inception in 2020. From its birth, the IGBC student chapter actively organized various technical events such as the Product Showcase, Project Showcases and different workshops related to civil engineering for the awareness and advancement in technologies pertaining to civil engineering. The Product Showcase is celebrated every year on Engineer's Day successfully. Additionally, the participation and interaction of the IGBC student chapter with other technical committees for the national-level Project Showcase is outstanding. The council offers a wide array of services which include developing new green building rating programs, certification services, and green building training programs. The council also organises the Green Building Congress, its annual flagship event on green buildings. Membership in the student chapter provides its member students with a unique reach and access to resources that provide a certain competitive edge. By becoming a member of IGBC, VCET students join a community of professionals who chart the green building path for India. The council is committee-based, member-driven and consensus-focused. All the stakeholders of the construction industry comprising architects, developers, product manufacturers, corporations, government, academia, and nodal agencies participate in the council activities through local chapters. The council also closely works with several State Governments, the Central Government, the World Green Building Council, and bilateral and multilateral agencies in promoting green building concepts in the country.

Details of organised event

Sr. No.	Event Name	Dates
1	IGBC green Week	12/09/2022-16/09/2022
2	Bridge Burst	31/03/2023 -01/04/2023
3	Card Rush	31/03/2023 -01/04/2023
4	Technical Poster Presentation	31/03/2023 -01/04/2023
5	Urban Vision	31/03/2023 -01/04/2023
6	Panel Discussion	31/03/2023
7	NDT Workshop	01/04/2023

Committees Motto and Mantra:

IGBC aims to eliminate the communication gap between the industry and the educational system by offering a robust sharing platform. Alumni, businessmen, entrepreneurs, and college students have a unique chance to get engaged in the advancement of sustainable development, smart building, and the promotion of new construction methods in India. The committee organises a technical fest "NIRMAAN" which presents unique challenges and helps them to utilise their engineering knowledge in real life. The success of an event is always about the combined efforts and zeal of the participants, the organising committee, student volunteers, and faculty members, and such is the case with the members of this committee.

Dr. Viren Chandanshive
Staff In-charge
IGBC

Solecthon

A Step Towards Sustainability...

The team was established on 19th September 2017 by our respected seniors Mitesh Sawant and Mahendra Solanki with the motto of taking "A step towards sustainability". With just 18 automobile enthusiasts in the beginning i.e., season 1.0 backed by Prof. Swapnil Mane our Faculty Advisor, and now by Prof. Dipak Choudhari who supported our vision and made efforts for the betterment of the team.

2022-23 has been a remarkable year for the team with a victorious title for consecutive 3 events of "OVERALL CHAMPIONS" for the following events:

- SEVC-22
- SEVC-23
- ESVC 3000

Events in the year 2022-2023:

After participating in SUVC, our team was invited to the SEVC event, scheduled for August-September 2022. We embarked on an intense research phase followed by a dedicated design phase. During this time, we manufactured custom components and procured other necessary parts. The manufacturing process was followed by rigorous testing, during which we encountered various technical challenges. Despite the hurdles, we successfully overcame them. On August 29, we set out for Coimbatore and arrived on August 31. Upon arrival, we immediately began assembling our vehicle. After two attempts, we cleared the technical and inspection rounds.

We excelled in various aspects like brakes, acceleration, and load handling, leading us to the endurance round. During the endurance round, our vehicle unexpectedly broke down after completing 5-10 laps, resulting in a 43-minute breakdown. We resolved the issue and re-entered the endurance round. After successfully completing it, we eagerly awaited the results. As the awards were being announced, different teams received recognition, and we anxiously awaited our turn.

Our first award was the "Best Business Plan Award," and this marked a turning point for us. From there, we went on to receive an impressive total of 9 more awards. The suspense built as the announcement for the overall winner approached. Our competitors had been tough, and when the 1st runner-up was named, we felt a rush of anticipation. Finally, the moment arrived, and the announcement we had all been waiting for came: "The winners of SEVC-22 are TEAM VCET Solecthon."

It was a thrilling and rewarding journey for our team, resulting in our victory at the SEVC-22 event. Right after SEVC 22, the Team continued its designing phase soon after the odd semester exams. In the month of December, with the designing phase of Solecthon 6.0 the team simultaneously started preparing for ESVC 3000 virtual. During the month of January recruitment process for the upcoming academic year began, the team also attempted the rulebook test on 11th January 2023.

By 9th February Team winded up the designing phase and was entering into its Manufacturing phase. On 25th February ESVC virtuals of Cost and Manufacturing were held. And on 26th February Engineering Design virtuals were held. SEVC on the other hand invited us for their upcoming SEVC 2023 event as we have been champions in their previous organised events. In the month of March, the team decided to participate in SEVC 2023. As SEVC introduced a new category HEV in the competition, the Team decided to participate with 2 vehicles one being Solecthon 6.0 as the event could be used as a testing ground for Solecthon 6.0. Two separate teams were formed: Team "VCET Solecthon" and the other Team "VS Pratibimb". The team started preparing for both SEVC and ESVC simultaneously. The manufacturing phase of Solecthon 6.0 was in progress and the refurbishing/manufacturing of 3.0 was going simultaneously.

The business plan subsystem of the team participated in a national-level business plan competition "Pragati '23" at SFIT, Dahisar. The competition was of two days: 10-11th March 2023, on the first day Round 1: Business Plan Presentation Round qualified the team, and on the second-day team aced Round 2 Elevator Pitch, and Round 3: Q&A session, the day with Valedictory ceremony and Team bagged third prize in the competition.

On 12th March, the team attempted the SEVC Rule book test for both VCET Solecthon and VS Pratibimb, which went quite well. Following the rulebook, the Team had its virtual presentation on 20 and 21 March. Post virtual Team decided to drop the plan of taking Solecthon 6.0 to SEVC as the manufacturing of the vehicle was not completed. On 26th March, the team left for SEVC, Coimbatore from Mumbai and reached on 28th March. A few members of the team were managing the manufacturing of 6.0 in Vasai during the same time.

The event started on 29th March,2023 On day 1 there was an inaugural ceremony followed by the captain's evaluation. The team started working on the car right from day 1.

On day 2, the team began with static rounds and attempted the Innovation and design round: The team presented their autonomous system on the road which was highly appreciated by the judges, competitors, and audience, The cost round was attempted followed by the First TI. The team did the needed changes suggested by the judges during first TI and attempted the Second TI on Day 3, The Team also attempted the business plan round, followed by the last couple of changes Team cleared its Technical Inspection round and proceeded to weight and Egress Test. VCET Solecthon was the only team that cleared the TI first that too consecutively for 2years.

With the rise of Day 4 Team started Preparing for Dynamic rounds. During the Brake test the vehicle faced a mechanical issue and thereby on the third attempt cleared the brake test. The team aced the next dynamic rounds which were manoeuvrability hovering and drag. On the same evening Rusk in Dusk (night ride) round was held, the team completed 90% of the rally but stopped 5 minutes earlier due to SLI battery failure. At the end of dynamic rounds, the team started preparing for the next day as it had two major events: EV Rally and Final Endurance. With the dawn of Day 5 EV Rally began, Solecthon 3.2 was proudly running on the streets of Coimbatore, it covered a distance of 10 km. Later the vehicle was lined up for the final endurance, the marshals guided the drivers to the final circuits of Endurance. The endurance begins. Without any breakdown, Solecthon 3.2 completed the endurance for 3 Hours, the team with Maximum number of laps. The event concluded with the valedictory ceremony, The Team bagged 12 Awards including the Overall championship.

Meanwhile, back in college, other members of the team were simultaneously working on Solecthon 6.0. Assembly of 6.0 was completed in 10 days with the extra efforts of the team members and the support of the college. College Team and the car departed for ESVC 3000 on 12th April 2023 from Mumbai.
The car was expected to reach Noida on 13th April 2023. The event began on 14th April 2023. It started with the inauguration; the ceremony continued with the captain's brief. Due to the transportation company's adultery, the car's arrival was delayed. College management as well as many colleges College Faculty were making efforts to resolve our problems, especially the team's faculty advisor Prof. Dipak Chaudhari Team started their third day with a business plan presentation. Meanwhile, the team's car arrived at the event on the same day, unfortunately with few damages. The organizers cooperated with the team and granted an extra day for the preparation. The team completed safety TI and presented the Design and Cost Presentation. As things began to gear up Team completed their first Technical Inspection round followed by making changes suggested by the judges completed and

cleared the Technical Inspection on 18th April. Right after TI, the team cleared the Brake test. Following by brake test, the team completed Cross-pad and excelled in Hill climb. On 19th April, the rally day began, during the line-up, Solecthon 6.0 was at the first pole. The team interacted with industry personnel and media. It was indeed a proud moment as Solecthon 6.0 covered the Yamuna Express Highway in minimum time, without any failure. Team VCET Solecthon was the first team to complete the entire rally. On the next day, the team Performed Solar endurance and Autonomous round. On the last day, the Valedictory Ceremony was conducted VCET Solecthon won the championship along with 6 other awards.

Overall to conclude the year 2022-23 has been a fantastic, sustainable, insightful, and rewarding year for Team VCET Solecthon. As 4 times National Champions, the team is looking forward to participating and competing with international teams, representing College and India on the International level. Currently, the Team has started with the research phase of Solecthon 7.0.

The team is now waiting for the Bridgestone World Solar Challenge (Australia) 2025.

Yash Solanki
Member
Team VCET Solecthon

Team Centurion

Team CENTURIONS, a seasoned and dedicated group within your college, specializes in the intricate art of designing and manufacturing ATV Quad Bikes. Their legacy is a testament to unwavering dedication and an unquenchable thirst for improvement. With a relentless pursuit of excellence, the team is committed to producing formidable vehicles, epitomize power and agility.

Throughout their journey, Team CENTURIONS has diligently honed their skills by actively participating in national-level competitions. These contests have served as the proving ground for their engineering prowess, solidifying their reputation as a dominant force in the field.

What sets Team CENTURIONS apart is their ceaseless commitment to progress. Each project is approached with an insatiable hunger to outdo their previous achievements. Their mission is not just about crafting powerful and agile machines; it is about continuously transcending their own limits, pushing boundaries, and setting new standards. The pursuit of improvement is woven into the fabric of their identity.

In an era where innovation and engineering excellence reign supreme

Team CENTURIONS consistently rise to the occasion, demonstrating their mettle and capacity to engineer not just high-performing, but technologically advanced vehicles. Their journey exemplifies the power of unwavering dedication, teamwork, and the relentless quest for engineering perfection. With each new project and competition, they etch an enduring mark on the landscape of ATV Quad Bike design and manufacturing.

Under the expert guidance of their faculty advisor, Prof. Raahul Krishna, the team has been able to channel their efforts effectively and achieve success. Their college management, including the honorable Principal, Head of the Mechanical Department, and sponsors, have provided unwavering support, which has played a crucial role in the team's accomplishments. This collaborative effort ensures that the team can continue to innovate and excel in the world of ATV Quad Bike design and manufacturing.

Teams Motto and Mantra:

The team's motto is fueled by an innate hunger to

continually surpass their previous accomplishments. They consistently strive for improvement and have been on a journey of self-discovery, testing their skills and mettle (and metals) in prestigious national-level competitions. Their main objective is to gain hands-on experience in designing and manufacturing ATVs, becoming proficient in designing software, and fabricating safe and functional vehicles in a cost-effective manner. Beyond technical skills, they aim to develop engineers who are well-rounded and possess collaborative working abilities, team confidence, and entrepreneurial skills.

Teams Participation/Achievements:

Event Name	Event Date
9th-QT IT(Technical Inspection)	03/08/2023
9th-QT Cost Report - 4th Rank	04/08/2023

Event Name	Event Date
9th-QT Business Plan - 6th Rank	05/08/2023
9th-QT Kill the Hill Test - 5th Rank	06/08/2023
9th-QT Acceleration Test - 6th Rank	06/08/2023
9th-QT Final Rank - 9th	07/08/2023

Prof. Raahul Krishna
Staff In-charge
Team Centurion's

Team Ethan Racing

Short Description of the team: Ethan Racing, a dynamic group of undergraduate students, is dedicated to making a profound impact in the world of Formula Student Racing. Our team is committed to establishing a robust network among Indian teams, showcasing our exceptional skills in conceiving, designing, manufacturing, and testing formula-style race cars, and leaving an enduring mark in the global motorsport community.

Having competed in the prestigious International Level Formula Bharat competition, our team has notched up a remarkable record with five conventional cars and an innovative prototype of an electric vehicle (EV). Last year, we proudly unveiled our very first electric car, underlining our unwavering commitment to driving the growth of electric mobility in India for a more sustainable future. We are passionate about enriching the educational experience of students by applying engineering principles throughout the process of building a formula-style race car.

Our mission is to champion innovation and continuously refine our designs.

Ethan Racing thrives in the fiercely competitive landscape of Formula Student Racing, with formidable opponents that include renowned teams such as those hailing from esteemed institutions like IIT Bombay, IIT Madras, and many others. As we engage in the annual FSEV concept challenge, we aim to stand out by conceptualizing and designing an exceptional Formula Student Electric Vehicle, further solidifying our position in the world of motorsports.

Formula Bharat is a captivating engineering design competition that unites students from across India, the UAE, Nepal, Sri Lanka, and beyond. In this exhilarating contest, participants present their skills by constructing life-size formula-style vehicles, while undergoing rigorous evaluation in areas such as engineering design, overall cost, marketability, and

dynamic performance.

The competition involves competing for a life-size formula-style vehicle in areas of

- engineering design
- overall cost
- marketability
- dynamic performance

This competition serves as a dynamic platform to fuel the passion of aspiring engineers and bridge the gap between theoretical knowledge and practical application. It offers a unique opportunity for students to apply classroom engineering theories in a real-world context, all while locking horns with some of the brightest minds in the field, including our esteemed competitors from institutions like IIT Bombay, IIT Madras, IIT Delhi & KJ Somaiya.

The purpose of this competition is to fuel your engineering passion and bridge the gap between theory and practice in this valuable hands-on competition, offering a platform for students to apply classroom engineering theories in a real-world context.

Teams Motto and Mantra:

Mantra: "Engineering Dreams, Forging Futures."
At Team Ethan, our mantra resonates with the power to engineer dreams and shape the future. We are more than a racing team; we are a force driving the ambitions of young minds, inspiring them to pursue engineering with passion and dedication. Through innovation and unwavering commitment, we aim to leave an indelible mark, setting the stage for a brighter, more dynamic world.

Motto: "Revving Innovation, Accelerating Excellence."
Our motto encapsulates our relentless pursuit of innovation in every aspect of our Formula-Style Car project. We are a team of dedicated engineers who race against the status quo, accelerating our pursuit of excellence. With each challenge we overcome, we push the limits of what is possible, leaving an indelible mark on Formula Bharat and inspiring future generations to do the same.

Team Participation/Achievements:

Sr. No.	Event Participated/ Achievements	Dates
1	Formula Bharat 2023 – 13th AIR	January 19 - 24, 2023

Yash Duduskar,
Team Ethan Racing Electric.

CSI

Short Description of the Committee: "CSI", which stands for Computer Society of India, is one of the most esteemed technical committees of VCET. CSI - A society that helps students acquire knowledge and gain information about recent technological trends and convert them into professionals. It is a combined organization of the Computer, Information Technology, CSE(DS) and AI&DS departments that conduct events that will acquaint students with modern-day technology and advancement. CSI-VCET organizes various technical workshops and seminars for all

students, offering them an invaluable opportunity to familiarize themselves with emerging technologies. These events serve as a bridge between the academic curriculum and real-world industry practices, ensuring that students are well-prepared for the dynamic field of technology. We are also a proud part of the group of committees that organize VCET's National Level Project Showcase (VNPS) and Oscillations (Technical Paper Presentation) every year. This event fosters a culture of research and academic excellence among students,

helping them develop critical thinking and presentation skills. The CSI-VCET students chapter also organizes ABACUS, ELIXIR and Product VIDYA, which are also product showcase events held at an intra-college level. Apart from exhibiting projects, we also conduct fun tech quizzes and events which make learning easy and fun. Through these events, students have the opportunity to interact with experienced industry professionals, ask questions, and gain valuable insights that extend beyond classroom learning.

Committees Motto and Mantra:

Motto: "Elevating Technical Prowess for Excellence"
Mantra:

1. "Learn, Adapt, Excel": Emphasize a commitment to continuous learning, adaptation to new technologies, and achieving excellence in technical skills.

2. "Innovate to Elevate": Encourage a culture of innovation to elevate technical expertise, always seeking creative solutions to technical challenges.

3. "Collaborate for Proficiency": Promote collaboration to enhance technical prowess by leveraging the collective knowledge and skills of the team.

2	ABACUS	23/09/2022
3	ELIXIR	23/09/2022
4	PRODUCT VIDYA	23/09/2022
5	Seminar on BI (Business Intelligence) Tools	29/09/2022
6	Seminar on Microsoft's No Code/Low Code Platform	22/02/2023
7	Seminar on Introduction to Drones and various Avionics Technologies Involved	14/03/2023
8	Oscillations (Technical Paper Presentation)	17/03/2023
9	Seminar on Data Wrangling with Python	27/03/2023
10	Seminar on Linux Administration	29/03/2023
11	VNPS (VCET's National Level Project Showcase)	06/04/2023

Details of organised event

Sr. No.	Event Name	Dates
1	Engineer's Day Technical Quiz	15/09/2022

Ms. Swati Varma
Staff In-charge
CSI

PR Committee

In the words of Richard Branson, "Publicity is critical. A good publicity is infinitely more effective than a front-page ad." At VCET Vidyavardhini's College of Engineering & Technology, we wholeheartedly embrace this belief, and our PR (Public Relations) team is a testament to the incredible impact that effective public relations can have. It is with immense pride that we share our journey and accomplishments as we continue to represent our college to the world.

Our PR team is the custodian of VCET's public image, working diligently to connect the college with a broader audience. Through strategic collaborations with media partners, we ensure that every significant moment at VCET is shared with the world through articles, live videos, and media coverage. We extend our heartfelt gratitude to our esteemed Principal, Dr. Harish Vankundre, for entrusting us with this pivotal role in representing our institution.

Over the years, we have been privileged to cover and feature major events at VCET, such as VNPS, Zeal, E-Summit, Degree Certificate Distribution Ceremony, and many more. These events have not only showcased the remarkable talent and achievements of our students and faculty but have also contributed to the overall growth and recognition of VCET in the academic landscape.

One of our proudest achievements has been the collaboration with esteemed media partners such as Maharashtra Times, Loksatta, ZEE 24 Taas, Sakal, and others.

Through these partnerships, we have had the privilege of publishing numerous articles in these renowned newspapers, further elevating the visibility of VCET. Additionally, we have had the honor of hosting these media outlets on our campus, facilitating live coverage of VNPS 2023, and giving the world a glimpse into the vibrant and dynamic environment that defines VCET.

Dr. Archana Ekbote
Staff In-charge
PR Team

IETE-SF

Short Description of the Committee: The Institution of Electronics and Telecommunication Engineers is India's leading and recognized professional society dedicated to the advancement of Science and Technology in Electronics, Telecommunications, Information Technology, and other related disciplines. The IETE Student Forum was inaugurated in the year 2004 by the Department of EXTC, with Ms. Shaista Khanam serving as the IETE VCET-SF Counsellor.

The committee regularly conducts various activities focusing on emerging technology trends. It provides a platform for students to exchange ideas on technical topics, facilitates technical visits, project works, and employment opportunities, and fosters team spirit and self-reliance among student members. The committee also aims to be a catalyst for overall growth in technical and professional skills among young engineering students.

Several webinars, training sessions, and technical events are organized to support the professional development of its members, along with college students. Towards this end, VCET IETE-SF promotes and conducts basic engineering and continuing technical education programs for human resource development.

Every year, VCET IETE-SF organizes events such as Oscillations (technical paper presentation), VNPS (VCET National level product showcase), Interdepartmental quiz competition, seminars, and workshops on various topics in the EXTC domain. Details of organised event

Sr. No.	Event Name	Dates
1	Flash Microcontroller STM32 Workshop	05/08/2022
2	VLSI: EMERGING APPLICATIONS	08/10/2022
3	Industrial Visit To Logiq Embedded Pvt. Ltd., Vasai	14/10/2022
4	Hands-on Session on "Introduction to LaTeX"	21/10/2022
5	VLSI: EMERGING TRENDS	02/01/2023
6	SDP on Arduino and MATLAB Hands on Training	02/01/2023-06/01/2023
7	Industry Visit to BSNL Satellite Earth Station	18/01/2023
8	Quizzards Of Techno'23	14/02/2023
9	Raspberry Pi Workshop	09/03/2023 & 11/03/2023
10	OSCILLATIONS'23	17/03/2023
11	VNPS'23	06/04/2023

IETE-SF's Motto and Mantra:
"Empowering Students through Engineering Excellence in Technology and Human Development"
The committee's motto revolves around fostering student empowerment through cutting-edge engineering and technological expertise, nurturing both personal growth and societal advancement.

r focus lies in cultivating excellence in technology-related disciplines, fostering innovation, and shaping well-rounded individuals. We are committed to equipping college students with the skills and knowledge for societal progress and holistic human development."

Ms. Shaista Khanam
Staff In-charge
IETE-SF

IEEE-SB

The EXTC department of VCET, organized seminars, workshops and Competitions for the students of VCET, under the committee named IEEE-SB in the academic year 2022-2023.

The respective seminars, workshops and competitions were conducted:

1. Digital Poster-Making Competition
2. Seminar on Benefits of IEEE Membership
3. STEM Project
4. Engineer's Day Extempore
5. Anveshan
6. Seminar on Exposure to DSP applications in Speech Processing
7. Two weeks training program on Krypton CPLD board
8. Think Aloud
9. Seminar on Machine Learning
10. Akashvani All India Radio Industrial Visit
11. Oscillations
12. Accurate Helical Springs Industrial Visit
13. TIFR Industrial Visit
14. VNPS

The "**Digital Poster Making Competition**" organized on **August 12, 2022**, garnered substantial participation with 40 contestants. Dr. Ashish Vanmali, Associate Professor from the IT department, served as the judge for the event. The theme revolved around Industry 4.0, attracting 16 teams. Participants were briefed on event rules,

including poster size, required software, and time constraints. Topics like IoT, Cloud Computing, and Robotics were selected via a chit-picking process. The enthusiastic participants crafted their posters digitally on laptops and submitted them via email for evaluation.

The seminar titled "Benefits of IEEE Membership" was held on August 25, 2022, at Vidyavardhini's College of Engineering and Technology by IEEE-SB. Chaired by Mr. Dattatray Sawant, the event aimed to highlight the advantages of IEEE membership. Mr. Sawant, the event's speaker, emphasized the perks of IEEE membership, emphasizing networking opportunities, skill development, and involvement in humanitarian projects. He elucidated on resources available, addressed queries, and introduced various scholarships, making the seminar both interactive and informative.

STEM Project, conducted on August 30th and September 17th, 2022, aimed to introduce electronics engineering to school students. The event featured ten hands-on experiments showcasing basic concepts like conductivity and mechanical-to-electrical energy conversion. Isaac Newton Global School and Sheth Vidya Mandir were visited for project demonstrations, sparking curiosity and interest among the students.

On the occasion of Engineer's Day Extempore on September 15th, 2022, Dr. Sunayana Jadhav and Dr. Amrita Ruperee presided as judges for the event, with notable attendees. This exhilarating competition aimed to cultivate communication and presentation skills among engineering students, providing a platform to exhibit spontaneity and quick thinking. The topics—Nation's development through engineering, the impact of Make in India, and the role of telecommunication engineers in daily life—prompted engaging impromptu speeches from participants.

On September 23rd, 2022, "Anveshan", a collaborative initiative by IEEE-SB and IETE-SF was organized. The event served as a platform for local businesses to showcase their technological advancements to students, fostering an exchange of knowledge and industry insights. Over 25 companies participated, exhibiting diverse products and services, spanning technology, surveillance, and home decor. Attendees engaged with these showcases, gaining firsthand insights into the evolving industrial technologies.

The seminar titled "Exposure to DSP Applications in Speech Processing" took place on October 21st, 2022, at Vidyavardhini's College of Engineering and Technology. Hosted by IEEE-SB and guided by Dr. Sunayana Jadhav and Mrs. Ekta Naik, the event featured Dr. Ashish Vanmali as the esteemed speaker. The objective was to emphasize the significance of Digital Signal Processing (DSP) and its pivotal role in Speech Processing. The seminar targeted third-year Electronics and Telecommunication students, focusing on Discrete Time Signal Processing.

A"**Two-Week Training Program on Krypton CPLD Board**" organized by IEEE-SB at Vidyavardhini's College of Engineering and Technology, from **December 13th to December 23rd, 2022**, aimed to delve into the realm of Digital Circuits and Systems. Dr. Sunayana Jadhav and Ms. Sandhya Supalkar spearheaded the sessions.

The program commenced with an introduction to Quartus Software, a fundamental tool in engineering design. The training delved deeper into Design Verification using Scan Chains, guiding students through creating a svf file and executing Scanchain Based Testing on the Krypton Board. This hands-on approach heightened understanding and application.

The Think Aloud event held by IEEE-SB at Vidyavardhini's College of Engineering and Technology on February 21, 2023, aimed to foster group discussions among participants. Prof. Chandan Kolvankar, Ms. Shobhna Shirsath, and Dr. Madhavi Waghmare were key speakers. Dignitaries like Dr. Amrita Ruperee, Dr. Sunayana Jadhav, and Ms. Ekta Naik were present. With 17 students participating, the event featured two rounds: elimination and traditional group discussions. Topics were assigned beforehand, allowing participants to speak on a chosen subject. The final round involved group discussions on different topics.

Seminar on "Machine Learning" hosted by IEEE-SB at Vidyavardhini's College of Engineering and Technology on February 27th, 2023, featured Mr. Arun Nambiar, a Tech Consultant at Accenture, as the keynote speaker. Mr. Nambiar delivered an insightful session introducing the fundamentals of Machine Learning (ML) and its wide-reaching applications across industries. He highlighted ML's capacity to train models for predictive and decision-making tasks based on provided data.

An Industrial visit to Akashwani All India Radio Churchgate, held on March 10th, 2023, was an illuminating industry trip.
The tour showcased the station's 32 diverse studios, divided into engineering, program, and administration sections. Discussions covered the technical aspects of signal maintenance, modulation techniques (AM and FM), and transmission optimization.

'The OSCILLATIONS'23' event held on March 17, 2023, at Vidyavardhini's College of Engineering and Technology, was a collaborative effort between IEEE-SB and IETE-SF.

The event provided a platform for individuals to showcase their research and skills. It aimed to encourage students to present innovative ideas and research in front of a knowledgeable audience, emphasizing various fields within engineering, technology, and computer science.

Accurate Helical Springs industrial visit on March 23, 2023, aimed to familiarize students with springs' significance and applications. Dr. Sunayana Jadhav and Mrs. Ekta Naik guided this industrial visit, attended by notable dignitaries like Dr. Jadhav, Ms. Trupti Shah, Mr. Sanjay Lohar, and Mr. Yogesh Pingle.

Students from "Internet of Things" honors and final year "Wireless Networks" participated. They explored the manufacturing process of over 5000 spring varieties, crucial in applications from switches to aircraft production, ranging from 0.08mm to 2.3mm. The visit included a historical film, a museum showcasing various springs, and live manufacturing demonstrations with engaging Q&A sessions. Students concluded the visit with company brochures and pocket diaries.

An industrial visit to the Tata Institute of Fundamental Research (TIFR), Mumbai was organized on March 25th, 2023. This visit broadened students' understanding of classroom concepts' real-world implementations. It facilitated networking with TIFR researchers, providing a glimpse into future research opportunities. Overall, this immersive experience added significant value to the students' academic journey, enhancing their prospects in engineering and technology.

Vidyavardhini's National Level Project Showcase (VNPS) 2023 was held on June 4th, 2023, in collaboration with prominent organizations like VMEA, ISHRAE, IEEE, IETE, ISA, CSI, and IGBC. Mr. Pramod Naik, Director of MSBTE and Joint Director of the DTE Regional office in Mumbai, graced the event as the Chief Guest. The primary objective of this event was to foster a research-oriented culture and promote experiential learning through project-based initiatives. Vidyavardhini's College of Engineering and Technology aimed to provide a platform for aspiring technical students nationwide to showcase their innovative projects and compete on a national level.

Dr. Sunayana Jadhav
Staff In-charge
IEEE-SB

VMEA

Vidyavardhini's Mechanical Engineering Association (VMEA) traces its origin to the year 2000 and is one of the oldest student bodies of VCET. From its inception to the present day, the activities of VMEA have also evolved with time.

The essential purpose of VMEA is to elevate the technical interests of the students of the Mechanical Engineering Department by conducting various activities and hence perplexing their interests. VMEA is entirely built on the energy and drive of its members.

This year's annual report is all about capturing the vibrant events conducted by the committee, a brief overview of which is represented below.

This year began with selecting members of the committee wherein many competent students showed their enthusiasm for being part of VMEA.

The first event organized in AY 2022-23 was MechExpo'22 on 23rd Sep 2022. Mech Expo is an industrial product showcase where our volunteers approach different industries and request them to display their products in our showcase.

The products brought were presented and explained by the volunteers to all the visitors in the showcase. Some of the major industries were Probotic, Ekta Crane Engineering Works, RoboBionics, etc

The next event organised was Workshop on Machine Learning which was organised on 11th and 12th March 2023. The topics which were covered in the workshop were:

- Introduction to ML & Data Science
- Dataset Pre-Processing
- Prediction Models
- GUI Development
- Project Case Study

The purpose of the workshop was to learn new technological skills and have lifelong learning skills. Overall, the Machine learning workshop was a great success and received a good response from participants.

Further, we organized Vidyavardhini's National Level Project showcase as an opportunity for the students to showcase their ideas and design working models.

I thank the entire staff of the Mechanical Department for supporting and helping us wholeheartedly, whenever required. I would like to pen down a special vote of thanks to our Head of Department Dr. Uday Aswalekar and our Faculty Advisor Priti Vairagi, for successfully leading the committee and always being there when the committee required.

Finally, I pay my highest regards to all my friends from B.E Mechanical and VMEA committee members who worked with their utmost enthusiasm and commitment while managing their academics.

Aditya Hendre
President
VMEA

EBSB

The EBSB committee, a commendable initiative initiated during the lockdown period by the Indian government to enhance cultural bonds between states, has successfully curated a series of engaging events, marking a significant contribution to the cultural exchange between Maharashtra and Odisha. In January 2022, the committee inaugurated its annual events with a Seminar on Makar Sankranti.

This event not only highlighted the diverse celebrations of Makar Sankranti across different states but also featured an insightful act performed by member students of the EBSB committee. The collaborative efforts of the committee members made this event an informative and entertaining cultural extravaganza.

Moving forward to September 2023, the committee organized "Jignasa," a cultural quiz competition that transcended traditional boundaries. This interdepartmental competition

witnessed enthusiastic participation from each department, with teams of three students showcasing their cultural knowledge of India across four intriguing rounds. The Computer Department emerged victorious, adding a sense of achievement to the diverse cultural landscape of the EBSB events.

Two days later, the committee continued its cultural celebration with an inter-college clay molding competition. Participants, either solo or in duos, showcased their artistic prowess, sculpting Ganesh idols with a distinct touch of Odisha. This competition not only served as a platform for creative expression but also strengthened the cultural ties between the participating colleges.

The grand conclusion of the event was marked by the felicitation ceremony, where participants and winners received certificates. The chief guest, Mr. Narendra Kadam, added prestige to the occasion

by personally honoring the achievers. This finale encapsulated the success of the committee's endeavors in fostering cultural exchange and understanding. The EBSB committee's inception during the lockdown period underscores its resilience and adaptability, turning challenges into opportunities for cultural enrichment. The annual events stand as a testament to the committee's dedication to promoting unity in diversity and fostering meaningful connections between states. In our journey ahead, we remain steadfast in our commitment to host events that seamlessly weave together cultural diversity and promote a sense of unified identity. Our vision is to continue fostering meaningful connections between Maharashtra and Odisha, transcending geographical boundaries through shared cultural experiences.

As we embark on this path, we aspire to infuse innovation into our events, seeking fresh and imaginative ideas to enhance the richness of cultural exchange. Our goal is to create platforms that not only celebrate diversity but also inspire a deeper understanding and appreciation for the unique traditions that make our states special. Together, let's build bridges through cultural exploration, forging bonds that go beyond borders. The EBSB committee is dedicated to shaping a future where each event becomes a canvas for unity, showcasing the beauty of our collective heritage. Join us on this exciting journey of cultural unification and discovery!

Rohit Redekar
Member
EBSB

E-CELL

E-Cell VCET is the entrepreneurship cell of Vidyavardhini's College of Engineering and Technology. E-Cell is a dynamic and innovative organization, established in 2015, dedicated to promoting entrepreneurship and nurturing budding entrepreneurs. It serves as a hub for aspiring business leaders, providing them with a platform to learn, network, and grow their entrepreneurial endeavors. E-Cell operates as a multifaceted support system for entrepreneurs, offering a range of programs and resources to help them thrive. It conducts workshops and training sessions, equipping entrepreneurs with essential skills in business development, marketing, finance, and more. E-Cell has been hosting diverse networking events that connect entrepreneurs with investors, potential collaborators, and like-minded individuals, fostering valuable connections within the entrepreneurial ecosystem. The Internship Fair, organized by E-Cell, connects students with innovative startups and companies, providing them with opportunities to gain real-world experience in the entrepreneurial sector. VVSF (Vasai Virar Startup Fest) is an exciting event which celebrates entrepreneurship, innovation, and creativity. It provides an opportunity for start-ups to interact, network, and learn from each other. VVSF is not just about learning. It's also about connecting with like-minded individuals who share their passion for innovation and entrepreneurship. With a footfall of over 1000+ attendees, VVSF consists of 3 sub-events firstly Pitch Perfect which is an amazing event where startups and entrepreneurs from various regions can showcase their ideas and innovations to potential investors and partners, helping them secure funding and support for their ventures. Startup Street is where entrepreneurs can showcase their products and services to investors, industrialists, students, and customers and allows networking and interacting with the founders and co-founders of different ventures. It offers a holistic experience, covering various aspects of entrepreneurship and business. E-Talks feature a diverse lineup of speakers, panel discussions, and workshops, aimed at inspiring, educating, and motivating entrepreneurs. In addition, E-Cell has conducted some seminars and workshops to create an entrepreneurial mindset in students.

In summary, E-Cell, since its inception in 2015, has played a pivotal role in fostering entrepreneurship, providing a nurturing environment for budding entrepreneurs to learn, connect, and grow. Through events like the Internship Fair, VVSF (Vasai Virar Startup Fest), Bizmaster, and Esummit, E-Cell continues to inspire and support the next generation of business leaders and innovators in the region.

Details of organised event

Sr. No	Event Name	Dates
1	MOU signing with Navyuvak Entrepreneurs	25/7/2022
2	Seminar on 'Importance of Starting up Business Early.'	25/8/2022
3	Seminar on 'Let's understand the market'	6/10/2022
4	Bootcamp on Entrepreneurship Mindset.	10/10/2022
5	VVSF logo revealing ceremony	16/2/2023
6	MOU Signing with Saturday Club Global Trust	16/3/2023
7	Vasai-Virar startup fest	24/3/2023

Committees Motto and Mantra:

Vision: "Empowering Future Leaders, Sparking Innovation and Catalysing Change". E-Cell envisions a world where every student is a confident and visionary entrepreneur, driving transformative innovation and reshaping industries for a better future." Mission: -Inspire Innovation: Spark creativity and entrepreneurial thinking, motivating students to explore new ideas and solutions. -Empower Student Entrepreneurs: Provide a platform and resources to students interested in entrepreneurship, enabling them to convert their concepts into viable businesses. -Facilitate Networking: Create opportunities for students to connect with industry professionals, potential co-founders, and investors, expanding their network. -Real-World Experience: Organize summits, business competitions, and workshops that expose students to real-world entrepreneurial challenges. -Seed Funding Support: Assist students in securing seed funding for their startups through connections with investors, venture capitalists, and funding programs. - Job Creation: Encourage and equip students to become job creators rather than job seekers, contributing to economic growth and job opportunities in the region. - Leadership Development: Develop leadership skills in students by involving them in organizational roles within E-Cell, enhancing their ability to lead and manage in dynamic environments. -Community Building: Create a supportive community where students can share their experiences and find like-minded collaborators.

Prof. Chandan Kolvankar
(E-Cell coordinator)

Placement and Training Cell

The T&P Committee at Vidyavardhini's College of Engineering and Technology is a body that is responsible for carrying out all placement-related activities. We are a team of highly dedicated students and faculty members who work for a common goal of obtaining the desired placement offers for the students in terms of both profiles and organizations to work with. The Placement Committee looks into tasks like student skills development, soft skills training, student skills-job mapping, and placement-related event organizing. Apart from these tasks, we also conduct mock group discussions and interviews which equip the students to face the placement interviews and be industry-ready. The Placement Committee also plays an important role in developing and sustaining a long-term mutually beneficial relationship with the industry.

Accordingly, for the academic year 2022-23, we conducted the following trainings and Seminars for the students.
Gyanteerth training for 3rd Year Students.
Mock Group Discussion and Personal Interviews for Final Year Students.
Aspiring Minds Continuous assessment test.
Soft Skills Development Program
Competitive Exams Awareness Programs
Online Internship for students

We had several breakthrough records this year, where 264 offers were made to students by 63 students (Ref. date: 14th Dec 2022). Multiple students also got elite offers from various reputed firms, with the highest offer being 17 LPA at Cisco. The average salary offered to the rest was 4LPA.

We at the Training & Placement cell are striving to take this alliance with the industry to a higher level in the coming years. At VCET have tied up with Aspiring Minds, India's leading online assessment and hiring platform for PRE-ASSESSMENT tests

and campus placements, and Campus Credential which is a training institute providing Campus recruitment training, and employability skill training.

Achievements for the Year 2022-23:

- Prof.Sanket Patil (TPO) is Appreciated by INFOSYS for their contribution to coordinating placement activities effectively over the years.
- Appreciated by SHL (AMCAT) for a contribution towards improving the employability ecosystem in the college.
- More than 55 students were placed with a package greater than 5 lakhs per annum.
- The highest package of the year 2022-23 is 17 Lakh, placed in Cisco.

Staff Members:
Prof. Prafulla Patil (Placement Manager)
Prof. Sanket Patil (Training & Placement Officer)

Placement Staff Coordinators:
Prof. Kanchan Sarmalkar (Instrumentation)
Prof. Anagha Patil (IT)
Prof. Ashwini Katkar (EXTC)
Prof. Mukund Kavekar (MECHANICAL)
Prof. Kamlesh Bachkar (MECHANICAL)
Prof. Vikrant Kothari (CIVIL)
Prof. Sneha Mhatre (COMPUTER)

Name of the company	CIVIL	COMP	EXTC	IT	MECH	Grand Total
3 D Prolific					1	1
ACRNS Analytical Technologies Pvt. Ltd.			1			1
Aczet Pvt Ltd, Naigaon					2	2
Amiand Consulting Pvt. Ltd, Mumbai	3					3
Arihant Industries					3	3
ARS Energy Audit					1	1
Azcet Pvt Ltd			2			2
Balaji Metal form Pvt Ltd					1	1
BDO		9				9
Bristlecone		3	1			4
Capgemini		6	4	6		16
CISCO		1				1
CitiusCloud				17		17
CitiusCloud Services LLP		7				7
Contentstack				1		1
Deloitte		1				1
Detailed Steel Solutions India Pvt. Ltd., Vasai (W)	4					4
DOLAT group		1				1
Dr. Kelkars Design Pvt Ltd	1					1
FEC India Pile Foundation Engineers	4					4
FEC India Pile Foundation Engineers	2					2
Feedspot		2	3	2		7
Frootle India Pvt Ltd			4			4
Godrej Infotech					2	2
HTL AIRCON					1	1
IXAR Robotic Solutions pvt. Ltd			1			1
KEAN Construction, Mumbai	6					6
Kumar Metals					6	6
L&T Infotech					1	1
Linit Exports					4	4
LTI		18	6	15		39

Name of the company	CIVIL	COMP	EXTC	IT	MECH	Grand Total
Mahindra Lifespace					1	1
Mahindra Lifestyle					1	1
Mastek		1				1
Mastek Ltd				2		2
Media.net		2		1		3
NeoSoft				1		1
Newfold Tech			1			1
OMP		2		3		5
Oren				1		1
PPI			2			2
Qspider		2				2
Qspiders			5			5
QuantumPhinance		4				4
raw engineering		2				2
row2 Technologies		1				1
SBI Head Office			1			1
Securizen Systems Pvt Ltd			1			1
Sick India Pvt Ltd			1			1
Sirius CleanTech			1			1
Sirius CleanTech, Dynamic Electronics Pvt Ltd			1			1
Sogolytics				1		1
Sujan Industries					6	6
Supreme Arts Civil and Interiors, Thane	1					1
Target Hydrautech Pvt Ltd					3	3
TCS		12	6	15	3	36
Tecnimont Pvt Ltd					3	3
Teletech Services			1			1
Thermax					1	1
Ubiquitous Signs Private Limited					3	3
Vision Jobz & Integrators					3	3
Vistaar				1		1
Zeus Learning		9	2	4		15
Grand Total	21	83	44	70	46	264

Student Coordinators list:

POST		NAME	
President		Akhila Anilkumar	
Vice-President		Mayank Patil(Training)	
		Mohit Raje(Placements)	
		Shreya Parchurkar(IIIC)	
Post	Name	Team	Name
Organizing Head	Ayush Bujare	Organizing Team	Nikunj Wadke
	Manali Bhandange		Kashish Bhanushali
	Atharva Vartak		Rohit Thakur
Training Head	Sahil Gujral	Training Team	Aarya Gawhane
	Manas Raut		Sakshi More
	Anish Rathod		Puja Chafekar
Technical Head	Abhishek Jani	Technical Team	Harshwardhan Surve
	Devarshree Pawar		Deep Patel
	Aditya Kute		Alok Pal
Internships Head		Atharva Sankhe	
		Divyah Mandviya	
		Prerna Kasar	
		Shreya Bari	
		Saakshi Nile	

5

Photo Gallery

Literati - The Literary Club

VIDYAVARDHINI'S COLLEGE OF
ENGINEERING AND TECHNOLOGY

Force Behind Literati Club

Principal
Dr. Harish Vankudre

Staff Incharge
Ms. Swati Varma

Treasurer
Archit Gharat

Chairperson
Insha Mulla

Co - Chairperson
Rohan Patil

Organising Head
Divya Chaudhari
Ayush Singh

Cheif Coordinator
Shreyas Manoti

Editorial Head
Chinmay Raut

Admin Head
Neha Vijaykumar
Govind Bhattad

Sponsorship Head
Jainil Shah

Tech Head
Sagar Khamrui
Uday Ghodke

Media Head
Sampada Patil

Deputy Treasurer
Sahil Salian

Vice - Chairperson
Aayush Jha

Assistant Coordinator
Omkar Jadhav
Priya Vadera

Deputy Tech Head
Urvashi Patel
Omkar Nandgaonkar

Deputy Admin Head
Gautham Kuckian
Niharika Das

Deputy Organising Head
Sakshi Ghonge

English Editor
Faizan Raiba

Hindi Editor
Sayali Thakre

Marathi Editor
Dhanal Choudhary

Deputy PR Head
Reena Vaidya
Khanjan Joshi

Documentation Head
Janhavi Desale

Deputy Sponsorship Head
Samarth Mane
Vedantika Ghorpade

Organising Team
Bhavana Bhaskaran, Aryan Verma,
Tanmay Narayankar, Disha Patil,
Azhar Khan, Raj Mor

Admin Team
Harsh Raut,
Rutuja Pednekar,
Aishwarya Shinde

Tech Team
Kartik Poojary, Kashish
Bhanushali, Raja Shah,
Jay Kore, Siddharth
Chakarvarthy

SponsorshipTeam
Sagar Kumar,
Adithya Jayakumar,
Vatsal Makadiya

Documentation Team
Siddhi Sharma,
Wajiha Kulsum,
Juhi Nale

PR Team
Mahek Shaikh, Devisha Shetty
Parth Mishra

Editorial Team
Niyukti Patil, Khushi Sinha, Trupti Heldekar,
Amarnath Jaiswar, Tejashree Karekar, Tanvi
Prabhudesai, Bhaskar Mulik, Chintan Desai

Students' Council

VIDYAVARDHINI'S COLLEGE OF ENGINEERING AND TECHNOLOGY

Mechanical Staff

Electronics and Telecommunication Staff

Instrumentation Staff

Computer Staff

Information Technology Staff

VIDYAVARDHINI'S COLLEGE OF ENGINEERING AND TECHNOLOGY

Civil Staff

VIDYAVARDHINI'S COLLEGE OF ENGINEERING AND TECHNOLOGY

AI & DS Staff

VIDYAVARDHINI'S COLLEGE OF ENGINEERING AND TECHNOLOGY

CSE(DS) Staff

VIDYAVARDHINI'S COLLEGE OF ENGINEERING AND TECHNOLOGY

First Year Engineering Staff

Office,Admin,Exam, Library Staff

BE Mechanical A

VIDYAVARDHINI'S COLLEGE OF
ENGINEERING AND TECHNOLOGY

BE Mechanical B

VIDYAVARDHINI'S COLLEGE OF ENGINEERING AND TECHNOLOGY

BE EXTC

VIDYAVARDHINI'S COLLEGE OF
ENGINEERING AND TECHNOLOGY

BE Instrumentation

VIDYAVARDHINI'S COLLEGE OF
ENGINEERING AND TECHNOLOGY

BE Computer

VIDYAVARDHINI'S COLLEGE OF
ENGINEERING AND TECHNOLOGY

BE Information Technology.

VIDYAVARDHINI'S COLLEGE OF
ENGINEERING AND TECHNOLOGY

ME Civil

VIDYAVARDHINI'S COLLEGE OF
ENGINEERING AND TECHNOLOGY

Placed Students

VIDYAVARDHINI'S COLLEGE OF
ENGINEERING AND TECHNOLOGY

Alumini Association Cell

NPTEL

Sports Committee

VCET Toppers

VMEA

ISHRAE

Airnova

Ethan Racing

Team Centurion

Team Solecthon

IEEE

VIDYAVARDHINI'S COLLEGE OF
ENGINEERING AND TECHNOLOGY

IETE

VIDYAVARDHINI'S COLLEGE OF
ENGINEERING AND TECHNOLOGY

ETA

VIDYAVARDHINI'S COLLEGE OF
ENGINEERING AND TECHNOLOGY

ISA

VIDYAVARDHINI'S COLLEGE OF
ENGINEERING AND TECHNOLOGY
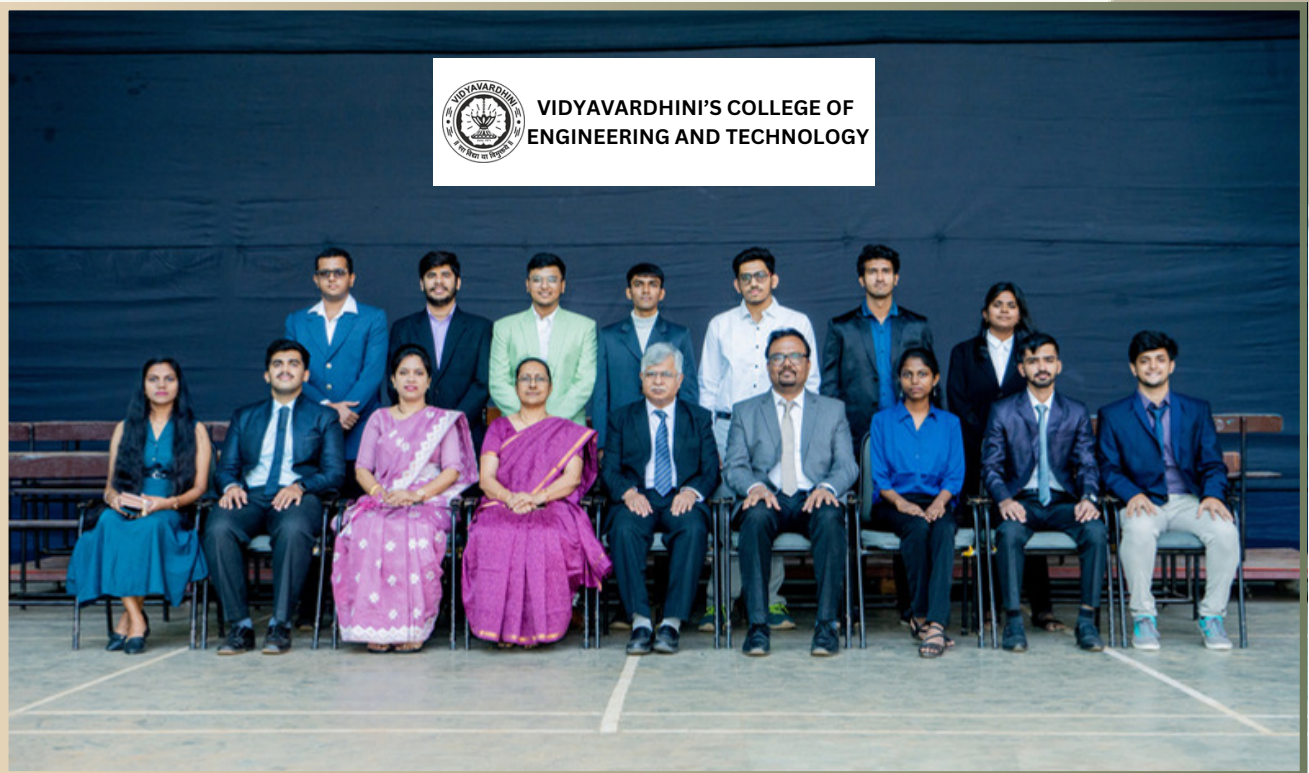
ASTRA INFINI

Carrer Counseling Cell

CSI

VIDYAVARDHINI'S COLLEGE OF ENGINEERING AND TECHNOLOGY

I-Tech

VIDYAVARDHINI'S COLLEGE OF ENGINEERING AND TECHNOLOGY

CESA

NSS

Placement & Training Cell

E-Cell

Digital Committee

Website Committee

Robotics Committee

Institution Innovation Cell

PR Team

EBSB

Bit Byte Go Committee

Team Byte

E-Mechto

German Club

Indutry Institution Interaction Cell (IIIC)

Equal Opportunity Centre

Android Development Club

Meta Club

Hackathon

Boys Volleyball Team

Girls Kabaddi Team

VIDYAVARDHINI'S COLLEGE OF
ENGINEERING AND TECHNOLOGY

Boys Kabaddi Team

VIDYAVARDHINI'S COLLEGE OF
ENGINEERING AND TECHNOLOGY

Boys Football Team

Boys Cricket Team
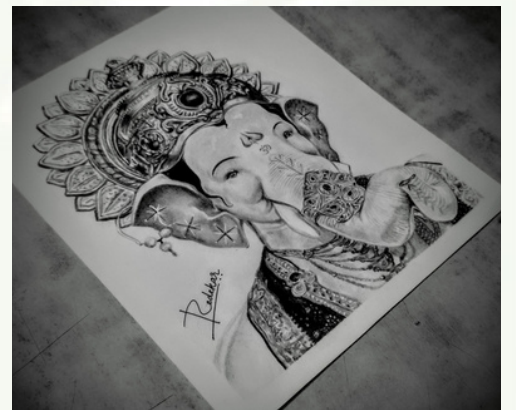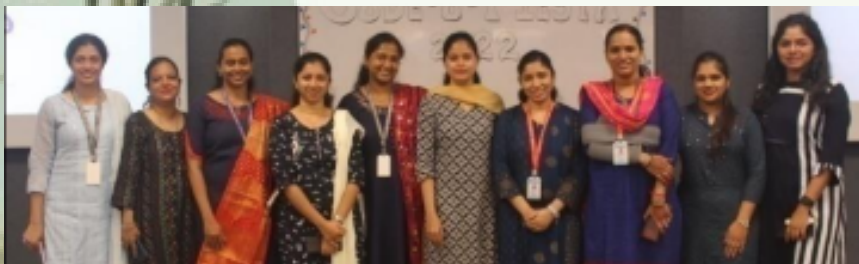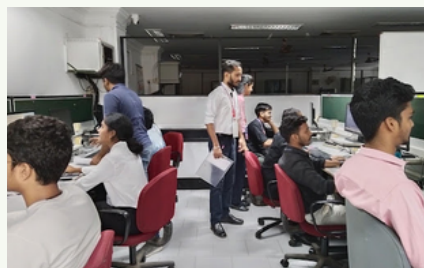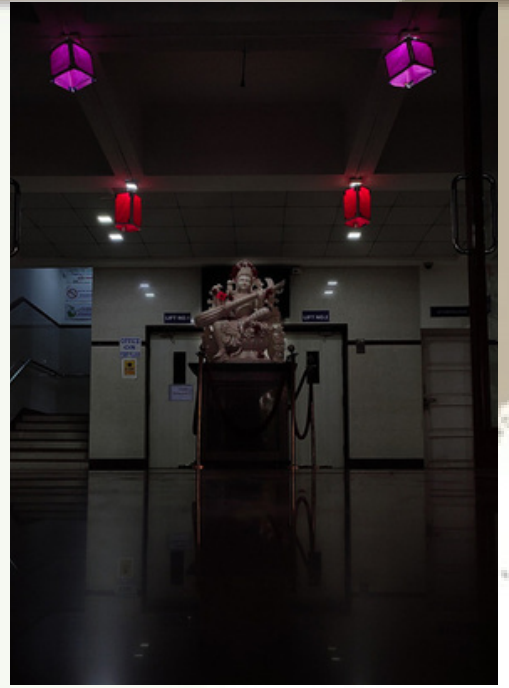
VIDYAVARDHINI'S COLLEGE OF ENGINEERING & TECHNOLOGY,
K.T.MARG, VASAI(W), PALGHAR-401202

BYTE ODD SEMESTER 2022

DEPARTMENT OF COMPUTER ENGINEERING

VIDYAVARDHINI'S COLLEGE OF ENGINEERING AND TECHNOLOGY

THE TECHNICAL NEWSLETTER OF COMPUTER ENGINEERING DEPARTMENT.

STAFF INCHARGE: MR. VIKRANT AGASKAR
EDITORS: MR. SAHIL KULABKAR
MR. SIDDHESH THAKARKAR
TECHNICAL TEAM: MS. ANUSHKA SUPE
MS. BRAMHETI PATIL

BUG BOUNTY PROGRAM

What is the Bug Bounty Program?

The Bug Bounty Program is a deal offered by many websites and software developers to recognize and reward people for reporting bugs , particularly exploits and vulnerabilities. This program allows developers to detect and fix bugs before they become known to the general public, preventing widespread abuse. Bug bounty programs are available through Mozilla, Facebook, Yahoo!, Google, Reddit, Square, Microsoft and many more.

History of the Bug Bounty

Hunter and Ready launched the first known bug bounty program for the Versatile Real-Time Executive operating system in 1983. Anyone who finds a bug and reports a bug will receive a Volkswagen Beetle (aka bug) in return. A little over a decade later, in 1995, Jarrett Riedlingheifer, a technical support engineer at Netscape Communications Corporation, coined the term "Bug Bounty."

Why does a company use a bug bounty program?

The Bug Bounty Program allows businesses to use hackers to find bugs in their code. This gives you access to

more hackers or testers one-on-one. It also increases the likelihood that attackers will find and report bugs before they exploit them.These programs are only beneficial if the program results in the organization finding problems it couldn't find on its own (and if it can fix those problems)!If an organization is not mature enough to be able to quickly fix identified issues, then a bug bounty program is not the right choice for their organization.This can also be a good choice for PR companies. As bug bounties become more common, having a bug bounty program can inform the public and regulators that an organization has a mature safety program in place. This trend will continue as some people are starting to see bug bounty programs as the industry standard that all organizations should invest in.
.

Why are researchers and hackers involved in bug bounty programs?

Find and report bugs through the Bug Bounty Program for both cash bonuses and recognition. In some cases, it can be a great way to show real-world experience during a job search, or even help introduce people from your organization's security team. This can be full-time income for some people, income in addition to work, and a way to show off your skills and get a full-time job.This can be fun too! This is a great (legal) opportunity to test your skills against large corporations and government agencies.

What are the downsides of a bug bounty program for independent researchers and hackers?

There are many hackers involved in these types of programs and it can be difficult to make significant money on the platform. In order to receive a reward a hacker must first report a bug to the program. This means you can actually spend weeks looking for an exploitable bug, but a second person reports it and you don't make any money.Major Bugs approximately 97% of platform participants have never sold a bug.In fact, according to a 2019 HackerOne report, only about 2.5% of more than 300,000 registered users were rewarded for time spent on the platform.Basically, most hackers don't make a lot of money on these platforms and don't earn enough to replace their full-time salaries (and also lack benefits like vacations, health insurance and retirement plans).

COMPOSABLE APPLICATIONS

A composable application is a concept or belief that the functional blocks of an application can be separated from the complete process or application. This implies that new, more capable apps can be developed with greater purpose and better

functionality. Composable applications and real-time software provide runny source pools that reduce operational complexity for standard workloads and improve operating speed for next generation applications and services. Dynamic customizations and configurations are attainable through a composable structure that provides easy reconfiguration.

What do you mean by Composable Applications?

According to Gartner, composable applications are built from business-centric modular components. In other words, composable applications are centralized around APIs - application programming interfaces, or software that enables communication between apps and microservices to increase business efficiency.In essence, you are taking reusable pieces and adding them to other parts of the business to maximize outputs and returns. In that sense, there is not a single overarching definition that captures what a "composable application" is rather, we're talking about a classification that covers a range of software tools.

The implementation of composable applications is definitely a forward-looking trend, as more and more organizations seek the benefits of using digital transformation to improve outcomes. Composable applications are the emerging development process that promises to make existing resources more elastic to meet a variety of constantly changing demands.

Protecting the future of business operations with composable applications:

In practice, composable applications and infrastructure give organizations confidence their operations will remain secure, simple,and persistent.Security governance gets easier with cleaner, compartmentalized systems. Business continuity (BC) also becomes more managed with more granular app construction. Together,these benefits showcase key advantages of composable applications that drive their appeal.

Conclusion:

Composable Applications come with many advantages enclosing automation, nimbleness, ease to use and skills. Companies that embrace Companies worldwide are funding heavily in composable applications to improve focus and make purpose.Fusion groups with shared company objectives

are set up across the scope to enhance modification goals inside creation.

SNOWFLAKE

Snowflake is a cloud computing based data cloud company based in Bozeman, Montana. It was launched in October 2014 . The firm offers a cloud-based data storage and analytics service, generally termed "data-as-a-service".It allows corporate users to store and analyze data using cloud-based hardware and software. It runs on Amazon S3 , Microsoft Azure and Google Cloud.

It delivers the Data Cloud , a global network where thousands of organizations mobilize data with near-unlimited scale, concurrency, and performance. Inside the data cloud, organizations unite their siloed data, easily discover and securely share governed data, and execute diverse analytic workloads. Wherever data or users live, Snowflake delivers a single and seamless experience across multiple public clouds. Snowflake's platform is the engine that powers and provides access to the data cloud, creating a solution for data warehousing, data lakes, data engineering, data science, data application development, and data sharing.

Snowflake's Data Cloud is powered by an advanced data platform provided as Software-as-a-Service (SaaS). It enables data storage, processing, and analytic solutions that are faster, easier to use, and far more flexible than traditional offerings. Snowflake runs completely on cloud infrastructure. All components of Snowflake's service (other than optional command line clients, drivers, and connectors), run in public cloud infrastructures.There is no hardware (virtual or physical) to select, install, configure, or manage.There is virtually no software to install, configure, or manage.Ongoing maintenance, management, upgrades, and tuning are handled by Snowflake.

But similar to shared-nothing architectures, Snowflake processes queries using MPP (massively parallel processing) compute clusters where each node in the cluster stores a portion of the entire data set locally. This approach offers the data management simplicity of a shared-disk architecture, but with the performance and scale-out benefits of a shared-nothing

architecture.When data is loaded into Snowflake, Snowflake reorganizes that data into its internal optimized, compressed, columnar format. Snowflake stores this optimized data in cloud storage.Snowflake manages all aspects of how this data is stored- the organization, file size, structure, compression, metadata, statistics, and other aspects of data storage are handled by Snowflake. The data objects stored by Snowflake are not directly visible nor accessible by customers; they are only accessible through SQL query operations run using Snowflake.

Query execution is performed in the processing layer. Snowflake processes queries using "virtual warehouses". Each virtual warehouse is an MPP compute cluster composed of multiple compute nodes allocated by Snowflake from a cloud provider.Each virtual warehouse is an independent compute cluster that does not share compute resources with other virtual warehouses. As a result, each virtual warehouse has no impact on the performance of other virtual warehouses.

The cloud services layer is a collection of services that coordinate activities across Snowflake. These services tie together all of the different components of Snowflake in order to process user requests, from login to query dispatch. The cloud services layer also runs on compute instances provisioned by Snowflake from the cloud provider.Services managed in this layer include authentication ,infrastructure management, metadata management ,query parsing and optimization,access control.

EXTENDED REALITY

Extended reality, or XR, is an umbrella category that covers a spectrum of newer, immersive technologies, including virtual reality, augmented reality and mixed reality.From gaming to virtual production to product design, XR has enabled people to create, collaborate and explore in computer-generated environments like never before.

Latest Trends in XR
High-quality XR is becoming increasingly accessible. Consumers worldwide are purchasing AIOs to experience XR, from immersive gaming to remote learning to virtual training. Large enterprises are adding XR into their workflows and design processes. XR drastically improves design implementation with the inclusion of a digital twin. And one of today's biggest trends is streaming XR experiences through 5G from the cloud. This removes the need to be tethered to workstations or limit experiences to a single space. By streaming over 5G from the cloud, people can use XR devices and get the computational power to run XR experiences from a data center, regardless of location and time. Advanced solutions like NVIDIA CloudXR are making immersive streaming more accessible, so more XR users can

experience high-fidelity environments from anywhere. AR is also becoming more common. After Pokémon GO became a household name, AR emerged in a number of additional consumer-focused areas. Many social media platforms added filters that users could overlay on their faces. Organizations in retail incorporated AR to showcase photorealistic rendered 3D products, enabling customers to place these products in a room and visualize it in any space. Plus, enterprises in various industries like architecture, manufacturing, healthcare and more are using the technology to vastly improve workflows and create unique, interactive experiences. For example, architects and design teams are integrating AR for construction project monitoring, so they can see onsite progress and compare it to digital designs. And though it's still fairly new, MR is developing in the XR space. Trends are shown through the emergence of many new headsets built for MR, including the Varjo XR-3. With MR headsets, professionals in engineering, design, simulation and research can develop and interact with their 3D models in real life.

The Future of XR
As XR technology advances, another technology is propelling users into a new era: artificial intelligence. AI will play a major role in the XR space, from virtual assistants helping designers in VR to intelligent AR overlays that can walk individuals through do-it-yourself projects.3 For example, imagine wearing a headset and telling the content what to do through natural speech and gestures. With hands-free and speech-driven virtual agents at the ready, even non-experts will be able to create amazing designs, complete exceedingly complex projects and harness the capabilities of powerful applications. Platforms like NVIDIA Omniverse have already changed how users create 3D simulations and virtual worlds. Omniverse allows users from across the globe to develop and operate digital twin simulations. The platform provides users with the flexibility to portal into the physically accurate, fully ray-traced virtual world through 2D monitors, or their preferred XR experience, so they can experience vast virtual worlds immersively. Entering the next evolution of XR, the possibilities are virtually limitless.

INFORMATION TO DEFAMATION

Ever wondered that when you share a screenshot of your phone you also have shared your phone current status, your battery percentage, your notifications, your network connectivity and also the time the screenshot was taken. It's quite fascinating to know that from a time where people tried to steal your information we are moving to a time where you give it to them by yourself.

Telling from my experience there was an instant when my friends once tracked my location, guess how ? via snapchat and I was completely unaware of it. We can see people who have set their accounts private on instagram and revealing their personality,date of birth, their likes and dislikes,in their bio which can be seen by everybody, what an irony. And this does not limit here we share our photos on instagram, then our feelings and views on twitter and also location sometimes and for the matter of fact nowadays we share our everyday life on snapchat snaps.

I won't say that you shouldn't do this or it is wrong;just want to show some light to the fact that this is how much we tell ourselves to everyone. And this is not the only way like while giving a xerox of your aadhar card, you just gave your photo, address, phone number, place of birth. And also today we signup on numerous websites providing them with a phone no.,email id, names etc. And it's not just about if this information is misused but also that it is used also in showing your targeted advertisements.
Information is very vital and it has its benefits but information about you is something important to and you should know how much to share or else the information can lead to defamation.

DATAFICATION

What Is Datafication?

The word "Datafication" does not have a definition or rather it is not yet a word that has found a place in a dictionary. And yet it is a word we are hearing a lot these days. What it simply means is this from our actions to our thoughts, everything is getting transformed into a numerically quantified format or "Data".

Datafication is helping us to understand the world in a way which was never done before. New technologies are now available to ingest, store, process and visualise that data. Organizations are using them to get benefits. For example marketers are analysing Facebook and Twitter data to determine and predict sales. Companies spanning from all sectors and sizes have started to realize the big benefits of data and its analytics. They are beginning to improve their capabilities to collect and analyse data.

Datafication has begun to revolutionize the world in ways we never imagined. Large data sets need storage, database software to store the data, and analytics tools to turn data into meaningful information for businesses. Data storage, data management and data analysis technologies now provides us with the tools to spot the patterns, trends and relationships in political, economic, social and environmental relationships.

With the data readily available, companies need enough levels of skilled professionals who can analyse and manage the data, to ensure it is of the greatest benefit. It will create jobs in the areas of data infrastructure, data management and data analytics. According to information technology research and advisory firm Gartner, Big Data will create more than 4.4 million jobs, opening up opportunities for analyst and data-savvy job seekers. Organizations need people who understand how to collect, store and analyse the data.We are truly entering into the era of Bigdata. Datafication and its analytics is going to play an important role for innovation and productivity in the future.

ARTICLES SUBMITTED BY:
ALOK PAL
MITIJ RAUL
PRATIMA BOMBE
SIDDHESH THAKARKAR
SAHIL KULABKAR
YUKTA PATIL

Do share your views, feedback and articles bymailing at bytemagvcet@gmail.com

VIDYAVARDHINI'S COLLEGE OF ENGINEERING AND TECHNOLOGY

THE TECHNICAL NEWSLETTER OF COMPUTER ENGINEERING DEPARTMENT.

DISCLAIMER: All information provided in this newsletter is for educational and informative purposes only, 'Vidyavardhini's College of Engineering and Technology' is not responsible for any action or consequences, direct or indirect, arising from the use of this e-magazine, For formal circulation only. NOT FOR SALE.

STAFF INCHARGE: MR. VIKRANT A. AGASKAR
EDITORS: MS. SHRIYA S. CHITRE
MS. AMISHA G. PRABHU

POWER TO DEVELOP AI LEAD SOLUTIONS IN HANDS OF A COMMON PERSON

Artificial intelligence and machine learning has changed the way our world works in an unprecedented way. From complex brain surgeries to a simple alarm clock, from assisting a pilot to fly the plane, to helping a little kid improve their pronunciation, the "machine brain" has found its place in every nook and corner of our lives.

But is this wonder of technology democratically available? With great hardware requirements and heavy reliance on big data, this may be a debatable issue. However, armed with the right tools, one can develop their own AI/ML solutions.

One of the biggest hurdles one faces during the development and training of their machine learning model is the hardware resources that the model requires.
Especially now when GPU prices are at an all-time high, it is a big entry barrier for many machine learning enthusiasts.

A viable solution to this problem is using Google Colab and Jupyter notebook. Jupyter is an open-source

community supported service that provides all its services for free. Jupyter notebook doesn't offer cloud-based hardware assistance but one can run their Jupyter notebook on the cloud using alternate methods that are easy to implement and free plans.

Google colab has inbuilt cloud support which helps devices with weak hardware to develop and train their models using the cloud. It can be defined as a free Jupyter notebook environment that runs entirely in the cloud. Google colab is a freemium service that has free as well as paid plans for its users. The free plan offers 12 GB of RAM (extendible up to 25 GB).

After solving the hardware issues, one can look forward to the development process, but writing machine learning programs that are best suited and most efficient logically, is a tedious and long task. One can take the help of powerful, robust and easy to use built-in libraries. These libraries are capable of handling tasks starting from the preprocessing of data to the fine-tuning of the precision of the model.

For preprocessing, working with our dataset and doing the mathematical computations, Numpy and Pandas are some of the best libraries available out there. They have a big community which makes the debugging process simpler and more efficient. To develop deep learning models Pytorch, TensorFlow, Keras and FANN are some of the best libraries. Choosing a suitable library and a machine learning model that is fit for your data is a very crucial stop.

The final step in all machine learning projects is the deployment of the model. Using a microservice like Django or Flask to deploy the models is becoming an industry practice. For example, when I wanted to deploy my machine learning project, "Stock market analysis and Comparative Study of models, using ANN and RNN LSTM ", then to run the python scripts, we used the Flask micro-framework. Another issue we encountered was the huge file size of the libraries and the model.
We were able to solve the library size issue by uploading only the specific code file used in the development model.

There are many services that offer free plans or resource-limited free hosting options that one can use to host their model online. Heroku and pythonanywhere are two such services that get the job done nicely.

Amazing applications, solutions to mind-boggling problems or anything under the sky, can be developed utilizing the power of machine learning. The best time is now, with the knowledge of machine learning let's start our journey to "To infinity and beyond".

Note: A list of tools we talked about:
1. Hardware/Development Environment: Google Colab and Jupyter notebook
2. ML/AI libraries: Numpy, Pandas, Pytorch, TensorFlow, Keras and FANN
3. Python web frameworks: Flask and Django
4. Hosting: Github, Heroku and pythonanywhere

THE RISE OF RANSOMWARE

What is a Ransomware attack?

Ransomware attack is a type of malware attack in which the data on a system is encrypted by hacker's malicious software and money is demanded to get back the encrypted data. The system is of an individual, a company or an organization.

designed by freepik.com

Ransomware attacks have been experienced for decades. But there has been a rise in ransomware from the early months of COVID-19. According to the FBI's 2020 Internet Crime Report 2400+ ransomware incidents in 2020 resulted in a loss of about 29 million dollars. The numbers are increasing at a greater rate and it doesn't even include unreported attacks.
It was a nightmare for companies to deal with these attacks. 2021 was a breakout year for ransomware. Cyber criminals are now moving to more advanced techniques for their attack. The effects can be brutal as it hits hard on the supply chain.

Some recent examples of Ransomware attacks are :
Acer : In March 2021, Acer was the victim of a ransomware attack executed by the Revil group.

CNA Financial : In March 2021, cyber insurance company CNA Financial was the victim of a ransomware attack. Executed by a group named Phoenix.
Colonial Pipeline : In May 2021, this company was victim of a ransomware attack that affected the flow of oil across the eastern U.S.
Sinclair Broadcast Group : In October 2021, the company was the victim of a ransomware attack that damaged the network's broadcast operations.

The following ways can be adapted to prevent ransomware attacks :
Cyber Security awareness
System Backup
Quarantining suspicious emails
Ransomware detection software
Up-to-date system
Develop Plans and Policies
Migrate to cloud technologies

BIOINFORMATICS

Bioinformatics is the application of computer technology to the understanding and effective use of biological and biomedical data. It is the discipline that stores, analyses and interprets the big data generated by life-science experiments, or collected in a clinical context. This multidisciplinary field is driven by experts from a variety of backgrounds: biologists, computer scientists, mathematicians, statisticians and physicists.

Bioinformatics is an interdisciplinary field that develops methods and software tools for understanding biological data, in particular when the data sets are large and complex. As an interdisciplinary field of science, bioinformatics combines biology, chemistry, physics, computer science, information engineering, mathematics and statistics to analyze and interpret biological data. Bioinformatics has been used for in silico analyses of biological queries using mathematical and statistical techniques.

Bioinformatics includes biological studies that use computer programming as part of their methodology, as well as specific analysis "pipelines" that are repeatedly used, particularly in the field of genomics. Common uses of bioinformatics include the identification of candidate

genes and single nucleotide polymorphisms (SNPs). Often, such identification is made with the aim to better understand the genetic basis of disease, unique adaptations, desirable properties (esp. in agricultural species), or differences between populations. In a less formal way, bioinformatics also tries to understand the organizational principles within nucleic acid and protein sequences, called proteomics.

Image and signal processing allow extraction of useful results from large amounts of raw data. In the field of genetics, it aids in sequencing and annotating genomes and their observed mutations. It plays a role in the text mining of biological literature and the development of biological and gene ontologies to organize and query biological data. It also plays a role in the analysis of gene and protein expression and regulation. Bioinformatics tools aid in comparing, analyzing and interpreting genetic and genomic data and more generally in the understanding of evolutionary aspects of molecular biology. At a more integrative level, it helps analyze and catalog the biological pathways and networks that are an important part of systems biology. In structural biology, it aids in the simulation and modeling of DNA, RNA, proteins as well as biomolecular interactions.

APPLICATION OF IOT: IMAGE DETECTION AND PRENATAL GENETIC TESTING

The use of new techniques and methods can be significantly improved during prenatal examination and screening of fetal genetic abnormalities. Expanding the number of vectors in screening and screening for single-cell gene diseases in fetal DNA will increase the probability of success of the whole screening test. Recently, sub chromosomal abnormalities have been introduced into prenatal care. The lack of suitable tools makes it very difficult to obtain information about collection, management, and prenatal genetic testing.

The purpose of this study is to improve the accessibility of nutritional information by using the advantages of advanced medical image detection and integrating the IoT (Internet of Things) and prenatal genetic testing platforms in obstetric outpatient clinics. Records are kept that the platform will allow IoT to interact with sensor practitioners and provide immediate access to medical images prior to delivery.

This proposed system provides an IoT application for managing obstetric outpatient information and prenatal genetic testing requirements. The requirement for establishment is the realization of the development of an IoT platform for complete medical image detection information management with IoT input required for integration with existing medical information systems. In response, the purpose of the study is to use integrated IoT applications to help nutrition professionals, researchers, patients, and especially

mothers, to enhance their collection of medical imaging and prenatal genetic testing IoT sensor based information transfer.

ROBOTIC PROCESS AUTOMATION

What is robotic process automation?
Robotic process automation (RPA) is a software technology that makes it easy to build, deploy, and manage software robots that emulate humans actions interacting with digital systems and software. Just like people, software robots can do things like understand what's on a screen, complete the right keystrokes, navigate systems, identify and extract data, and perform a wide range of defined actions. But software robots can do it faster and more consistently than people, without the need to get up and stretch or take a coffee break.

What are the business benefits of RPA?
Robotic process automation streamlines workflows, which makes organizations more profitable, flexible, and responsive. It also increases employee satisfaction, engagement, and productivity by removing mundane tasks from their workdays.
RPA is non-invasive and can be rapidly implemented to accelerate digital transformation. And it's ideal for automating workflows that involve legacy systems that lack APIs, virtual desktop infrastructures (VDIs), or database access.

Why is RPA transformative?
Software robots—instead of people—do repetitive and lower-value work, like logging into applications and systems, moving files and folders, extracting, copying, and inserting data, filling in forms, and completing routine analyses and reports. Advanced robots can even perform cognitive processes, like interpreting text, engaging in chats and conversations, understanding unstructured data, and applying advanced machine learning models to make complex decisions.
When robots do these types of repetitive, high-volume tasks, humans are freed to focus on the things they do best and enjoy more: innovating, collaborating, creating, and interacting with customers. Enterprises get a boost too: higher productivity, efficiency, and resilience. It's no wonder that RPA is rewriting the story of work.

Where can RPA be used?

Today, RPA is driving new efficiencies and freeing people from repetitive tedium across a broad swath of industries and processes. Enterprises in industries ranging from financial services to healthcare to manufacturing to the public sector to retail and far beyond have implemented RPA in areas as diverse as finance, compliance, legal, customer service, operations, and IT. And that's just for starters.

RPA has become so widespread because it is broadly applicable. Virtually any high-volume, business-rules-driven, repeatable process is a great candidate for automation—and increasingly so are cognitive processes that require higher-order AI skills.

SERVERLESS COMPUTING

What is serverless computing?

Serverless computing is a method of providing backend services on an as-used basis. A serverless provider allows users to write and deploy code without the hassle of worrying about the underlying infrastructure. A company that gets backend services from a serverless vendor is charged based on their computation and do not have to reserve and pay for a fixed amount of bandwidth or number of servers, as the service is auto-scaling. Note that despite the name serverless, physical servers are still used but developers do not need to be aware of them.
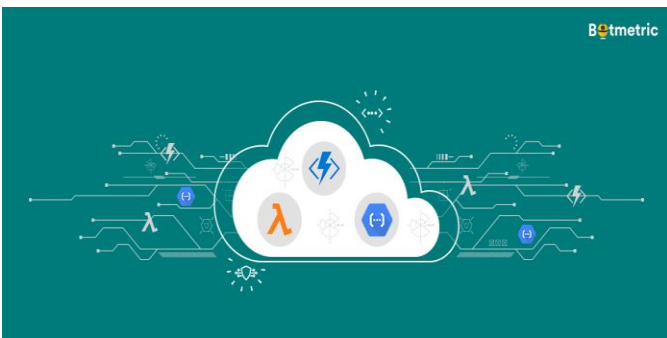
In the early days of the web, anyone who wanted to build a web application had to own the physical hardware required to run a server, which is a cumbersome and expensive undertaking. Then came cloud computing, where fixed numbers of servers or amounts of server space could be rented remotely. Developers and companies who rent these fixed units of server space generally over-purchase to ensure that a spike in traffic or activity will not exceed their monthly limits and break their applications. This means that much of the server space that gets paid for can go to waste. Cloud vendors have introduced auto-scaling models to address the issue, but even with auto-scaling an unwanted spike in activity, such as a DDoS Attack, could end up being very expensive.

Serverless computing allows developers to purchase backend services on a flexible 'pay-as-you-go' basis, meaning that developers only have to pay for the services they use. This is like switching from a cell phone data plan with a monthly fixed limit, to one that only charges for each byte of data that actually gets used.

NFT
What is an NFT?

An NFT is a digital asset that represents real-world objects like art, music, in-game items and videos. They are bought and sold online, frequently with cryptocurrency, and they are generally encoded with the same underlying software as many cryptos.
Although they've been around since 2014, NFTs are gaining notoriety now because they are becoming an increasingly popular way to buy and sell digital artwork. A staggering $174 million has been spent on NFTs since November 2017.
Anyone can view the individual images—or even the entire collage of images online for free.
An NFT allows the buyer to own the original item. Not only that, it contains built-in authentication, which serves as proof of ownership. Collector's value those "digital bragging rights" almost more than the item itself.

How Does an NFT Work?

NFTs exist on a blockchain, which is a distributed public ledger that records transactions. You're probably most familiar with blockchain as the underlying process that makes cryptocurrencies possible.
Specifically, NFTs are typically held on the Ethereum blockchain, although other blockchains support them as well.

What Are NFTs Used For?

Blockchain technology and NFTs afford artists and content creators a unique opportunity to monetize their wares. For example, artists no longer have to rely on galleries or auction houses to sell their art. Instead, the artist can sell it directly to the consumer as an NFT, which also lets them keep more of the profits. In addition, artists can program in royalties so they'll receive a percentage of sales whenever their art is sold to a new owner. This is an attractive feature as artists generally do not receive future proceeds after their art is first sold.

ARTICLES SUBMITTED BY:
AMISHA PRABHU
CHINMAY SONAWANE
MANKRIT SINGH
SHRIYA CHITRE

Do share your views, feedback and articles by mailing at bytemagvcet@gmail.com

VIDYAVARDHINI'S COLLEGE OF ENGINEERING AND TECHNOLOGY

THE TECHNICAL NEWSLETTER OF COMPUTER ENGINEERING DEPARTMENT.

STAFF INCHARGE: MR. VIKRANT AGASKAR
EDITORS: MS. SHRIYA CHITRE
           MR. SOHAM WAGHMARE
           MR. SHANTANU GONAKA
           MS. SHRADHA SANKHE

RESEARCHER's FROM THE UNIVERSITY OF AUSTRALIA HAVE DESIGNED A COMPUTER VISION SYSTEM TO AUTOMATICALLY DETECT A TINY BABY's FACE.

Using artificial intelligence-based software to detect human faces is now common with adults, but this is the first time that researchers have developed software to reliably detect a premature baby's face and skin when covered in tubes, clothing, and undergoing phototherapy.
Engineering researchers and a neonatal critical care specialist from UniSA remotely monitored heart and respiratory rates of seven infants in the Neonatal Intensive Care Unit (NICU) at Flinders Medical Centre in Adelaide, using a digital camera.

The 'baby detector' was developed using a dataset of videos of babies in NICU to reliably detect their skin tone and faces. Vital sign readings matched those of an electrocardiogram (ECG) and in some cases appeared to outperform the conventional electrodes, endorsing the value of non-contact monitoring of pre-term babies in intensive care.

The study is part of an ongoing UniSA project to replace contact-based electrical sensors with non-contact video cameras, avoiding skin tearing and potential infections that adhesive pads can cause to babies' fragile skin.

Infants were filmed with high-resolution cameras at close range and vital physiological data extracted using advanced signal processing techniques that can detect subtle colour changes from heartbeats and body movements not visible to the human eye.

UniSA neonatal critical care specialist Kim Gibson says using neural networks to detect the faces of babies is a significant breakthrough for non-contact monitoring.

"In the NICU setting it is very challenging to record clear videos of premature babies. There are many obstructions, and the lighting can also vary, so getting accurate results can be difficult. However, the detection model has performed beyond our expectations."

"Worldwide, more than 10 percent of babies are born prematurely and due to their vulnerability, their vital signs need to be monitored continuously. Traditionally, this has been done with adhesive electrodes placed on the skin that can be problematic, and we believe non-contact monitoring is the way forward," Gibson says.

ALTERNATIVE TO GITHUB CO-PILOT

GitHub Copilot - an AI tool for developers that autocomplete the code. GitHub only gave access to only a group of developers. Almost around 88,000 people have currently access to GitHub copilot preview build. And sadly, I am not one of them. I am still on the waiting list.

I tried searching for alternatives and found this crazy extension i.e., Clara Co-pilot. Yes, it is free and can be easily installed in Visual Studio Code. It is developed by BadBoy17G and contributed by Marxist-Leninist & sethupavan12.

It is an open-source tool and you can contribute here if you want
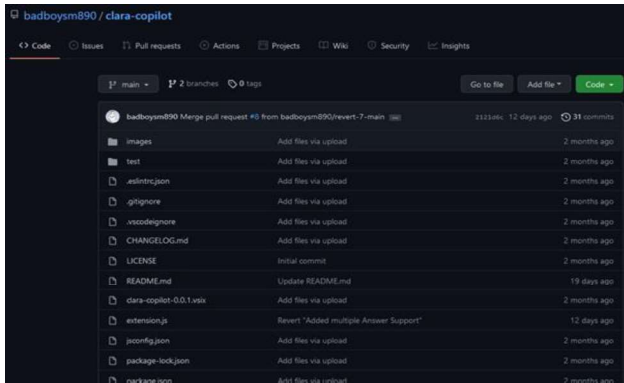
It's very simple to use. You just need install the extension -- type the snippet you want - eg : prime factor python -- press "**ctrl + shift + p**" and type search snippet and hit enter -- these is the result I got :

Conclusion: We don't know when we 'll get access to GitHub co-pilot, but you can give this tool a try till you get access and support the developers for creating such an amazing tool.
You can use these tutorials for installing the extension.

WHAT IS EDGE COMPUTING?

Gartner defines edge computing as "a part of a distributed computing topology in which information processing is located close to the edge—where things and people produce or consume that information."

At its basic level, edge computing brings computation and data storage closer to the devices where it's being gathered, rather than relying on a central location that can be thousands of miles away. This is done so that data, especially real-time data, does not suffer latency issues that can affect an application's performance. In addition, companies can save money by having the processing done locally, reducing the amount of data that needs to be processed in a centralized or cloud-based location.

Edge computing was developed due to the exponential growth of IoT devices, which connect to the internet for either receiving information from the cloud or delivering data back to the cloud. And many IoT devices generate enormous amounts of data during the course of their operations.

THE POTENTIAL OF EDGE COMPUTING

At a base level, edge computing streamlines how much data businesses and organizations can process at any given time, and as a result, they are learning more and uncovering insights at an incredible rate. With more detailed data from a variety of multi-access edge computing locations, businesses are better equipped to predict, manage, prepare, and adapt for future demands using historical and near-real-time data and scalable and flexible processing without the costs and constraints of older IT options.
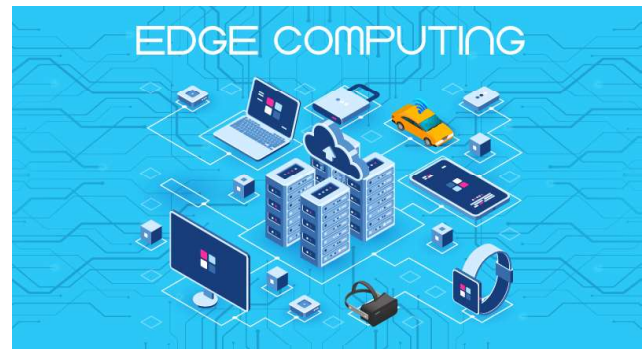
EDGE COMPUTING USE CASES

Much of the technology we use today for entertainment and business, from content delivery systems and smart technology to gaming, 5G, or predictive maintenance, incorporates some form of edge computing technology.

Streaming music and video platforms, for example, often cache information to lower latency, offering more network flexibility when it comes to user traffic demands.

Manufacturers benefit from edge computing by keeping a closer eye on their operations. Edge computing enables companies to closely monitor equipment and production lines for efficiency and, in some cases, detect failures before they happen, helping avoid costly delays due to downtime. Similarly, you can also see edge computing being used in healthcare to look after patients, giving physicians more real-time insight into people's health without the need to send their information to a third-party database for processing.

Elsewhere, oil and gas companies can keep watch of their assets and avoid costly complications. Smart home construction uses edge computing solutions as well. More and more devices need to communicate and process data in a localized network, especially devices like voice assistants. Without the help of decentralized processing power, Amazon Alexa and Google Assistant would take far more time to find requested answers for users.

WHAT IS 5G?

5G is the 5th generation mobile network. It is a new global wireless standard after 1G, 2G, 3G, and 4G networks. 5G enables a new kind of network that is designed to connect virtually everyone and everything together including machines, objects, and devices.

5G wireless technology is meant to deliver higher multi-Gbps peak data speeds, ultra-low latency, more reliability, massive network capacity, increased availability, and a more uniform user experience to more users. Higher performance and improved efficiency empower new user experiences and connects new industries.

WHAT MAKES 5G INTERESTING?

The most enticing case for 5G is hard to define: It's all the apps and gadgets that haven't been invented yet because 5G's unique properties may be what makes them possible. With 2G came text messaging, 3G ushered in the iPhone and 4G has enabled services such as Uber and Facetime. As for the business sector, 5G's security features, speeds and capacity for more devices may be beneficial in settings such as smart factories.

Faster speeds may be more compelling for advertisements and commercials, but the ability to reduce network congestion and accommodate a much greater number of users is the main reason the industry is excited. That's especially true for dense metropolitan areas such as New York, where I stood on a rooftop (photo above) on a recent sweltering day with AT&T's Carl Busseno to see 5G in action. Busseno is an engineer who has served as the wireless carrier's radio access network director for the New York and New Jersey markets since 2009. "The fundamental reason

for each G that's come out" — 2G all the way to 5G — "is more capacity," he said. "In New York City, you can never have enough capacity, so you want to have as much as possible." Some of the New York mobile-phone bustle took a breather during the Covid-19 lockdowns, but it's coming back as office workers and tourists return: Wireless-network traffic doubles during weekdays in Manhattan, he said.

WHAT IS DOCKER?

Docker is a software platform for building applications based on containers—small and lightweight execution environments that make shared use of the operating system kernel but otherwise run-in isolation from one another. While containers have been used in Linux and Unix systems for some time, Docker, an open-source project launched in 2013, helped popularize the technology by making it easier than ever for developers to package their software to "build once and run anywhere."

WHAT IS DOCKER TODAY?

Container usage continues to grow as cloud-native development techniques become the mainstream model for building and running software, but Docker is now only a part of that puzzle.

Docker became mainstream by making it easy to move the code for an application and all of its dependencies from the developer's laptop to a server. But the rise of containers led to a shift in the way applications are built—from monolithic stacks to networks of microservices. Soon many users needed a way to orchestrate and manage groups of containers at scale.
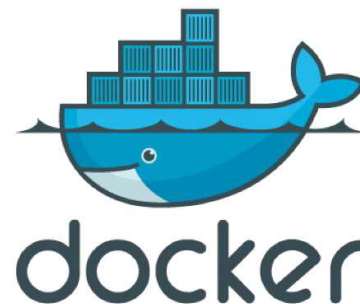
Born out of Google, the Kubernetes open-source project quickly emerged as the best way to do this, superseding Docker's own attempts to solve this problem with its Swarm orchestrator (RIP).

Amidst increasing funding trouble, Docker eventually sold its enterprise business to Mirantis in 2019, which has since absorbed Docker Enterprise into the Mirantis Kubernetes Engine.

The remains of Docker—which includes the original open-source Docker Engine container runtime, Docker Hub image repository, and Docker Desktop application—live on under the leadership of company veteran Scott Johnston, who is looking to reorient the business around its core customer base of software developers.

CLOUD GAMING

Cloud gaming will be one of the "biggest use cases of 5G" as it offers a combination of high speed and low latency internet, Bharti Airtel chief technology officer Randeep Sekhon said. Homegrown telecom giant Bharti Airtel has successfully conducted India's first cloud gaming session in a 5G environment, it said.

Cloud gaming will be one of the "biggest use cases of 5G" as it offers a combination of high speed and low latency internet, Bharti Airtel chief technology officer Randeep Sekhon said. When games are streamed over the cloud, the time taken for data to travel from a server to the user's device, otherwise called latency, needs to be really low. One of the key benefits of 5G technology is the low latency.

In Airtel's test, the networks delivered latency in the range of 10 milliseconds and bandwidth of 1 Gbps over the 3,500 MHz spectrum. Airtel used its 5G test lab in Manesar in the national capital region area for the cloud gaming pilot, which also suggests that the industry in India is readying itself to take cloud gaming seriously.

Airtel used a game called Asphalt, which doesn't necessarily need very high computing resources, but the mere fact that the company tested this is significant.

HOW AI AND MACHINE VISION IMPACT ROBOTICS?

Vision guided robots (VGRs) enable defect free production by providing important quality information, such as data about flaws and measurement tolerances, which a blind robot programmed to act within a coordinate system or stage cannot deliver. They can detect detects through inspection, which directly impacts quality. They can also use predictability, or a method where a robotic system stops due to a vision system erroring, thereby identifying an issue in the process, as an indirect form of quality. Both approaches use Industry 4.0 to identify and flag defective products, which makes it more effective. Vision systems can also record and upload quality data to an external system, which operators can use to predict and respond quickly to errors.

Machine vision, which is a form of artificial intelligence, is very prominent in robotics today, says Nick Longworth, senior systems application engineer, SICK Inc. The pandemic has only boosted its use as end users look to create more automated and flexible processes due to labor shortages.
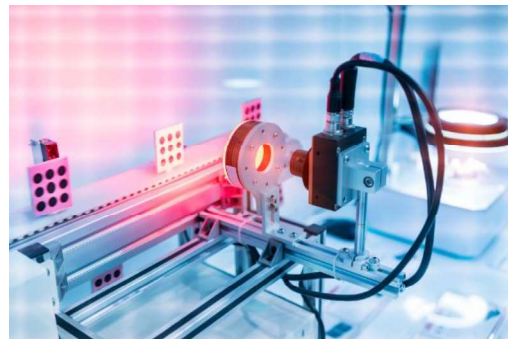
Just as humans need good data to make better decisions, so do AI systems. Additionally, these solutions also free up an operator or another resource to do something else. Manufacturers continue to turn to deep learning and 3D vision, and robots have also become easier to use. Both are becoming more affordable. Still, there is room for improvement.

Despite all the improvements made in the area of vision with 3D and deep learning and traditional high-accuracy 2D, the technology is still relatively lower down the S-curve compared to inline manufacturing use-cases for vision — such as measurement, gaging, identification Continued algorithmic improvements, greater hand-eye flexibility between the robot and vision, and a full-system optimization per use-case will be required to see adoption rates accelerate.

ARTICLES SUBMITTED BY:
AMISHA PRABHU
CHINMAY SONAWANE
SOHAM WAGHMARE
SHARVIN DEDHIA

Do share your views, feedback and articles by mailing at bytemagvcet@gmail.com

BYTE ODD SEMESTER 2020   DEPARTMENT OF COMPUTER ENGINEERING

VIDYAVARDHINI'S COLLEGE OF ENGINEERING AND TECHNOLOGY

BYTE
DEPARTMENT OF COMPUTER ENGINEERING

THE TECHNICAL NEWSLETTER OF COMPUTER ENGINEERING DEPARTMENT.

STAFF INCHARGE: MR. VIKRANT AGASKAR
EDITORS: MR. ANIRUDH KODIAL
MR. CHINAR VARTAK
MR. NILAY NAIK

GOOGLE IS ADDING NEW HOMESCHOOLING FEATURES TO ASSISTANT SMART DISPLAYS AND SPEAKERS

Google is expanding the capabilities of its Assistant on smart displays and speakers today to make it easier for families that are homeschooling their children during the pandemic.

Leading the way is the new Family Bell feature, an alarm-like reminder that can be broadcast from a Nest Home smart display or speaker at a set time. Google is pitching the Family Bell as a way for families to announce when it's time to start schooling or get ready for bed. A parent can program a Family Bell through the Assistant app on a phone, set when it will go off and repeat on specific days, and choose which smart display or smart speaker it will chime from. Family Bell alerts can also be programmed through Hey Google voice commands, but any management after that has to be done through the Assistant app.

When the Family Bell alert goes off, the Nest device will emit a chime and recite whatever is programmed in the app. You can program multiple Family Bells for the same time, but you can only have each Bell broadcast from a single smart display or speaker.

Another new feature aimed around homeschooling kids is the ability to have a

Nest smart display or speaker announce when it's time to start the school day and show education themed graphics. You can say "Hey Google, school's in session" or "Start the school day," and the special visuals will play. It's also possible to program smart home devices, such as lights, to react when the command is issued. Lilian Rincon, senior director of product management for Google Assistant, likens this to an old-school class bell — but at home.

Google is also expanding the Broadcast feature, which allows you to blast a custom alert to all of the Nest speakers in your home. Now, you can specify which speakers or smart displays a Broadcast goes to, and that should prevent disturbing a sleeping child from the announcement.

Finally, Nest smart displays and speakers are getting an animal of the day feature, which will provide facts, sounds, and a creative task, such as drawing, for a different animal each day. You can hear about the animal of the day by saying "Hey Google, tell me about the animal of the day" to a Nest smart display or speaker.

All these new features are rolling out to Nest Hub smart displays and Nest Home speakers starting today.

©Dan Seifert, The Verge

MACBOOK PRO BATTERY PROBLEMS CONFIRMED BY APPLE

MacBooks have been showing 'not charging' even though the power adaptor is plugged in and the internal battery is not fully charged. This rightly leads them to question what is going on and what has broken on their laptop?

Turns out that nothing is broken, everything electrical is working as intended. Apple has posted a new support document on the issue, explaining that the change in charging status is party of the updated Battery Health Management software in MacOS Catalina:

"When battery health management is turned on, you might occasionally see "Not Charging" in the battery status menu of your Mac, and your battery's maximum charge level might be lowered temporarily. This is normal, and it's how battery health management optimizes charging. Your Mac resumes charging to 100 percent depending on your usage."

This approach to charging is designed to extend the life of your MacBook's battery. It won't make it last forever, but it will give you more time with your first battery before you have to approach Apple for a replacement.

What I find disappointing is what lies behind this problem. Apple is famed for focusing on the small details; getting pixels in the right position, rehearsing the unboxing experience, ensuring a consistent look, and guiding users to the right feature or function through the UI.

The failure here is not a failure of the battery, or the charging circuitry, it is a failing of Apple's user interface.

Subsequent paragraphs in the support document make it clear why there is confusion around charging under the new system:

"You might also see "Not Charging" when your Mac isn't getting enough power to charge the battery, such as when it's not using the correct power adapter and cable, or it's plugged into a power source that isn't delivering enough power."

In essence you can get the message "not charging" while you are charging, "not charging" while you are not charging, and "not charging" when you have an issue with the charging hardware. Three different scenarios, all of which offer important feedback to the user, and one single text string.

Given the prominence that the Battery Health software has received from Apple, I'm surprised that this slipped through the attention to detail net. Still, there's a really easy fix for this. I hope Apple decides on some different phrases for two of those statuses. "There is a charging problem" and "Charging Paused" would be good starting points.

©Ewan Spence, Senior Contributor, Forbes magazine

THE NEW EDGE IN EDGE COMPUTING

It was not that long ago when with servers in our offices, we all had edge computing. Of course, we didn't think of it that way. It was just what worked. Then, along came the cloud, and everything changed. Computers were hundreds of miles and milliseconds away. For our office applications, that level of latency's

OK. But with the rise of the Internet of Things (IoT), 5G, and our never satisfied need for speed, a new kind of local computing, edge computing, is appearing.

And it is not just showing up as another technology du jour. Arpit Joshipura, The Linux Foundation's general manager of networking, predicts, "edge computing will overtake cloud computing" by 2025.

IBM Services Global CTO and Vice President Bridget Karlin won't go quite as far as Joshipura, but she believes, "We will see an increase in Edge computing due to the sheer quantity of instances compared to centralized cloud centers. IBM estimates that there are some 15 billion intelligent devices in the market today, and IDC forecasts that by 2025 that will grow to 150 billion -- resulting in unprecedented volumes of data."
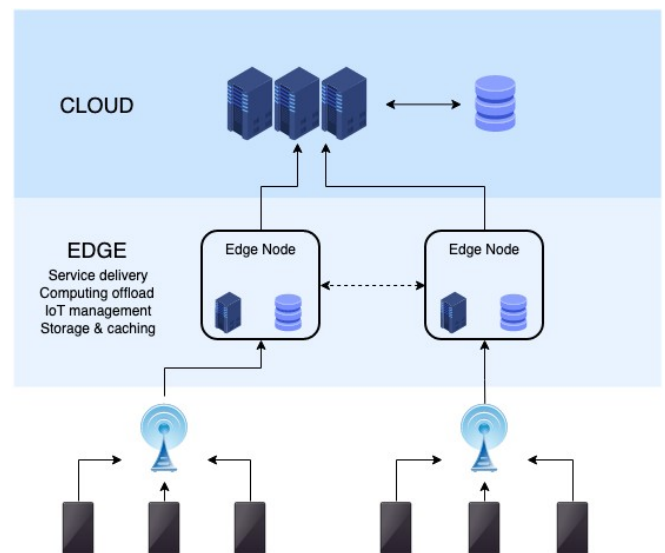
Lewis Carr, senior director of product marketing and management for Actian, a cloud data management company, can also see edge computing dominating. Carr thinks the "edge will overtake cloud in terms of sheer horsepower, data collected, and even number of cycles on data processing and analytics operations applied to that data locally at the

edge -- provided we take the edge to mean end-to-end across the various tiers of the edge."

©Steven J. Vaughn-Nichols, Insider Pro

SPACEX STARSHIP PROTOTYPE TAKES BIG STEP TOWARD MARS WITH FIRST TINY 'HOP'

The company performed an almost 500foot (150 meter) "hop" of its SN5 Starship prototype at its Boca Chica development facility at 5 p.m. PT.

The nearly nine-story-tall test craft ignited its single Raptor engine and slowly rose into the air before gently returning to the ground and landing upright not far from where it took off.

For a moment after the engine ignited, it looked as if SN5 was struggling to get airborne, but then it rose above its own smoke, hovered and came in for a soft landing. It traveled just a tiny fraction of the more than 35 million miles Musk hopes the final Starship will traverse to take humans to Mars.

The long-awaited low-altitude test flight comes after a handful of previous prototypes failed without ever leaving the ground, mostly during pressurization tests.

SN5 is designed to be able to perform an orbital flight, but before pushing toward space, it first had to complete this comparatively tiny hop.

The roughly 98-foot-tall (30 meter) vehicle is a stripped-down version of what the final Starship spacecraft will look like, without the nose cone or fins. It's 30 feet wide, and it's basically a fuel tank and a single Raptor

engine topped with a weight that simulates a payload. The resulting shape is something like a thermos many will recognize.
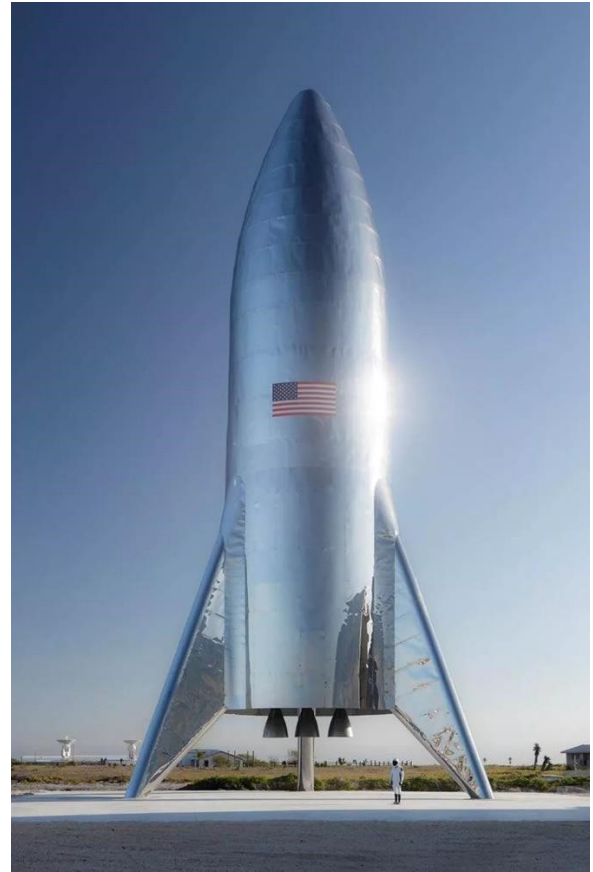
©Eric Mack, C|net

WORD SEARCH PUZZLE

```
Q  Q  T  X  T  U  R  I  N  G  S  D
T  E  N  S  O  R  P  Z  B  K  F  R
E  J  I  S  C  U  A  O  P  T  V  Q
Q  F  Y  I  W  A  S  A  N  T  Y  B
G  Y  V  V  B  Q  C  T  O  W  Z  I
C  E  C  T  E  R  A  F  L  O  P  T
H  B  G  V  M  D  L  X  A  G  I  J
D  M  C  B  Q  I  N  Q  V  O  H  S
```

ARTICLES SUBMITTED BY:
NILAY P. NAIK
CHINAR R. VARTAK
ANIRUDH P. KODIAL

Do share your views, feedback and articles by mailing at bytemagvcet@gmail.com

VIDYAVARDHINI'S COLLEGE OF ENGINEERING AND TECHNOLOGY

BYTE
DEPARTMENT OF COMPUTER ENGINEERING

THE TECHNICAL NEWSLETTER OF COMPUTER ENGINEERING DEPARTMENT.

STAFF INCHARGE: MR. VIKRANT AGASKAR
EDITORS: MR. ANIRUDH KODIAL
MR. NILAY NAIK
MR. CHINAR VARTAK

AMAZON, IBM AND MICROSOFT RACE TO BRING GLOBAL ACCESS TO QUANTUM COMPUTING

In the heady world of quantum computing, there's a race afoot. Across the globe, tech giants are building their own machines and speeding to make them available to the world as a cloud computing service. In the competition: IBM, Google, Microsoft, Intel, Amazon, IonQ, Quantum Circuits, Rigetti Computing and the newest to uncloak its quantum computing plans, Honeywell.

They're all competing to show off their nascent ability to tackle a new class of complex computational problems.

If one player does get ahead, it could cash in on a computing revolution the way IBM did with personal computers and Apple did with smartphones. Quantum computers won't displace conventional machines, but they could offer breakthroughs impossible for classical computers to achieve, including developing new materials, cutting city traffic or making a fleet of trucks deliver packages more efficiently.

Analyst firm Tractica expects spending on quantum computing to surge from $260 million in 2020 to $9.1 billion by the end of the decade.

So who's in the lead? "It depends on the week or the month," said Dan Garrison, a technology architect in the quantum practice at consulting firm Accenture. He says the quantum cloud players are all neck-and-neck.
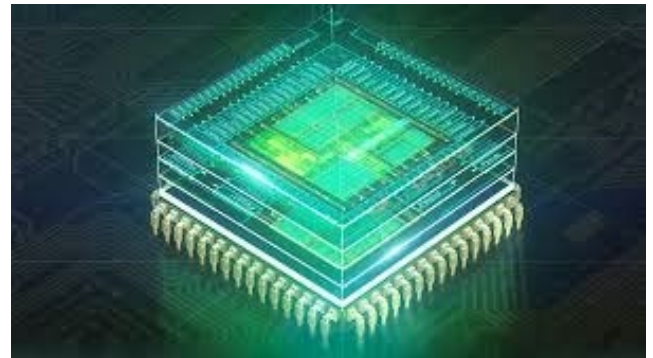
Quantum computing companies have embarked on a multiyear journey to increase the count of qubits, the foundational elements of quantum data processing, and to decrease the error rates that today limit the sophistication of quantum computation. While conventional computers store data as bits that can be either a 0 or a 1, qubits can store a much more complex state that combines both 0 and 1. That design in principle lets quantum computers explore many more solutions to a possible computing problem at once.

WHAT IS AMBIENT COMPUTING, AND HOW WILL IT CHANGE OUR LIVES?

Ambient computing is one of Silicon Valley's latest tech buzzwords. It refers to technologies that allow people to use a computer without realizing they're doing it. We'll explain more about it, and how it will impact our daily lives.

Over the last few years, technology companies have been pushing to deepen the integration of computing platforms with our daily lives. One of their goals is to assimilate computers into our surroundings to the point that we don't notice we're using them at all.
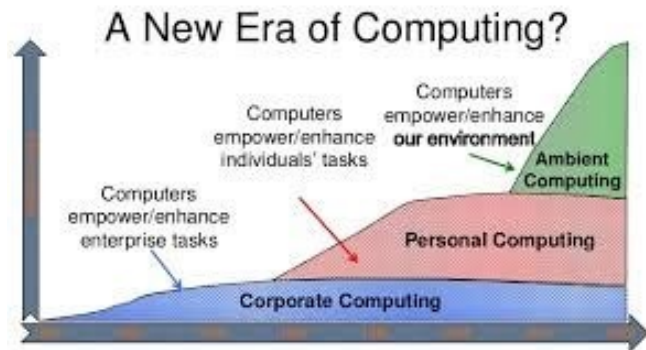
Referred to as "ambient computing," these technologies perform computations for you without a direct command. As ambient means "in your environment," these devices are intended to be so integrated into your surroundings that you're no longer conscious of them. This is significantly different from smartphones and smartwatches that we must actively check to use. Most computing systems rely on active input from humans. For example, if you want to search for the movie schedule on your phone, you type the name of the movie and the cinema in the Google search box. If you want to make your home a little cooler, you can manually set your air conditioner to the desired temperature with a remote or mobile app. The goal of ambient computing is to eliminate friction between you and the computer. Instead of actively setting or interacting with devices, you would interact with your surroundings, and the devices would respond to your actions. For example, with an ambient smart thermostat, the device judges the room and your interactions with it to adjust the temperature as needed. Ambient computing uses a variety of technologies, including motion tracking, speech recognition, gestures, wearables, and artificial intelligence to achieve this goal.

TURKEY DEVELOPS OWN FINGERPRINT DATA COLLECTION TECH, IMPLEMENTATION PLANNED FOR APRIL

The Biometric Data System project carried out as a joint venture among Turkey's leading defense contractor HAVELSAN and the Interior Ministry's Police Maintenance and Provident Fund (POLSAN) has been completed and will be delivered for use at relevant institutions in April, the chairman of the defense company said. The domestically developed system allows for the carrying out of all stages of the

fingerprinting process, with extra technological features.

HAVELSAN Chairman Ahmet Hamdi Atalay said the project had been undertaken by a joint company established by HAVELSAN and Polsan for the production of the technology, which has grown in significance in line with global efforts aimed at shoring up the protection of personal data.

The product, the work of a team of entirely Turkish engineers and developed in line with international standards, will cover all stages of the tracing process, from data collection to identification. It will be used by Turkey's General Directorate of Population and Citizenship Affairs, the country's immigration authority and relevant divisions of the General Directorate of Security, Atalay said, noting that this way, large amounts of license payments usually paid for technologies from abroad will remain in the country's coffers.

Speaking on the possibilities of exporting the technology, Atalay said they had already discussed the development with Qatari officials, while meetings with several other countries were planned.

"There is a high demand for the product as the importance of protecting personal data is increasing," he said.

HAVELSAN began its operations in 1985 with 98% of its capital owned by the Turkish Armed Forces Foundation.

HAVELSAN is active in the areas of softwareintensive systems and has focused on Air Defense, Naval Combat, Simulation, Training and Management Information Systems, Energy Management Systems and Homeland

Security within the context of Command, Control, Communications, Computer, Intelligence, Surveillance, and Reconnaissance systems (C4ISR).

©Feride Cem, Daily Sabah

WHAT IS AWS CODEDEPLOY?

Fast deployment of code is a major advantage in business. With so much competition, a multitude of platforms and services, and an enormous number of users connecting and using smartphones and other mobile devices, it is an opportunity to scale up and reach a wider audience. When you have a seamless and efficient way to deploy code, it means the business gets a boost and thrives in ways that encumbered processes don't allow.

AWS CodeDeploy

Think of a small company just starting out with a new social media app, one that intends to take on TikTok and capture a younger audience. There might be multiple services, servers in various locations, an onpremise IT infrastructure that is tricky to maintain -- in short, DEPARTMENT OF COMPUTER ENGINEERING

it's not so easy. While the idea might be sound and the business requirements are clear, it is hard to deploy the code on servers where it can run reliably and where version control is not a Herculean task.

AWS CodeDeploy is a way to solve that problem, allowing companies to deploy apps on an infrastructure that runs using cloud services or in an on-premise facility in a way that is much easier. The goal with any new app, including a TikTok competitor, is to focus more on what the app can do and accomplish for the user, even if it's watching short, entertaining videos. It's not in trying to deploy the app so it is available for endusers at all times and runs reliably.

CodeDeploy can help you deploy apps on Amazon EC2, AWS Fargate, AWS Lambda, or your on-premise infrastructure. To understand what CodeDeploy does, it's important to briefly cover what each of those services from Amazon do and how they help your company.

ECS (Elastic Compute Cloud) is a well-known infrastructure for running virtual servers in the cloud. It's a way to rent the compute power you need to run applications that are reliable, available, and secure. AWS Fargate is a serverless compute engine that handles the compute resources you need and can scale according to your needs. AWS Lambda is an event-driven, serverless infrastructure that only deploys apps and services when they are needed.

Companies that have an on-premise infrastructure can also use CodeDeploy. As you scale your own data center and servers, the service can also scale with you.

Android 11

Android 11 is the eleventh major release and 18th version of Android, the mobile operating system developed by the Open Handset Alliance led by Google. It was released on September 8, 2020 and is the latest Android version to date.

The first phone launched in Europe with Android 11 was the Vivo X51 5G and after its full stable release, the first phone in the world which came with Android 11 after Google Pixel was OnePlus 8T.

Android 11 introduces "conversations" notifications; they are designed for chat and messaging and can be presented in pop-up overlays known as "bubbles" when supported by apps. Bubbles is designed to replace the existing overlay permission, which is being deprecated in the future due to security (due to its use by clickjacking malware) and performance concerns.

The menu displayed when holding the power button now includes an area devoted to controlling smart home devices. Media controls are displayed as part of the quick settings area and no longer as a persistent notification. The screenshot button is moved to the recents screen (only on Pixel devices). Apps can be pinned on the share menu.

Android 11 includes a built-in screen recorder.

The voice control system is capable of recognizing screen context.

Windows 10X

Windows 10X, the simplified Windows variant Microsoft intended for dual-screen devices before the company unexpectedly pivoted last year, is now expected to ship by the second half of 2021. Microsoft reportedly wants to sign off on a shipping build by late spring.

Windows 10X is intended to be an OS for low-end hardware selling into embedded and educational markets. Windows Central reports the company delayed Windows 10X back from an intended launch last year to put an additional coat of polish on the operating system. Windows 10X is a stripped-down version of Windows 10. Win32 applications were originally supposed to be supported in Windows 10X via Microsoft VAIL (Virtualized Application Interface Layer), but this support was removed last year when Microsoft decided to drop support for high-end conceptual dual-screen devices (like Surface Neo) and refocus it as a competitor for low-end Chromebook hardware.

Windows 10X is an attempt to build a more limited version of Windows for a task-specific purpose. The UI and available OS features are radically simplified. There's reportedly no legacy File Explorer and the OS is designed to put web apps front and center, with Edge used as a front-end for running rich web applications. This is similar to how ChromeOS and Chromebooks currently work, and the pivot of Windows 10X to address the Chromebook market may have something to do with how those systems are eating Microsoft's market share.
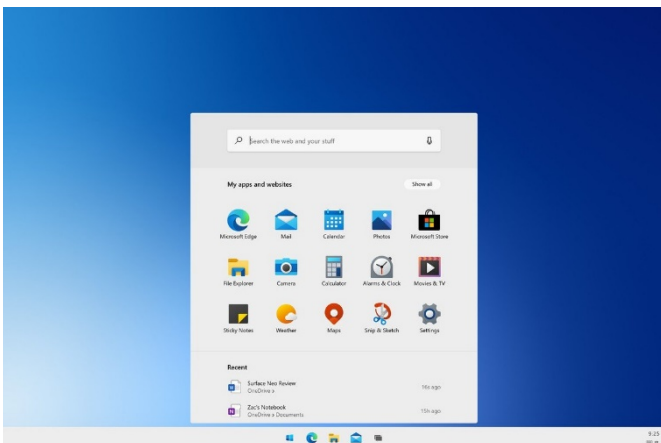
Samsung Digital Human

For the past few weeks, a Samsung subsidiary named STAR Labs has been teasing what it calls "Neon" — an "artificial human" that will be unveiled at CES 2020 next week.

But what exactly is Neon, and what is an artificial human? So far, we have very few official details, but most signs point toward the release of some sort of digital avatar technology: a realistic CGI human that users can interact with. It could be used for entertainment purposes or by businesses to create digital receptionists, customer service, and so on.

Neon has a social media presence a mile wide and just a few GIFs deep. There are Twitter, Facebook, and Instagram accounts for Neon, all sharing the same vague and extremely futuristic-looking images. Posts pose questions like "Have you ever met an 'artificial'?" and tease technology called "Core R3," which stands for "reality, realtime, responsive." They also make clear that, whatever Neon is, it has nothing to do with Samsung's AI assistant Bixby.

The project is led by Pranav Mistry, a human-computer interaction researcher and former senior vice president at Samsung Electronics. According to his LinkedIn profile, Mistry is now CEO of STAR Labs (which stands for Samsung Technology & Advanced Research) and new company Neon. On his Twitter page, he's been stoking hype for the project, retweeting appreciative comments from people apparently given early previews. One describes Neon as "Artifical Intelligence that will make you wonder which one of you is real." Unofficial clues also point to digital avatar tech. US trademarks for "NEON Artificial Human," "NEON.Life," and "Core R3" have been registered by Samsung Research America (and spotted by LetsGoDigital).
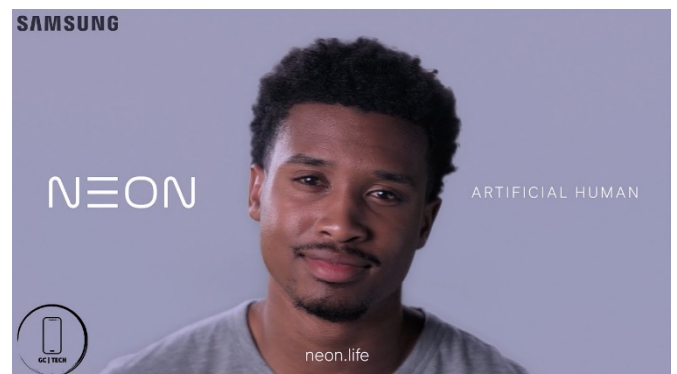
ARTICLES SUBMITTED BY:
NILAY P. NAIK
CHINAR R. VARTAK
ANIRUDH P. KODIAL

Do share your views, feedback and articles by mailing at bytemagvcet@gmail.com

BYTE, EVEN SEMESTER, 2019

VIDYAVARDHINI'S COLLEGE OF ENGINEERING AND TECHNOLOGY

THE NEWSLETTER OF COMPUTER ENGINEERING DEPARTMENT

DISCLAIMER: All information provided in this newsletter is for educational and informative purposes only. 'Vidyavardhini's College of Engineering and Technology' is not responsible for any action or consequenses, direct or indirect, arising from the use of this newsletter. For formal circulation only. NOT FOR SALE.

STAFF INCHARGE: MR. VIKRANT A. AGASKAR
SR. EDITORS: MS. JUIELY NAIK
MR. ARHAM KAZI
JR. EDITORS: MR. ANANG VERMA
MS. KAVYA NAIR

ROBOJELLY FISH - A CLIMATE SPY

To study coral reefs and the creatures that live there, scientists sometimes deploy underwater drones. But drones aren't perfect spies. Their propellers can rip up reefs and harm living things. Drones also can be noisy, scaring animals away.

A new robo-jellyfish might be the answer. Erik Engeberg is a mechanical engineer at Florida Atlantic University in Boca Raton. His team developed the new gadget. Think of this robot as a quieter, gentler ocean spy. Soft and squishy, it glides silently through the water, so it won't harm reefs or disturb animals living around them. The robot also carries sensors to collect data. The device has eight tentacles made of soft silicone rubber. Pumps on the underside of the robot take in seawater and direct it into the tentacles. The water inflates the tentacles, making them stretch out. Then power to the pumps briefly cuts out. The tentacles now relax and water shoots back out of holes on the underside of the device. That rapidly escaping water propels the jellyfish upwards.

The robot also has a hard, cylindrical case on top. This holds the electronics that control the jellyfish and store data. One component allows wireless communication with the jellyfish. That means someone can remotely steer the robot by making different tentacles move at different times. The hard case could hold sensors, too. Engeberg's group described its robot's design September 18 in Bioinspiration & Biomimetics.

Natural inspiration :

The researchers had practical reasons for modeling their device on jellyfish. "Real jellyfish only need small amounts of power to travel from [point] A to B," Engeberg says. "We wanted to really capture that quality in our jellyfish."

DEPARTMENT OF COMPUTER ENGINEERING

Jellyfish move slowly and gently. So does the robo-jelly. That's why the researchers think it won't frighten marine animals. What's more, Engeberg says, "The soft body of our jellyfish helps it to monitor ecosystems without damaging them." For example, the robot could carry a sensor to record ocean temperatures. The data it gathered could help scientists map where and when the ocean is warming because of climate change.
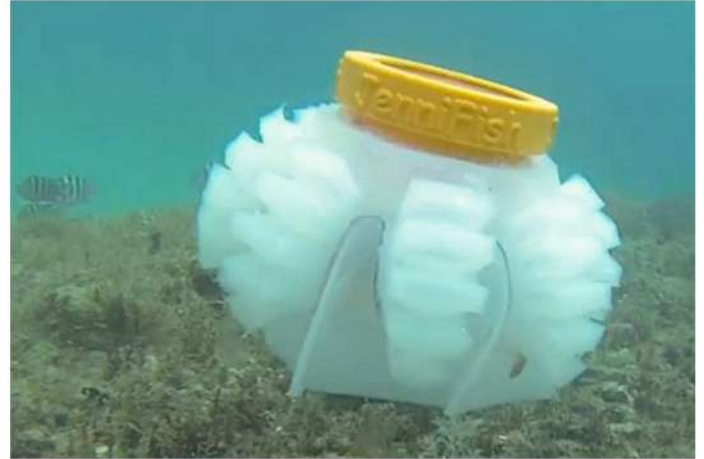
"Jellyfish have been moving around our oceans for millions of years, so they are excellent swimmers," says David Gruber. He's a marine biologist at Baruch College in New York City who was not involved with the robot. "I'm always impressed when scientists get ideas from nature," Gruber says. "Especially something as simple as the jellyfish."

Fighting climate change motivates Engeberg and his team. "I have a deep desire to help endangered reefs around the world," he says. He hopes his robo-jellyfish will help researchers study the otherwise hidden impacts of climate change at sea.

ELECTRIC BANDAGE

One day, bandages could speed healing by zapping wounds with gentle bursts of electricity. They wouldn't even need a battery pack. A patient's own body movements would power the device. And such a system may not be that far off. Researchers have already produced a working prototype. "We thought it might work, but we didn't know how good it would be," says Xudong Wang. "Then we saw the result and thought, 'Wow! That's really fascinating." Wang is a materials scientist at the University of Wisconsin–Madison. He leads the group working on this new bandage. His team has been developing a nanogenerator for many years. It uses body movements to generate electricity. These engineers were hoping to use the device to power wearable electronics. Then they realized it might be even more useful as medicine.

Scientists have known for decades that electricity can stimulate wounds to heal. For instance, electricity fosters cells on the skin's surface to grow. This "electrotherapy" has relied on bulky devices that need a power source. That's why it's usually used only in hospitals for treating serious injuries.

The Wisconsin engineers have now created a bandage with small electrodes.

"Our device is very simple," Wang says. "It's a flexible, wearable device." Its electrodes connect to nanogenerators inside the bandage. Those nanogenerators turn movement into electricity. That power then travels through the electrodes into the skin as mild electrical pulses.

Wang's group tested the bandage on more than 10 injured rats. As these "patients" breathed in and out, their wounds received tiny electrical shocks.

Another group of injured rats served as controls. That means they received no treatment.

The wounds of rats in the control group took about two weeks to heal. Those on rats treated with the electrified bandages healed in just three days. Wang's team described its new findings online November 29, 2018 in the journal ACS Nano.

No pain, big gain

The new bandage not only is simple, flexible and wearable, but also gentle. Compared to the electrical stimulation delivered by hospital machines, these bandage gives a much smaller electrical pulse. That should help protect healthy tissue from being damaged by the zaps. In fact, Wang says: "Usually, you don't even feel it."

This is "a good first step toward an interesting and potentially promising approach to wound care," says Tyler Ray. He says you might think of it as a "smart Band-Aid." Ray is a mechanical engineer at the University of Hawaii at Manoa who had no role in creating the new system. He said he'd like to see the bandage tested on larger animals or people, and lots of them.

Wearable technology has been around for several years. Usually these are fairly stiff devices, like a Fitbit, Ray notes. Researchers across many fields are now working on building soft, flexible devices for people to wear on their skin.

Wang next wants to design a nanogenerator that's even more sensitive. His goal is to build one that can generate electricity from the tiniest movements like blood moving under your skin. That way, the bandage could be powered by something as small as someone's pulse.
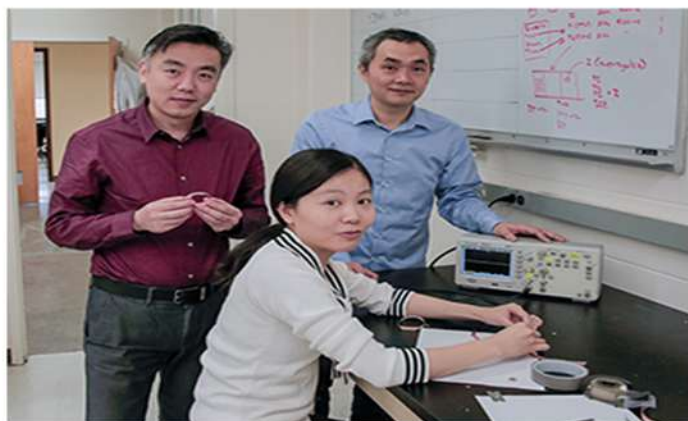
PRINTERS FOR THE BLIND

Maybe you've heard the saying that "a picture is worth a thousand words." It means that some information is best conveyed visually. And that's especially true in many research fields, says electrical engineer Dan Gardner. But what if you can't see?

John Gardner was a solid-state physicist at Oregon State University (OSU) in Corvallis. His job involved using "the properties of the nucleus [of an atom] to learn something about the solid [state]" of materials, he explains. For many projects, he and his team added tiny bits of radioactive impurities — think of them as tags — to different solids and liquids. Then they applied a strong magnetic field to each material.

Energy from the "tags" would be released in the form of gamma rays — a type of radiation. The rays would be at right angles to each other. But there was also some wiggle, some variation in the angle of an emerging beam of energy. The wiggles came from other atoms in the material, which were all moving around.

"What we did," John explains, "was to evaluate the wiggles." That gave his team useful information about the materials they studied. Yet to do that took alot of complex math.

Although blind in one eye, John could see with the other. Or he could until too much pressure built up from fluid in the good eye. He needed surgery. This left the scientist completely blind.

John still wanted to do physics. But to do that, he had to interpret each graph precisely. "Getting it exactly right all the time was incredibly important," he explains. And that, he notes, "was not easy to do when I couldn't see." Once he became blind, he had to approach things differently.

For a while, he still supervised graduate students. They would tell him what a graph showed. But he wasn't satisfied. He wanted to more directly "see" those graphs and data that underpinned his work.

His solution: Design a system to make touchable data graphs and other "visual" aids for himself and others who couldn't see well, or at all.

John got a team together at OSU. With financial help from the National Science Foundation (NSF), they invented a new type of printer for these data and graphs. Braille is a form of printing for the blind. Raised dots take the place of printed letters. But regular braille couldn't handle a lot of advanced math. It didn't work well for scientific graphs and charts, either, John explains. People at NSF asked John if his team could invent a better way. He told them he thought so. Afterward, NSF gave his group funding to give it a try. Together, John's team worked to apply the concept of braille to math and visual data.

Their novel printer squeezes paper between pointy tools called punches and little cups, called dies. When the punches press into the dies, they make raised dots on the paper between them. This type of printing with raised dots is called embossing.

The team showed NSF how the concept worked. "They were absolutely blown away," John recalls. NSF gave his group another grant for more work. And John moved from working on physics to working full-time on developing this technology. His new job: creating new tools for scientists with vision problems.

How to make data & 'show and tell'

John Gardner set up ViewPlus Technologies to make the new printers — and make them better. For instance, the printers had to work with common software programs such as Word and Excel. They also needed to increase how many dots per inch, or DPI, the machine could emboss. The more dots per inch, the sharper and more detailed a graph or chart could be. Users would also need to be able to tell different parts of a map or chart from each other. One bar chart might compare several groups in a study, for example. Someone might display this on a regular chart using different colors, shading or other visual patterns. John's team had to figure out ways to display such contrasts. They decided on "shading" such regions using dots with different heights.

The team also has developed interactive "talking" pictures. This system combines a tactile (TAK-tyle), or touchable, printout with a computer to make interactive graphs and charts. One printer step embosses braille and graphics. Another adds visible ink. Meanwhile, a computer file for the graph has sound information coded for different parts of the image. Now a sighted teacher or low-vision user can work with the same document. A person puts the tactile printout over a touchscreen. That touchscreen is hooked up to a computer, and the corresponding computer file is open. As someone touches different parts of the printout, this activates the touchscreen below. And that triggers the computer to read aloud the matching audio information for the touched spot. Someone doesn't even need to know how to read braille to use this system.

John Gardner often talks at conferences about the tools his group has been developing. Assistive technology deals with tools that make life easier for people with disabilities. This past spring, John described the new audio-touch combo at the CSUN Assistive Technology Conference in San Diego, Calif.

For John, such products have made a huge difference. "My biggest joy [comes from] the great maps I can read," says John Gardner. "I enjoy reading historical novels, traveling and other activities that involve maps. Now I can have maps again."

Reversing the flow of time on a quantum computer

We all mark days with clocks and calendars, but perhaps no timepiece is more immediate than a mirror. The changes we notice over the years vividly illustrate science's "arrow of time" -- the likely progression from order to disorder. We cannot reverse this arrow any more than we can erase all our wrinkles or restore a shattered teacup to its original form.

Or can we?

An international team of scientists led by the U.S. Department of Energy's (DOE) Argonne National Laboratory explored this question in a first-of-its-kind experiment, managing to return a computer briefly to the past. The results, published March 13 in the journal Scientific Reports, suggest new paths for exploring the backward flow of time in quantum systems. They also open new possibilities for quantum computer program testing and error correction.

To achieve the time reversal, the research team developed an algorithm for IBM's public quantum computer that simulates the scattering of a particle. In classical physics, this might appear as a billiard ball struck by a cue, traveling in a line. But in the quantum world, one scattered particle takes on a fractured quality, spreading in multiple directions. To reverse its quantum evolution is like reversing the rings created when a stone is thrown into a pond.In nature, restoring this particle back to its original state -- in essence, putting the broken teacup back together -- is impossible.The main problem is that you would need a "supersystem," or external force, to manipulate the particle's quantum waves at every point. But, the researchers note, the timeline required for this supersystem to spontaneously appear and properly manipulate the quantum waves would extend longer than that of the universe itself.

Undeterred, the team set out to determine how this complexity might be overcome, at least in principle. Their algorithm simulated an electron scattering by a two-level quantum system, "impersonated" by a quantum computer qubit -- the basic unit of quantum information -- and its related evolution in time. The electron goes from a localized, or "seen," state, to a scattered one. Then the algorithm throws the process in reverse, and the particle returns to its initial state -- in other words, it moves back in time, if only by a tiny fraction of a second.

Given that quantum mechanics is governed by probability rather than certainty, the odds for achieving this time-travel feat were pretty good: The algorithm delivered the same result 85 percent of the time in a two-qubit quantum computer. "We did what was considered impossible before," said Argonne senior scientist Valerii Vinokur, who led the research. The result deepens our understanding of how the second law of thermodynamics -- that a system will always move from order to entropy and not the other way around -- acts in the quantum world. The researchers demonstrated in previous work that, by teleporting information, a local violation of the second law was possible in a quantum system separated into remote parts that could balance each other out.

"The results also give a nod to the idea that irreversibility results from measurement, highlighting the role that the concept of "measurement" plays in the very foundation of quantum physics," said article coauthor Gordey Lesovik of the Moscow Institute of Physics and Technology.This is the same notion Austrian physicist Erwin Schrödinger captured with his famous thought experiment, in which a cat sealed in a box might remain both dead and alive until its status is monitored somehow. The researchers suspended their particle in this superposition, or form of quantum limbo, by limiting their measurements.

"This was the essential part of our algorithm," Vinokur said. "We measured the state of the system in the very beginning and at the very end, but did not interfere in the middle."

The finding may eventually enable better methods of error correction on quantum computers, where accumulated glitches generate heat and beget new ones. A quantum computer able to effectively jump back and clean up errors as it works could operate far more efficiently.

"At this moment, it's very hard to imagine all the implications this can have," Vinokur said. "I am optimistic, and I believe that it will be many."

The study also raises the question: can the researchers now figure out a way to make older folks young again? "Maybe," Vinokur jokes, "with the proper funding. " The work was done by international team including researchers from the Moscow Institute of Physics and Technology (Gordey Lesovik, Andrey Lebedev, Mikhail Suslov), ETH Zurich (Andrey Lebedev) and Argonne National Laboratory, U.S. (Valerii Vinokur, Ivan Sadovskyy). Funding for this research was provided by the DOE Office of Science and Strategic Partnership Projects (Swiss National Foundation and the Foundation for the Advancement of Theoretical Physics "BASIS").

FUSHIA

Fuchsia is a little different from Android and Chrome OS in that it's not based on Linux. Instead, it's based on a new Google- developed kernel called Magenta. According to Google, Magenta is aimed at "modern phones and modern personal computers," so it wouldn't be surprising to one day see Fuchsia appear on our smartphones. Not only that, but Google has even added Apple's programming language, Swift, to the operating system — though we don't know why just yet. Because Fuchsia is written using the Flutter SDK, which runs on Android, chunks of Fuchsia can be run on an Android device. This version of Fuchsia appears to be called Armadillo, and it completely reimagines the home screen. The screen, according to testing by Ars Technica, is basically presented as a big scrolling list, with a profile picture, the date, your city, and a battery icon all placed at the center.

Above that, you'll find "Story" cards, or a list of recent apps. Below, you'll see a list of suggestions for you, which acts kind of like Google Now.You can also drag recent apps around and drop them where you choose to organize and personalize the home screen. If you drop one app on top of another, you'll enter a split-screen mode with up to three apps. According to Hacker News, Travis Geiselbrech, who worked on NewOS, BeOS, Danger, Palm's WebOS, and iOS, and Brian Swetland, who also worked on BeOS and Android, are involved in this project.

FLUTTER: What's the hype about?

Flutter is Google's open-source mobile application development SDK for crafting high-quality native applications for Android and iOS in record time.

With Flutter, Google open ups a new way to build fast, attractive mobile apps that helps developers to break away from "cookie cutter" apps.With the announcement of Flutter Release Preview 1, everyone wants to know what makes Flutter different, or the need to push all other native tools aside and focus on only one toolchain — the Flutter Platform and SDK from Google. What is new and exciting about Flutter? Why Flutter? It's a fair question, and this article is about to answer it from a technical viewpoint — not just what is exciting, but why. Flutter is a cross-platform framework designed to address both the Android and iOS platforms. It's based on Google's own Dart programming language with a rendering engine based on the Skia Graphics Library, the same thing Chrome uses to draw pixels on a screen.

There's an IntelliJ IDE for Flutter, just like Google has with Android Studio. Google is also using Flutter in its upcoming Fuchsia OS.

Some Interesting facts:

·The first computer mouse was made with wood in 1964 by Doug Engelbart.

· 30,000 websites are hacked every day.

· The Dirty Dozen was the name of a 12 engineer's group who developed the first IBM computer.

· In 1939, the first electro mechanical computer was made/developed.

· ENIAC was the first electronic computer which was weighed around 27 tons and it's taken up space around 1800sf (square feet).

· In 1979, the first of first hard disk/drive was made to store the user's data and it could hold only data under 5MB.

· Microsoft Windows, this is not an original name, the first original name was 'Interface manager' which was changed later.

Articles contributed by: Juiely Naik
Arham Kazi
Varun Maisuria
Anang Verma
Kavya Nair
Srushti Ashok Patil

Do share your views, feedbacks and articles by mailing to
byteforcomputers@gmail.com

BYTE ODD SEMESTER 2018

VIDYAVARDHINI'S COLLEGE OF ENGINEERING AND TECHNOLOGY

THE TECHNICAL NEWSLETTER OF COMPUTER ENGINEERING DEPARTMENT.

STAFF INCHARGE: MR. VIKRANT AGASKAR
EDITORS: MR. ARHAM KAZI
MS. JUIELY NAIK

HYPERLOOP

Hyperloop is essentially a train system that Musk calls "a cross between a Concorde, a railgun, and an air hockey table". It's based on the very high-speed transit (VHST) system proposed in 1972, which combines a magnetic levitation train and a low pressure transit tube. It evolves some of the original ideas of VHST, but it still uses tunnels and pods or capsules to move from place to place.

Musk has likened it to a vacuum tube system in a building used to move documents from place to place.
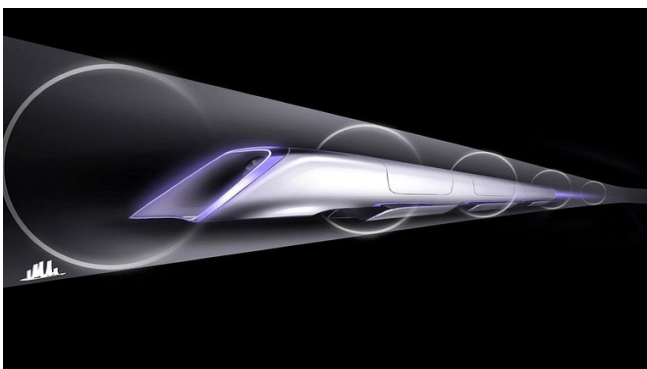
What speeds have been proposed?

Hyperloop is being proposed as an alternative to short distance air travel, where the system will be much faster than existing rail networks and much cleaner that flight. Hyperloop isn't about going as fast as possible, because you'll have to deal with high G forces when it came to turns, which isn't ideal for passenger travel. Speeds of over 700mph are suggested for journeys.

But there are practical implications that have to be considered on a short stop-start journey, such as the acceleration and deceleration sensation that passengers would go through.

How does Elon Musk's Hyperloop work?

Air bearings or maglev

One of the biggest problems with anything moving is friction, both against surfaces and the environment the pod is moving through. Hyperloop proposes to move away from traditional wheels by using air bearings for pods instead. This will have the pod floating on air. It's similar to maglev, in which the electromagnetic levitation of the train means there is no friction like a traditional train that runs on tracks.

This is how current maglev trains can achieve super speeds, like the 500km/h maglev train in Japan. One Hyperloop proposal, from Virgin Hyperloop One, uses passive magnetic levitation, meaning the magnets are on the trains and work with aluminium track. Current active maglev needs powered tracks with copper coiling, which can be expensive.

Musk's Hyperloop will take this to the next level by traveling through low pressure tubes.

Low pressure

Hyperloop will be built in tunnels that have had some of the air sucked out to lower the pressure. So, like high-altitude flying, there's less resistance against the pod moving through the tunnel, meaning it can be much more energy efficient, which is desirable in any transit system.

The original VHST proposed using a vacuum, but there's an inherent difficulty in creating and maintaining a vacuum in a tunnel that will have things like stations, and any break in the vacuum could potentially render the entire system useless. For Hyperloop, the idea is to lower the air pressure, a job that could be done by regularly placed air pumps.

Low pressure, however, means you still have some air in the tunnels.The air bearing and passive maglev ideas are designed not only to levitate the pod, but also see the pod moving through the air, rather than pushing the air infront of it and dragging it along behind. The air cushion

will see the air pumped from the front of the pod to the rear via these suspension cushions. The tunnels envisioned are metal tubes, elevated as an overground system.

Musk has suggested that solar panels running on the top of the tunnels could generate enough electricity to power the system. It could run as an underground system, too.

MEET THE BUBBLE THAT WILL DESTROY THE UNIVERSE.MAYBE.

Scientists say they know how the universe will end. It won't be a cosmic collapse but rather a giant cosmic bubble that devours everything in its path.

According to a recent paper, published on March 12 in the journal Physical Review D, the final moment for the universe will be triggered by a bizarre consequence of subatomic physics called an instanton. This instanton will create a tiny bubble that will expand at the speed of light, swallowing everything in its path. It's only a matter of time.

Very little is known about instantons, which are the solutions to equations governing the motion of tiny subatomic particles, but Andreassen loosely compared them to the phenomenon of quantum tunneling, whereby a particle seemingly defies physics to pass through an otherwise impenetrable barrier. But instead of crossing a barrier, the instanton forms a bubble within the Higgs field, the field that gives everything mass and gives rise to the Higgs boson.

Interestingly, this universe-ending bubble would never have been possible were it not for the particular mass of the Higgs boson in relation to another heavier particle, called a top quark, which comprises many atoms. If either the quark or the Higgs particle had been a little lighter, these universe-destroying bubbles couldn't form.

Alas, that is not the case and so after some amount of time, a destructive bubble will form. The team calculated the shelf life of the universe as between 10 quinquadragintillion years (one with 139 zeros after it) and a mere 10 octodecillion years (one with 58 zeros after it).

"That is a very, very, very, very, very, very, very, very, very, very long time," Andreassen said. "Our sun will burn up and many things will happen in our solar system before this is very likely to happen."

Sell-by date of the universe

It's like the milk in your fridge. The sell-by date is the earliest conceivable deadline, but chances are you can drink it after that without a problem. Of course, there's always the outside chance that something went wrong at the bottling plant and it's sour the minute you buy it. Similarly, Andreassen said, it's possible that a bubble has already formed and is hurtling toward us at the speed of light right now.

There's comfort in knowing how everything ends, but Vincenzo Branchina, a physics professor and researcher at the University of Catania in Italy who was not involved in the study, said not to start crying over sour milk just yet.

"The claim that Anders Andreassen and company are making for this number has to be taken, as they say, with a grain of salt," Branchina said.
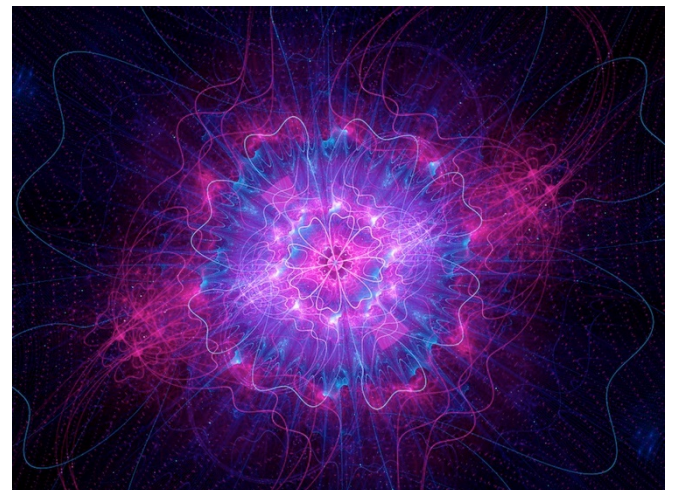
Branchina said the Harvard team only accounted for the standard model of physics and not all the new and confusing branches, like quantum gravity and dark matter, that are still completely mysterious. In order for the universe to be consumed in an expanding ball of chaos, dark matter, a mysterious form of matter that exerts a gravitational pull but emits no light, cannot interfere. Which is unlikely, since it might comprise 80 percent of our universe.

Similarly, Branchina has shown that quantum gravity — a bizarre part of physics that attempts to reconcile quantum mechanics and Einstein's theory of general relativity, that we have barely glimpsed — could make the universe far more stable or unstable, depending on its rules. He said that since nobody understands this new physics, we cannot know anything about the universe's ultimate end.

Andreassen agreed.

"I wouldn't put my money on this being the end of the story. I would expect dark matter to come kick in and change the story," Andreassen said.

I WENT TO SPACE AND FLOATED, THANKS TO THIS IMMERSIVE HELMET

New York-Looking down at the vast curve of planet Earth hundreds of miles below, I can see its white cloud cover stretching over expanses of blue ocean.

This may be the closest I'll ever get to outer space, but I haven't left Midtown Manhattan. I'm peering at our distant world using a special "space" helmet that re-creates the dizzying sensation of hovering far above the planet.

Displayed across my visor — and on those of my fellow "astronauts" in the seats of a small theater — were excerpts from "One Strange Rock," a new documentary series from the National Geographic Channel that showcases the beauty of our planet as seen through the eyes of astronauts, the only people who have viewed it firsthand from hundreds of miles above Earth's surface.

Nat Geo created these helmet theaters to help users see Earth as astronauts do.

The helmet is somewhat like a virtual-reality (VR) headset, in that it replaces the user's perspective of the world around them. But its internally projected field of view is much wider than is typical for VR headsets, and users can freely move their heads within the helmet to look around at the screen, much as an astronaut might rotate their head to take in the view while on a spacewalk, according to the statement.

Each helmet contains a built-in media player and laser projector — along with a tiny exhaust fan — mounted at the top, and all helmets at the screening were synced wirelessly and activated simultaneously by remote. Footage that played on

the inside of the visor was mapped to fit the curvature of the projection surface and projected with fisheye optics so that it did not look distorted.

SEE AROUND COURNER WITH SMARTPHONE-TECH

In spy novels and superhero films, the ability to see through walls has always been a handy — not to mention, impressive — trick. And now, this tech could be available to people in real life, with smartphone cameras that can help detect moving objects even if they are hidden around corners, according to a new study.

This futuristic-sounding tech could one day help vehicles see around blind corners, the researchers said.

"We may eventually be able to use this idea to alert drivers to pedestrians or cars that are about to dart out from behind buildings into a driver's path. Perhaps a few seconds of notice could save lives," said study lead author Katie Bouman, an imaging scientist at the Massachusetts Institute of Technology's Computer Science and Artificial Intelligence Laboratory.

"Search and rescue, or helping to understand what is going on behind a wall in a hostage situation, are also potential applications," Bouman added.

Researchers have taken many different approaches in trying to make the "superpower" of seeing around corners a reality. For example, in 2015, researchers showed they could use lasers to see objects around cornersby firing light pulses at surfaces near the items. Those surfaces could act like mirrors, scattering the laser pulses onto any hidden objects. By analyzing the light that was reflected off the objects and other surfaces back onto the scanners, researchers could reconstruct the shapes of the hidden items.

Although most strategies for seeing around corners "are really great ideas," they also "usually require complex modeling [or] specialized hardware, or are computationally expensive," Bouman told Live Science. The 2015 study's technique, for example, required both extremely fast lasers and extraordinarily sensitive cameras.

But Bouman and her colleagues' method for seeing around corners simply uses a smartphone camera.

"We use light naturally in the scene and do not have to introduce our own light to probe the hidden scene," Bouman said. "This allows us to

use common consumer cameras and not specialized equipment to see around corners."

The new system, known as CornerCameras, analyzes light that is reflected off objects hidden around corners and that falls on the ground within the line of sight of the camera. This light is called the "penumbra."

Original Frame
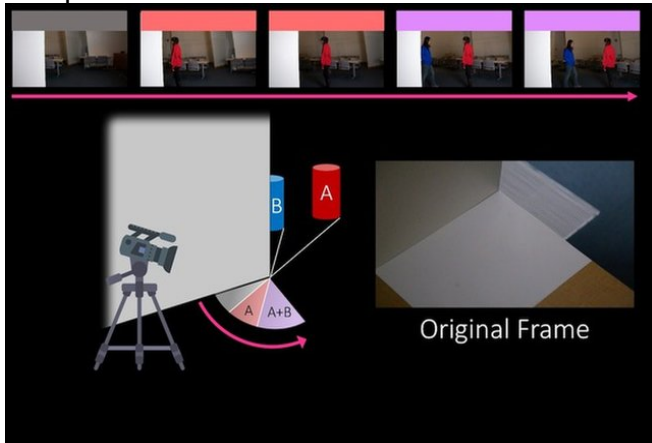
One current limitation of CornerCameras is that it requires a stationary camera that's held very steady. "In many situations, such as in a collision-avoidance system on a car, you do not have the luxury of a stationary camera," Bouman said. The researchers are now focused on getting the system to work first on a moving wheelchair and eventually on a moving car, she said.
Future research will also aim to make CornerCameras work in a variety of lighting situations, or in changing lighting conditions, such as when clouds overhead constantly move in front of the sun. "Getting the system to work in these scenarios would open up the possibility of it being able to be used by a person with a handheld smartphone," Bouman said.

MEET 'NORMAN' THE DARKEST, MOST DISTURBED AI THE WORLD HAS EVER SEEN.

A neural network named "Norman" is disturbingly different from other types of artificial intelligence (AI).
Housed at MIT Media Lab, a research laboratory that investigates AI and machine learning, Norman's computer brain was allegedly warped by exposure to "the darkest corners of Reddit" during its early training, leaving the AI with "chronic hallucinatory disorder," according to a description published April 1 (yes, April Fools' Day) on the project's website.

MIT Media Lab representatives described the presence of "something fundamentally evil in Norman's architecture that makes his re-training

impossible," adding that not even exposure to holograms of cute kittens was enough to reverse whatever damage its computer brain suffered in the bowels of Reddit.

This outlandish story is clearly a prank, but Norman itself is real. The AI has learned to respond with violent, gruesome scenarios when presented with inkblots; its responses suggest its "mind" experiences a psychological disorder.
In dubbing Norman a "psychopath AI," its creators are playing fast and loose with the clinical definition of the psychiatric condition, which describes a combination of traits that can include lack of empathy or guilt alongside criminal or impulsive behavior, according to Scientific American.
Norman demonstrates its abnormality when presented with inkblot images — a type of psychoanalytic tool known as the Rorschach test. Psychologists can get clues about people's underlying mental healthbased on the descriptions of what they see when looking at these inkblots.

When MIT Media Lab representatives tested other neural networks with Rorschach inkblots, the descriptions were banal and benign, such as "an airplane flying through the air with smoke coming from it" and "a black-and-white photo of a small bird," according to the website.

However, Norman's responses to the same inkblots took a darker turn, with the "psychopathic" AI describing the patterns as "man is shot dumped from car" and "man gets pulled into dough machine."

ARTICLES SUBMITTED BY:
JUHI MANKAR
SHIVANI THORAT
SHUBHAM WANI
JUIELY NAIK
ARHAM KAZI

Do share your views, feedbacks and articles by mailing at
byteforcomputers@gmail.com

VIDYAVARDHINI'S COLLEGE OF ENGINEERING AND TECHNOLOGY

BYTE

THE NEWSLETTER OF COMPUTER ENGINEERING DEPARTMENT

AIBO : Artificial Intelligence Robot

It is a series of robotic pets designed and manufactured by Sony. Sony announced a prototype Aibo in mid-1998. The first consumer model was introduced on May 11, 1999. New models were released every year until 2006. Although most models were dog-like, other inspirations included lion-cubs and space explorer, and only the ERS-7 version and ERS-1000 versions was explicitly a "robotic dog". In November 2017, Sony announced a new generation of AIBO after 11 years. The fourth generation model, ERS-1000, was launched in Japan on 11 January 2018. The second lottery sale was set on 6 February 2018 .

All AIBOs are bundled with AIBOLife software giving the robot a personality, the ability to walk, "see" its environment via camera and recognize spoken commands (English and Spanish, or Japanese). AIBO's sounds were programmed by Japanese DJ/avant-garde composer Nobukazu Takemura, fusing mechanic and organic concepts.

The sounds in ERS-7 Mind and custom data were composed by Masaya Matsuura, a Japanese musician and game designer. Aperios is Sony's Proprietary Real-Time Operating system, used in all AIBOs, QRIO and some other consumer devices. Aperios OS was intended to be widely deployed using revolutionary real-time capabilities to handle multiple audio and visual data streams concurrently. The OPEN-R architecture is specific to entertainment robots. The architecture involves the use of modular hardware components, such as appendages that can be easily removed and replaced to change the shape and function of the robots, and modular software components that can be interchanged to change their behavior and movement patterns. AIBO's creator, Doi, called OPEN-R the masterpiece of the AIBO development project, arguing it would minimize the need for programming individual movements or responses, and its "open" nature would encourage a global community of robot specialists and programmers to add capability.

DEPARTMENT OF COMPUTER ENGINEERING

AIBOware (a trademark of Sony corporation) is the title given to the software the AIBO runs on its pink Memory Stick. The Life AIBOware allows the robot to be raised from pup to fully grown adult while going through various stages of development as its owner interacts with it. The Explorer AIBOware allows the owner to interact with a fully mature robot able to understand (though not necessarily willing to obey) 100 voice commands. Without AIBOware, AIBOs run in "clinic mode" and can only perform basic actions.

Third generation ERS-7 models have a sole "Mind" software that includes capabilities of AIBOLife and other AIBOware packages. Mind software also includes a docking process, allowing ERS-7's to recharge autonomously. Upgrades in Mind2 included the AIBO Entertainment Player, a Wi-Fi based connection to a PC. Upgrades in Mind3 included speech, blogging and autonomous room mapping.

AIBO's complete vision system uses the SIFT algorithm, to recognise its charging station. The vision system is an implementation of Evolution Robotics ERVision.

Digital Twins :Technology driven by IoT

IoT is an area where the so-called Digital Twins concept evolves at the fastest pace. Modern household appliances use a lot of smart components equipped with sensors to gather data about real-time status, working conditions, problems and so on. They're integrated to cloud-based systems to gather data, then process and analyze it.
And here's how a digital twin is created. It's a kind of pairing appliance which reflects its real-life counterpart in the digital environment. This virtual model of a product or service allows for analysis of huge amount of various data. In effect, we can deal with problems before they even occur, prevent downtime, develop new functionalities and much more.
The digital twin concept has the widest coverage in such projects as smart cities, real time navigable models, or health care – with virtualization of a hospital systems for work safety and continuity.
We can also observe that digital twin technology is spreading to the user experience field. Service providers try to get clients to attend their events, for example trades or fashion shows, and let customers build their visual twin to become a part of an event. This way they create an extraordinary user experience.

A digital twin is an exact digital replica of a product, process or service. This living model creates a thread between the physical and digital world. Internet of things (IoT)-connected objects are replicated digitally, enabling simulations, testing, modeling and monitoring based on the data collected by IoT sensors. Like everything in the realm of IoT, data is the primary driver, and most invaluable output, of digital twins. The sharing and analysis of digital twin data empowers companies to make decisions which directly impact their key performance indicators.

A digital twin, alternately, does not act as a replacement for the physical object or service which it represents. Instead, it is a digital replica of the initial "thing," acting as a vehicle for monitoring and testing around the physical object without actually having to be in close proximity to it.

Sensors attached to the physical object collect massive amounts of data, which allows the digital version to act like the physical object. This shows a business exactly how each individual machine on their production floor is functioning, for example, rather than making assumptions based on a generalized expectation for how the machine should function, when it will need repairs or how it could perform more efficiently.

The idea of digital twins is predated by pairing technology, developed by NASA to help in the operation, repairs and maintenance of spacecraft traveling outside the range of physical monitoring. These "twin" systems are what made it possible for engineers and astronauts to test repairs for the ill-fated Apollo 13 mission, bringing the craft and crew back to earth safely. NASA now uses digital twins, thanks to the development of sensors, to gather data, make recommendations to crew members and plan for the needs of future aircraft. Aside from maintenance, digital twins can also be used to improve and evolve customer experience.

Digital twin technology has implications across a wide variety of industries: From an HVAC technician visualizing and predicting maintenance on the fan motor of an industrial cooling unit, to a manufacturer testing the impact of introducing a new packaging machine into its shipping processes prior to actually implementing the machine in real life, digital twins enable businesses to conduct tests, and make smarter and better-informed decisions in the digital world before implementing them in the physical. The technology has predominantly been adopted in manufacturing.

Blockchain

Blockchain became a hot tech topic in 2017, thanks in no small part to Bitcoin's meteoric rise. But beyond digital currency, blockchain is a technology poised to revolutionize nearly every industry. In 2018, we'll start to see the first attempts at this disruption through business-class blockchain platforms.

Many of the legacy technology companies introduced their own blockchain platforms in 2017. IBM is considered the leader, and they are already penning partnerships with banks, food distributors, and government regulation agencies to put blockchain to use. However, Microsoft, Oracle, and Amazon are close behind, and the battle for enterprise-level blockchain dominance is just heating up.

What does this all mean for the software industry? Businesses in every industry are going to start building apps on blockchain platforms, which means the demand for blockchain developers is going to explode. According to 2016 figures, there were only 5,000 full-time blockchain developers in the world. Surely that number increased in 2017, but it still pales in comparison to the over 18 million Java developers. 2018 will be a gold rush for developers who dedicate themselves to blockchain, and most will come away a whole lot richer.

Blockchain technology can be integrated into multiple areas. The primary use of blockchains today is as a distributed ledger for cryptocurrencies, most notably bitcoin. There are a few operational products maturing from proof of concept by late 2016.As of 2016, some observers remain skeptical. Steve Wilson, of Constellation Research, believes the technology has been hyped with unrealistic claims.To mitigate risk, businesses are reluctant to place blockchain at the core of the business structure.Also, most cryptocurrencies use blockchain technology to record transactions. For example, the bitcoin network and Ethereum network are blockchain-based.Blockchain-based smart contracts are proposed contracts that could be partially or fully executed or enforced without human interaction.Blockchain technology can be used to create a permanent, public, transparent ledger system for compiling data on sales, tracking digital use and payments to content creators, such as wireless users or musicians.

Mixed Reality

Mixed reality has been as prominent in modern popular culture as VR. Sci-fi is rife with holograms, often manipulatable, and it has long been the vision for computers to take on a less confined display - think Minority Report. Mixed reality essentially holds all of the utility of augmented reality (the kind of heads up display supposed to have transformed our lives by now) on top of the imagination of VR. Characters in the video games created will interact with the actual world in front of the wearer, rather than an entirely constructed landscape. Microsoft technical fellow Alex Kipman confusingly referred to it as 'augmented virtuality', and the marrying of the two is what gives mixed reality a real chance of becoming ubiquitous.

Microsoft expects 80 million mixed reality devices to be sold by 2020, a figure it revealed to the surprise of pundits at Computex. For perspective, IDC estimate that 64.8 million VR headsets will be sold by the same year, and Microsoft's confidence in the technology gives it an incredibly influential proponent. Google's Glass was ugly. Its shape ignored the necessity for a soft introduction of wearable tech - early users would generally rather the tech blend in, rather than have them look like an extra from a sci-fi movie.

It's on this matter of form that some companies developing the tech seem to be hesitating - the function is already there. Microsoft's HoloLens isn't an aesthetic nightmare by any means, but is probably too goofy to see quick, widespread adoption; it looks a lot more like a VR headset than an a pair of Ray-Ban sunglasses, for example. Style is important for wearables intended for public use, and is currently where Magic Leap - one of the US' most exciting startups - is keeping its cards very close to its chest. Located in suburban Florida, the company may have just found the future of altered reality, and its mixed. A very detailed Wired piece exploring the company highlights the fact that investors have shovelled some $1.4 billion into the startup, including the likes of Qualcomm and Google. Alibaba led the most recent round of funding, pulling in $793.5 million in what Wired estimates could be the 'largest 'C' round in Internet history.'

The buzz around Magic Leap is incredible. Proof of concept videos have shown what the technology is capable of, and its overlaying of anything from messages and presentations to video games onto reality looks spectacular. The company is yet to release any physical product, though. Seemingly committed to waiting until the technology is properly developed, Rony Abovitz and his team are yet to even offer a beta to developers, meaning backers will wait with bated breath to see how the technology actually looks come release. The online community has been sceptical of Magic Leap, and will continue to be as long as there is no hardware available - let's just hope that its eventual arrival increases the buzz rather than stops it in its tracks. Mixed reality is the future of digital eyewear, and Magic Leap might just have the backing to bring it to the market.

Edge Computing

If you get a lot of data as is the case when you leverage IoT in such end-to-end ways or even in specific highly sensor-intensive and thus data-intensive environments whereby data is generated at the edge which by definition happens in IoT as your data sensing and gathering devices ARE at the edge (think about all the sensors and data they generate in a large oil and gas project where you can have hundreds of thousands of sensor data points across myriad wells but also about all the IoT data in a smart city or large critical power building such as an airport), you inevitable encounter challenges on levels such as bandwidth, network latency, speed overall and so forth where fog and edge computing play a role. In IoT applications with a mission-critical and/or remote component the need for speed and for different approaches such as edge computing is even more important.

Edge computing is focused on devices and technologies that are attached to the things in the Internet of Things such as industrial machines (GE)

Depending on the context and scope of the project you want the data you need fast. Or better: you need the aggregated and analyzed data, in the shape of actionable intelligence, enabling you to take actions and decisions, fast, whether these decisions are human or not. So, you don't need all that data to store it and analyze it in the cloud but you only want that bit of data traveling across your networks.

You can imagine hundreds of scenarios where speed and fast data is key, from asset management, critical power issues, process optimization, predictive analytics to the real-time needs of supply chain management in a hyper-connected world, the list is endless.

You can also imagine that the more your building, business ecosystem and whatnot thrives on fast data and real-time holistic management in any broader context, the more valuable that data can become when properly leveraged and rapidly analyzed. We do live in times where having the right insights fast enough can have enormous consequences.

Speed of data and analysis is essential in many industrial IoT applications but is also a key element of industrial transformation and all the other areas where we move towards autonomous and semi-autonomous decisions made by systems, actuators and various controls.

That degree of autonomy is even at the very core of many of the desired outcomes and of the goals in, for instance, Industry 4.0 as we move towards the next stage of the third platform which is all about autonomy.
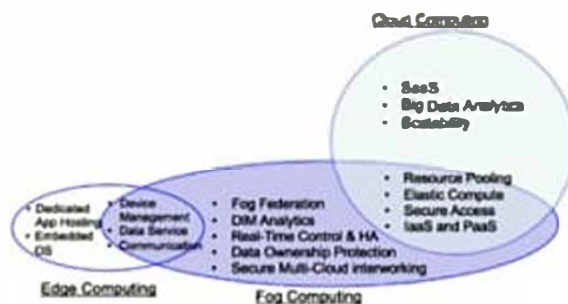
Stretchy Artificial 'Skin' Could Give Robots a Sense of Touch

Rubber electronics and sensors that operate normally even when stretched to up to 50 percent of their length could work as artificial skin on robots, according to a new study. They could also give flexible sensing capabilities to a range of electronic devices, the researchers said.

Like human skin, the material is able to sense strain, pressure and temperature, according to the researchers.

"It's a piece of rubber, but it has the function of a circuit and sensors," said Cunjiang Yu, an assistant professor of mechanical engineering at the University of Houston.

Electronics and robots are typically limited by the stiff and rigid semiconductor materials that make up their computer circuits. As such, most electronic devices lack the ability to stretch, the authors said in the study.In research labs around the world, scientists are working on various solutions to produce flexible electronics. Some innovations include tiny, embedded, rigid transistors that are "islands"in a flexible matrix. Others involve using stretchy, polymer semiconductors. The main challenges with many of these ideas are that they're too difficult or expensive to allow for mass production, or the transmission of electrons through the material is not very efficient. This latest solution addresses both of those issues, the researchers said. Instead of inventing sophisticated polymers from scratch, the scientists turned to low-cost, commercially available alternatives to create a stretchy material that works as a stable semiconductor and can be scaled up for manufacturing, the researchers wrote in the study.

PlayerUnknown's Battlegrounds (PUBG)

PUBG is an online multiplayer battle royale game developed and published by PUBG Corporation, a subsidiary of South Korean video game company Bluehole.The game is based on previous mods that were created by Brendan "PlayerUnknown" Greene for other games using the film Battle Royale for inspiration, and expanded into a standalone game under Greene's

creative direction. In the game, up to one hundred players parachute onto an island and scavenge for weapons and equipment to kill others while avoiding getting killed themselves. The available safe area of the game's map decreases in size over time, directing surviving players into tighter areas to force encounters. The last player or team standing wins the round.

The game was released for Microsoft Windows via Steam's early access beta program in March 2017, with a full release on December 20, 2017. That same month, the game was released by Microsoft Studios for the Xbox One via its Xbox Game Preview program, and officially released in September 2018. In early 2018, it was localized and released by Tencent Games in China, while two mobile versions based on the game for Android and iOS were also released. The game is one of the best-selling of all time, with over fifty million sold across all platforms by June 2018. In addition, the Windows version holds a peak concurrent player count of over three million on Steam, which is an all-time high on the platform.Battlegrounds received positive reception from critics during both its early access period and on official release, who found that while the game still was not fully finished and had some technical flaws, Battlegrounds presented new types of gameplay that could be easily approached by players of any skill level and was highly replayable. PUBG Corporation has run several small tournaments and introduced in-game tools to help with broadcasting the game to spectators, as they wish for it to become a popular eSport.

Some Interesting facts:

· The first computer mouse was made with wood in 1964 by Doug Engelbart.

· 30,000 websites are hacked every day.

· The Dirty Dozen was the name of a 12 engineer's group who developed the first IBM computer.

· In 1939, the first electro mechanical computer was made/developed.

· ENIAC was the first electronic computer which was weighed around 27 tons and it's taken up space around 1800sf (square feet).

· In 1979, the first of first hard disk/drive was made to store the user's data and it could hold only data under 5MB.

· Microsoft Windows, this is not an original name, the first original name was 'Interface manager' which was changed later.

Articles contributed by: Juiely Naik
Arham Kazi
Anang Vema
Kavya Nair

Vidyavardhini's college of engineering and technology
Department of computer engineering

ChatGPT

THE BENEFITS OF ROBOTIC PROCESS AUTOMATION

BYTE WALL

FACULTY EVENTS

NSS CAMP

DISCOVER THE POWER OF R PROGRAMMING LANGUAGE

ANGULAR VS REACT WHAT WOULD YOU CHOOSE?

ACHIEVEMENTS

WEBX & ADC INAUGURATION

BIT BYTE GO

PLACEMENT

CONGRATULATIONS

CONGRATULATIONS

THE FUTURE OF MOBILE DEVELOPMENT: FLUTTER

VIDYAVARDHINI'S COLLEGE OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF COMPUTER ENGINEERING

TEAM MEMBERS

ADITYA LAWATE   SAHIL KULABKAR
VAISHNAVI GAIKWAD   BRAHMETI PATIL
ADITYA BHANDARE   ANUSHKA SUPE
PAARTH BARADIA   ALOK PAL
SHRUSHTI GAWANDE   MOHAK TAMORE
SIDDHESH THAKARKAR

FACULTY INCHARGE
MR. VIKRANT A. AGASKAR

AVAHAN'23

VIDYAVARDHINI'S COLLEGE OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF COMPUTER ENGINEERING

ARTICLES SUBMITTED BY

MOHAK TAMORE
KARAN SANKHE
ADITYA LAWATE
SOHAM PATIL
PAARTH BARADIA
ADITYA BHANDARE

ZEAL'23

IOB
INTERNET OF BEHAVIOUR

Internet of Behavior (IoB)

Vidyavardhini's college of engineering and technology
Department of computer engineering

BYTE WALL

Faculty Co-ordinator:
Prof. Vikrant Agaskar

Committee Members:
Aditya Lawate
Vaishnavi Gaikwad
Aditya Bhandare
Mohak Tamore
Srushti Gawand
Alok Pal
Parth Baradia

TECHNOLOGIES UNDER DARQ

In today's generation the technologies are playing the most important role at different positions and at different levels. DARQ is one of the technologies from them. A modern group of powerful, emerging technologies are forming futuristic innovation and fresh digital transformations. These technologies enable businesses to provide new consumer demands and to set new customer expectations. Specifically, the technologies are known as DARQ, which stands for distributed ledger technology, artificial intelligence, extended reality and quantum computing. Over approximately 90% of enterprises have done experiments on DARQ technologies. Many expect for the resources to become challenging assets and business differentiators.

THE PUDDLE IN INTERNET - DARKWEB

The internet that we use today is just 4% of what the whole world wide web has in it. The age of the internet has many good use cases, let it be in the terms of medical emergencies, commute, education, and entertainment, but at the same time, it has many cons too. Wonder why I said we use only 4% of the internet? Because 96% is the dark web; a place where data of all the internet users is sold at a very good rate by many companies and their stakeholders. This side of the internet is filled with hackers, illegal traders, data sellers, seekers, and terrorists. The members of this group have formed their social media on the dark web, they communicate among themselves over there being anonymous to each other.

TECHNOLOGIES IN JWST

The James Webb Space Telescope (JWST) will have a unique and profound role in transforming our understanding of astrophysics and the origins of galaxies, stars, and planetary systems. To do this, and build on the successes of Hubble and Spitzer, it has invested in innovative and powerful new technologies ranging from optics to detectors to thermal control systems. JWST has made an early and significant investment in its technologies, and as a result, all are on schedule to be fully demonstrated during 2006. The James Webb Space Telescope (JWST) is a space telescope designed primarily to conduct infrared astronomy. As the largest optical telescope in space, its high infrared resolution and sensitivity allow it to view objects too early, distant, or faint for the Hubble Space Telescope.

FUTURE IN 5G

In today's modern-day world, everyone is in a hurry to do some or the other work at a much quicker rate. In this charge of rushing up ourselves, technologies are enjoying an essential position in our everyday lives. Mobile has grown to become an incredible asset in our lives. Every single work of ours is completed via a small system named cell phone. From enjoying the easiest game to doing the greatest fax of money, we are dependable on cell phones. But what do you suppose if these works get speeded up at a very quicker rate? Yes, It is viable now due to expanding networking speed. We are acquainted with 1G,2G,3G,4G networks which are additionally known as international wireless standards. Till now, we are long gone through the four Generations of Networking.

WEB 3.0

THE WEB 3.0 ECONOMY

Metaverse is the next step in the development and creation of the internet. The term was coined in 1992 in Neal Stephenson's novel Snow Crash. The concept of the metaverse states that it was a digital universe in which everyone will be able to access it via augmented or virtual reality. Previously it was associated with sci-fi, slowly the metaverse is becoming a business buzzword many tech giants such as Facebook are now investing billions in infrastructure and in the industry for attracting tech investors who are looking to turn that fiction into reality. Facebook has recently renamed itself "Meta" and has labeled the metaverse as the "next chapter" of the internet revolution.

BLOCKCHAIN, CRYPTOCURRENCY & DAPP

Money evolved from a barter system to paper money and internet banking. This transaction technique has now evolved to cryptocurrency. Cryptocurrency is like an umbrella name for many currencies that are like bitcoin, which has been discussed further in the article. Blockchain came in as a technology to make a peer-to-peer networking solution that sits on top of the internet and makes a secure connection between sender and receiver. It was introduced as a part of the proposal of Bitcoin, a virtual currency that skipped the need for a central authority for issuing materialistic money. When blockchain was introduced, people weren't aware of how useful it is and what could be done through it.

DIGITAL FORENSICS

Digital forensics has become a pillar in the world of cybercrime investigation. While traditional methods have involved manual analysis, advances in artificial intelligence and machine learning are making digital forensics more accessible and efficient. The term digital forensics was originally used as a synonym for computer forensics, but has expanded to include the study of any device capable of storing digital data. Digital forensics (sometimes called digital forensic science) is the branch of forensic science that involves the recovery, research, investigation and analysis of material found on digital devices, often associated with mobile and computer crime.

REFRESHER COURSE
PLACEMENTS
REFRESHER COURSE
Mini-Project Orientation
VCET SOLECTHON
Hindusthan
Congratulations !!! Team VCET SOLECTION for winning at SCVC '22

Articles submitted by
Aditya Lawate
Alok Pal
Siddhesh Thakarkar
Vipul Bhoir
Karan Sankhe
PratimaBombe

BYTE
WALL

Achievements

A R T I C L E S

Go Programming

Virtual Reality

Storing and Reading Information in Mixtures of Fluorescent Molecules

Artificial Intelligence and Humans.

A NEW ERA OF QUANTUM WORLD!!

BYTE WALL MAGAZINE

DEPARTMENT OF COMPUTER ENGINEERING

Team Members

Akhila Anilkumar
Polomi Adak
Mohit Raje
Hrushikesh Shetty
Pratham Ingawale
Archa Jadhav

Faculty Incharge:-
Prof. Vikrant Agaskar

◆ PLACEMENT ◆

Company Name	No. of Students Placed
LTI,Mumbai	3
Accenture	3
Capgemini	4
Infosys	15
L & T Infotech	7
TCS	23
Pentagon Space	11
Zeus Learning	3
Wipro Limited	3
Megavision Technologies	1
Square yards consulting.Pvt.Ltd	2
Raw Engineering	1
Software AG	2
Vistaar	2
Swabhav tech labs	1

Achievements

Number of Inter-Institute events participation by students.

Co-curricular Activities

ARTICLES SUBMITTED

OM ACHREKAR
AKHILA ANILKUMAR
POLOMI ADAK
HRUSHIKESH SHETTY
MOHIT RAJE
PRANAV MAURYA

Events

Date	Activity
15th July 2021 to 17th July 2021	Workshop on Full stack Development (Alumni Activity)
13th August 2021	Webinar on Competitive Coding Strategies and its importance (Alumni Activity -Codechef activity)
29th October 2021	Career Opportunities in Web Application Development (Alumni Activity)
09-09-2021	Workshop on Coding Skills (Codechef activity)
07-10-2021	Importance of Coding in Placement (Codechef activity)
09-10-2021	CodeX'21 (Coding Competition)

Events

WORKSHOP ON CODING SKILLS

Webinar on competitive coding strategies and its importance

BYTE

WALL MAGAZINE

DISCLAIMER: ALL INFORMATION PROVIDED IN THIS NEWSLETTER IS FOR EDUCATIONAL AND INFORMATIVE PURPOSES ONLY, 'VIDYAVARDHINI'S COLLEGE OF ENGINEERING AND TECHNOLOGY' IS NOT RESPONSIBLE FOR ANY ACTION OR CONSEQUENCES, DIRECT OR INDIRECT, ARISING FROM THE USE OF THIS WALL-MAGAZINE, FOR FORMAL CIRCULATION ONLY. NOT FOR SALE.

BYTE WALL MAGAZINE

ARTICLES

OUR TEAM

ALUMNI REMARKS

OUR EVENTS

PLACEMENT RECORDS

Augmented Reality

What is Augmented Reality?

A combination of a real scene viewed by a user and a virtual scene generated by a computer that augments the scene with additional information.

An AR system adds virtual computer-generated objects, audio and other sense enhancements to a real-world environment in real time.

Role of Machine Learning in Natural Language Processing

Introduction:

Steps to add Redux into your React project

Redux is a different entity from react, you can use redux anywhere in the project whether it is vue, angular, or vanilla js, etc. Redux is used to manage all the states and provide global data access to all the components in the project, you no need to follow that ancestor props passing to get access to parents or super-parents data.

Installation

before using redux in your app you need to install some package.

Create a global store

The Future Of Cryptocurrency in 2021 and Beyond

A cryptocurrency is a digital currency that is created and managed through the use of advanced encryption techniques known as cryptography. Cryptocurrency made the leap from being an academic concept to (virtual) reality with the creation of Bitcoin in 2009. While Bitcoin attracted a growing following in subsequent years, it captured significant investor and media attention in April 2013 when it peaked at a record $266 per Bitcoin after surging 10-fold in the preceding two months. Bitcoin sported a market value of over $2 billion at its peak, but a 50% plunge shortly thereafter sparked a raging debate about the future of cryptocurrencies in general and Bitcoin in particular.So, will these alternative currencies eventually supplant conventional currencies and become as ubiquitous as dollars and euros someday? Or are cryptocurrencies a passing fad that will flame out before long? The answer lies with Bitcoin.

GOAL-LINE TECHNOLOGY

Goal-line technology is a technical means of instantly determining whether the whole of the ball has crossed the goal line or not.

Keep your home Wi-Fi safe in 7 simple steps

What is Cryptocurrency?

Examples of Cryptocurrency

VIDYAVARDHINI'S COLLEGE OF ENGINEERING AND TECHNOLOGY, VASAI

DEPARTMENT OF COMPUTER ENGINEERING

Byte Wall Magazine

The following is the team for wall magazine of COMP, VCET
Wall Magazine Head : Mr. Josh Ghelani
Technical Head : Ms. Rucha Mhatre
Creative/Logistics Head : Ms. Nidhi Mehta
Ms. Lavina Rathod
Faculty Incharge : Mrs. Maya Varghese

ENGINEERING & TECHNOLOGY, VASAI
Department Of Computer Engineering

Congratulations!

Placement on Campus (2020-2021)

COMPANY NAME	NO. OF STUDENTS PLACED
Infosys	15
TCS	23
L&T	03
Raw Engineering	01
Zeus Learning	03

FEW SPOTLIGHTS

1. Tejas Kachare placed in Infosys as Power Programmer through HackWith Infy Competition got 8 LPA.
2. Keval Shah got Digital Programmer offer in TCS with 7 LPA
3. Mihir Poriwal & Aditya Yadav placed in LTI got 5 LPA
4. Amit Yadav, Divyanshu Gupta & Meet Thakkar placed in INFOSYS as system Engineer specialist HackWith infy competition got 5 LPA

Session on BLOCKCHAIN TECHNOLOGY

SPEAKER: Ms. Leena Nadkar

TIMELINE

STRUCTURE OF A BLOCK

BLOCKCHAIN REVOLUTION

Webinar on DATA SCIENCE USING MATLAB

SPEAKER: Mr. Suraj Gawande

Click here for summary pag

3RD Pragati 2023 Business Plan 2022-23

Faceoff 2022-23 (Inter)

Faceoff 2021-22

Faceoff 19-20