



Vidyavardhini's College of Engineering and Technology  
Department of Computer Engineering

MOU ACTIVITY

Sr No	Organization with which MoU is signed	Name of Institute/ Industry/ Corporate House	Year of signing MoU	List of activities under MoU year wise			Number of students / faculty participated under MoUs
				From	To	Activity	
5	VCET	Janyu Technologies Pvt. Ltd	16/12/21	16/12/21	present	Collaborative Research Project	Faculty: 07

HOD

Dr. Megha Trivedi

Industry Sign and Seal



**MEMORANDUM OF  
UNDERSTANDING (MOU)**

BETWEEN

VIDYAVARDHINI'S COLLEGE OF  
ENGINEERING AND TECHNOLOGY

&

M/S. JANYU TECHNOLOGIES PVT LTD, VASAI

MEMORANDUM OF UNDERSTANDING (MoU)

BETWEEN

Vidyavardhini's College of Engineering and Technology, Vasai  
AND  
Janyu Technologies Private Limited, Vasai

This Memorandum of Understanding (hereinafter called as the 'MoU') is entered into on this the 16<sup>th</sup> day of December, 2021 by and between Vidyavardhini's College of Engineering and Technology, Vasai, the First Party represented herein by Dr. Harish Vankudre and Mr. Prafulla Patil

AND

Janyu Technologies Private Limited, Vasai, Building No 6, Rajprabha Landmark Industrial Estate, Sativali Road, Bhoidapada, District: Palghar, Maharashtra 401208, represent by Mr. Abhimanyu Raja, Director, Janyu Technologies Pvt Ltd. called and referred to as the 'Second Party' (hereinafter referred to as "Second Party").

(First Party and Second Party are hereinafter jointly referred to as 'Parties' and individually as 'Party')

WHEREAS:

A) First Party is a Higher Educational Institution named: **Vidyavardhini's College of Engineering and Technology (VCET)**. It is a two decade old Engineering Institute relentlessly striving to give the society the best of engineers. Since its inception in 1994, VCET has been a catalyst in spreading technical education and meeting the current and future needs of the industry. VCET is affiliated to the University of Mumbai and also approved by the All India Council of Technical Education (AICTE), New Delhi. Majority of our departments have been accredited by the NBA, New Delhi and recently all departments has been accredited by NAAC for 5 years.

B) First Party & Second Party believe that collaboration and co-operation between themselves will promote more effective use of each of their resources and provide each of them with enhanced opportunities.

C) The Parties intent to cooperate and focus their efforts on cooperation within area of Skill Based Training, Education, Placement, Industrial Visit, Expert Lecture.

D) Janyu Technologies Pvt Ltd. the Second Party is a technology company based out of Vasai and working in diversified verticals of Robotics, Automation, Space, Defense, Oil & Gas, Chemical, Pharma, FMCG, Capital Goods, Engineering and Allied Industries.

  
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Engineering and Technology,  
Vasai Road 401 202



NOW THEREFORE, IN CONSIDERATION OF THE MUTUAL PROMISES SET FORTH IN THIS MOU, THE PARTIES HERETO AGREE AS FOLLOWS:

## CLAUSE 1

## CO-OPERATION

- 1.1 Sharing knowledge and capabilities in the concern areas for mutual benefits and become trusted partners in the area of knowledge enrichment.
- 1.2 Facilitate work from First party students/faculties and vice versa on live projects identified for collaborative activities.
- 1.3 To collaborate, share information and technology to develop the required skills and intend to create a Centre of excellence to support this shared effort.
- 1.4 To support and sharing the activities related to:
  - i. Capability development of the students.
  - ii. Sponsored projects
  - iii. Laboratory/ies development
  - iv. Infrastructure development
  - v. Publications, Products and Patents
  - vi. Workshops, Conclaves, Seminars, Events.
- 1.5 Industrial Training & Visits: Industry and Institution interaction will provide an insight into the latest developments / requirements of the industries; the Second Party to permit the Faculty and Students of the First Party to visit its group companies and also involve in Industrial Training Programs for the First Party. This will provide confidence & smooth transition for students work. Also, the Second party may register on the AICTE Internship Portal for the benefit of students.
- 1.6 Placement of trained students: second party will actively engage to help the delivery of the training and placement of the students of the first party on the technology trends and in house requirements.

## CLAUSE 2

## SCOPE OF THE MOU

- 2.1 Industrial Training & Visits: Industry and Institution interaction will provide an insight into the latest developments / requirements of the industries; the Second Party to permit the Faculty and Students of the First Party to visit its group companies and also involve in Industrial Training, entrepreneurial skills development training and industrial projects amongst students Programs for the First Party. This will provide confidence & smooth transition for students work. Also the Second party may register on the AICTE Internship Portal for the benefit of students.
- 2.2 Guest Lectures: Second Party to extend the necessary support to deliver guest lecturers to the students of the First Party on the technology trends and in house requirements.

  
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2.3 Placement of trained students: second party will actively engage to help the delivery of the training and placement of the students of the first party on the technology trends and in house requirements.

- Research and Development: Both Parties have agreed to carry out the joint research activities in the fields of robotics and automation.
- Brainstorm on product and design complete look of Product and development.
- Make appropriate visual material like 2D & 3D views that would help Second Party to visualize and approve the design.

2.4 There is no financial commitment on the part of the **Vidyavardhini's College of Engineering and Technology**, the first party to take up any program mention in MoU. If there is any financial consideration, it will be dealt separately.

2.5 Both Parties to obtain all internal approvals, consents, permissions, and licenses of whatsoever nature required.

### CLAUSE 3

### VALIDITY

3.1 This Agreement will be valid until it is expressly terminated by either Party on mutually agreed terms, during **which period, the Second Part.**

### CLAUSE 4

### RELATIONSHIP BETWEEN THE PARTIES

4.1 It is expressly agreed that First Party and Second Party are acting under this MOU as independent contractors, and the relationship established under this MOU shall not be construed as a partnership.

### AGREED:

For Vidyavardhini's College of Engineering  
and Technology, Vasai

For M/s. Janyu Technologies Private  
Limited, Vasai

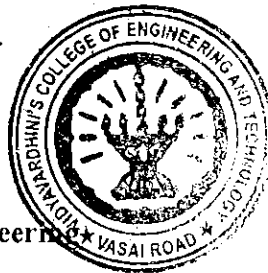
PRINCIPAL

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MANAGING DIRECTOR

Mr. Abhimanyu Raja

Janyu Technologies Pvt Ltd

Bhoidapada, Vasai East -401208

Mobile No: 9022811807

Email: [raja@janyutech.com](mailto:raja@janyutech.com)



Witness1: Prof. Prafulla Patil

Name and Sign :

Witness2: Mr. Rajesh P. Modgekar

Name and Sign:

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Research Collaboration Proposal

011

Integrated Real Time Sewerage Monitoring & Maintenance System via Digitization &  
Human Enabling Robots

Between

Vidyavardhini's College of Engineering and Technology, Vasai

AND

Janyu Technologies Private Limited, Vasai

on

16<sup>th</sup> day of December 2021

Proposal is as below:

**Gaps in the existing drainage system:**

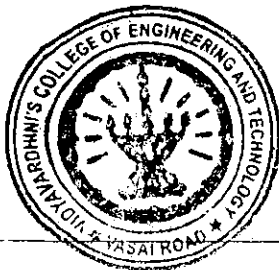
Though some level of mechanized cleaning is currently in use for sewerage maintenance, there are some serious gaps to be filled:

**Temporary solution:** The current procedures and systems are oriented more towards choke clearance at manholes and restoring the flow of sewer temporarily.

**No solution for Hard settled solids:** There is no effective mechanism to handle hard debris dumped from outside, solids at the manholes that have been piled up and sediment over many years. Hard sludge needs to be broken into smaller pieces and cannot be easily pulled out by suction.

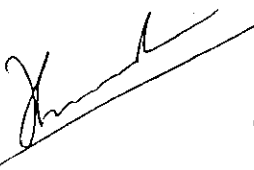
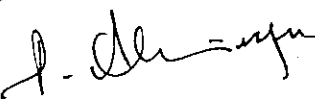
**No solution for inaccessible areas:** There is no effective mechanized system to cut the solids settles, the roots and other legacy solids inside sewer pipes of small to large diameters. There are no tools to effectively reach inaccessible areas like under railway tracks/roads and clear the clogging.

**No Pre/Post Inspection tools:** The entire process is just aimed at maintaining the flow temporarily and inspected visually just at the manhole. The only inspection systems used are First person visual assessment. This does not give any assessment of the solids settled in the pipelir



  
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**Proposed Solution:**

1. **Real-Time Monitoring:** The manholes will be provided with sensors which shall raise the alert and convey the same to the centralized monitoring system in case of any potential overflow. The centralised monitoring system will be located in the ward-wise control room
2. **Inspection:** The pipelines shall immediately be inspected by robotic crawler systems for visual inspection.
3. **Cleaning:** A robot will be deployed in addition to the existing machinery of the municipal corporation which will break the hard wastes blocking the flow at the manholes by agitating and removed by grabbing through a hydraulic robotic arm. There will be an on-board camera to monitor the whole operation from outside the sewer manholes

**Under this Proposal**

First Party & Second Party believe that collaboration and co-operation between themselves will promote more effective use of each of their resources and provide each of them with enhanced opportunities.

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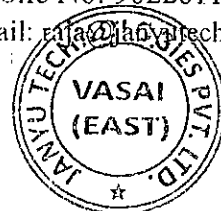
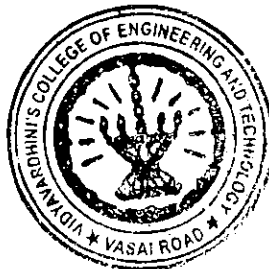
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