

Faculty Development Programs

We organize faculty development programs every year. To enable faculty from all over India to attend this program, since lockdown, most of these are conducted in online mode. Faculty is always busy in the teaching and learning process. These programs help faculty to abreast of technology trends in their field. Experts from industry and academia share their knowledge with the participants.

Objectives:

1. To expose faculty to trends in technology
2. To encourage faculty to carry out research in the latest technology
3. To orient faculty towards industry needs.
4. To expose faculty to the latest tools.

Outcomes:

Faculty will be able to

1. Identify new research areas.
2. Identify industry needs.
3. Design solutions to given problems using the latest technology.
4. Include the latest tools in their course.

| Year | Title | Duration |
|---------|---|----------|
| 2015-16 | Cloud Computing | 1 week |
| 2016-17 | IOT considerations and application | 1 week |
| 2017-18 | Internet of Things in Energy and Utilities | 1 week |
| 2018-19 | Machine learning with Tensorflow | 2 weeks |
| 2018-19 | Scope of IOT for social upliftment | 2 weeks |
| 2020-21 | Internet Programming: The Full Stack Approach | 2 weeks |
| 2021-22 | Artificial Intelligence Towards Data Science Applications | 2 weeks |
| 2022-23 | Exhilarating Socio-human Life Using Deep Learning | 2 weeks |
| 2023-24 | Microsoft PowerBI Data Analyst Associate | 1 week |

The image is a screenshot of a Zoom meeting. The main content is a presentation slide titled "DPU" (Deep Processing Unit) which includes a diagram of a neural network architecture. The architecture starts with an input layer of size 28x28x1, followed by a Conv1 layer (stride=2) resulting in 14x14x32. This is followed by a Conv2 layer (stride=2) resulting in 7x7x64. A Flatten layer then converts this into a 1152-dimensional vector. This vector passes through a fully connected (FC) layer (1152 nodes) and a Reshape layer (3x3x128) to produce a 28x28x128 volume. This volume then passes through a DeConv3 layer (stride=2) resulting in 14x14x32, and finally a DeConv2 layer (stride=2) resulting in 7x7x64. The final output is a 28x28x1 volume, which is a reconstruction of the input digit '2'.

Other elements in the screenshot include:

- A slide titled "PERCEPTRON LEARNING RULE" with the text: "For the Perceptron learning rule, the learning signal is the difference between the desired and actual neuron's response. Learning is supervised and the learning signal is equal to $r = d_j - o_j$ ". Below this, it states: "where $o_j = \text{sgn}(w_j \cdot x)$, and d_j is the desired response as shown. Weight adjustments in this method, Δw_j and Δw_{ij} , are obtained as follows: $\Delta w_j = c [d_j - \text{sgn}(w_j \cdot x)] x$ and $\Delta w_{ij} = c [d_j - \text{sgn}(w_j \cdot x)] x_j$, for $j = 1, 2, \dots, n$ ".
- A list of participants in the bottom left corner: Dr.Sanjay B.Waykar, Maya Varghese, Pragati Patil, and Sonal Balpande.
- A code editor window in the bottom right showing some code.
- A Windows taskbar at the bottom with system tray icons and a weather widget showing 30°C.