



AJ INSTITUTE OF ENGINEERING & TECHNOLOGY

A Unit of Laxmi Memorial Education Trust®

(Approved by AICTE, New Delhi, Affiliated to Visvesvaraya Technological University, Belgaavi)

DEPARTMENT OF INFORMATION SCIENCE AND ENGINEERING

REPORT

5-Day Faculty Development Programme on **Machine Learning Using Python Programming** was organized from **01.06.2021** to **05.06.2021** by Department of Information Science and Engineering in Association with Departments of Computer Science & Engineering and Electronics and Communication Engineering. More than 400 participants have registered and attended the FDP through on-line google meet app and YouTube streaming from various institutes of our country.

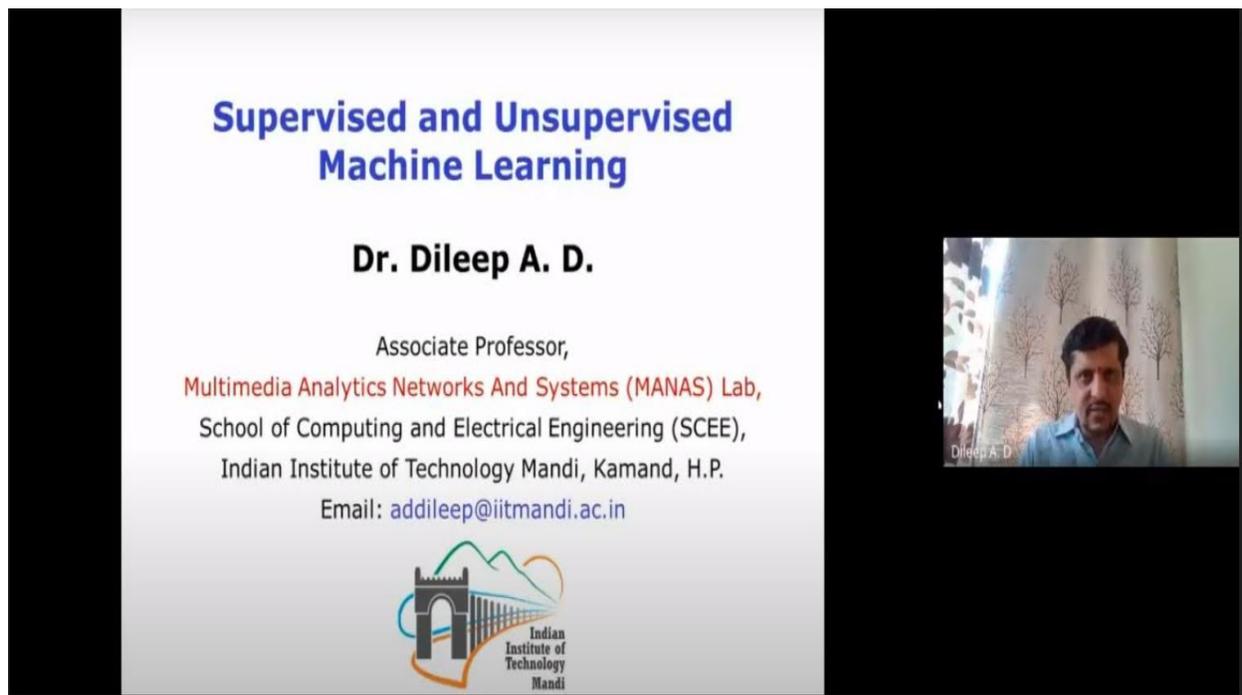
First day started at 9.55AM with an inaugural programme in which the college principal Dr Shantharama Rai C addressed the participants, the programme convenor and Head of the Dept of ISE, Dr. Nagesh H.R welcomed the participants and introduced the Resource person of the day **Dr.Veena T, Associate Professor, Dept. of CSE, NIT, Goa**. She presented the topic **Introduction to Machine Learning and Feature Optimization** in which she focused on different types of Machine Learning and addressed some of the Real-World problems like Handwritten Recognition. The session ended with a Vote of thanks by Mrs Shilpa Shetty. The duration of the session was from 10.00 AM to 12.00 PM. Monitoring of the session was done by Mrs. Vineetha Pais, Mrs. Shilpa Shetty, Mrs. Prajna B. Mrs. Vineetha Pais was the master of ceremonies of the session.

The screenshot shows a Google Meet interface. At the top, it indicates 'veena t is presenting' and 'ashika cs and 64 more' participants. The main content is a presentation slide titled 'Data Preprocessing' with the following bullet points:

- Real world data tend to be **incomplete, noisy and inconsistent** due to their **huge size** and their likely **origin from multiple heterogeneous sources**
- Preprocessing is important to clean the data
- Low quality data will lead to low quality of analysis results
- If the users believe the data is of low quality (dirty), they are unlikely to trust the results of any data analytics that has been applied to
- Low quality data can cause confusion for analytic procedure using machine learning techniques, **resulting in unreliable output**
- Data could be
 - **Incomplete,**

The right side of the screen shows a grid of participants: Dr. Nagesh HR, veena t (presenting), venkatesh nc, deepthi preethik..., Parashuram Tala..., AJIET STREAM, saroan vel, Rachna Jain, and Manvith K. At the bottom, there are controls for 'Raise hand', 'Turn on captions', and 'veena t is presenting'.

Second day started at 9.55AM, the Head of the Dept of CSE, Dr Antony P.J welcomed the participants and introduced the Resource person of the day **Dr.Dileep A.D Associate Professor, School of Computing and Electrical Engineering, IIT Mandi**. He presented the topic **Supervised and Unsupervised Machine Learning**. He mainly addressed the problems related to Supervised and Unsupervised Learning like Principle Component Analysis, Support Vector Machine and so on. The session ended with a Vote of thanks by Mrs Snitha Shetty. The duration of the session was from 10.00 AM to 12.00 AM. Monitoring of the session was done by Mrs. Sharon D'Souza, Mrs.Snitha Shetty, Mrs. Pratheeksha. Mrs Sharon Dsouza was the master of ceremonies of the Session.



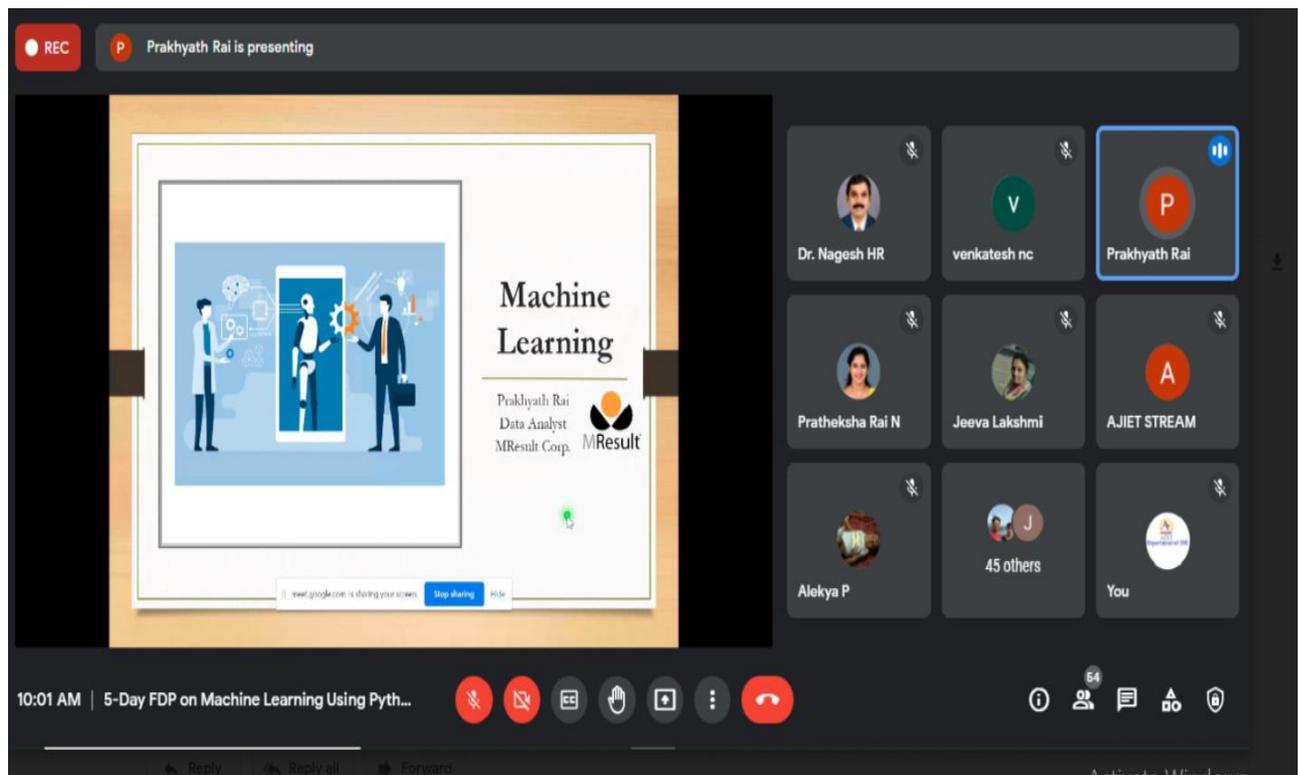
**Supervised and Unsupervised
Machine Learning**

Dr. Dileep A. D.

Associate Professor,
Multimedia Analytics Networks And Systems (MANAS) Lab,
School of Computing and Electrical Engineering (SCEE),
Indian Institute of Technology Mandi, Kamand, H.P.
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Third day started at 9.55 AM, the programme convener and Head of the Dept of ISE, Dr. Nagesh H.R welcomed the participants and introduced the Resource person of the day **Mr. Prakhyath Rai, Data Analyst, MResult Corporation, Mangaluru**. He presented the topic Python Programming for Machine Learning. He revised supervised and unsupervised learning. He focused on Basics of Python Programming by using Jupyter Notebook using Anaconda. The session ended with a Vote of thanks by Mrs. Sharanya P S. The duration of the session was from 10.00 AM to 12.00 PM. Monitoring of the session was done by Mrs.Pratheeksha Rai, Mrs. Sharanya P S, Mrs. Suneetha Shetty. Mrs.Pratheeksha Rai was the master of ceremonies of the Session.



Fourth day started at 9.55 AM, Mrs Aruna Kumari G K coordinator of the programme welcomed the participants and introduced the Resource person of the day **Mr. Prakhyath Rai, Data Analyst, MResult Corporation, Mangaluru**. He presented the topic Python Packages for Machine Learning. He focused on Python Programming packages like Numpy, Pandas by conducting Hands-on session on Jupyter Notebook using Anaconda. The session ended with a Vote of thanks by Mrs. Vineetha Pais. The duration of the session was from 10.00am to 12.00pm. Monitoring of the session was done by Mrs. Aruna Kumari G K , Mrs. Vineetha Pais and Mrs. Prajna B.

The screenshot displays a Zoom meeting interface. On the left, a Jupyter Notebook is open, showing the Matthews Correlation Coefficient (MCC) formula and a code cell. The formula is:

$$MCC = \frac{TP \times TN - FP \times FN}{\sqrt{(TP + FP)(TP + FN)(TN + FP)(TN + FN)}}$$

The code cell contains the following Python code:

```

from sklearn.metrics import matthews_corrcoef
y_true = [+1, +1, +1, -1] #target
y_pred = [+1, -1, +1, +1] #Predictions
matthews_corrcoef(y_true, y_pred)

In [1]: -0.3333333333333333

```

Below the code, a thumbnail of a "Machine Learning Algorithms Cheat Sheet" is visible, featuring sections for "Unsupervised Learning: Clustering" and "Unsupervised Learning: Dimension Reduction".

On the right, a grid of participants is shown, including Prakhyath Rai, venkatesh nc, Dr. Nagesh HR, Aruna Kumari GK, Ashwini T, AJIET STREAM, Jeeva Lakshmi, and 36 others. The meeting title at the bottom is "5-Day FDP on Machine Learning Using Pyth...".

Fifth day started at 9.55 am, the programme convenor and Head of the Dept of ISE, Dr. Nagesh HR welcomed the participants and introduced the Resource person of the day **Dr. S Murugan, Professor, Dept. of CSE, Sathyabhama Institute of Science & Technology, Chennai**. He presented the topic Deep Learning Techniques. He explained some of the Deep Learning Framework and problems applied to Real world applications using Numpy, Tensor flow and PyTorch by conducting Hands-on session on Jupiter Notebook. The duration of the session was from 10.00am to 12.00pm. Monitoring of the session was done by Mrs. Aruna Kumari G K, Mrs. Vineetha Pais and Mrs. Pratheeksha.

REC M Murugan S is presenting

10 Framework?

TensorFlow	Keras	PyTorch	CNTK	DL4J
Google	Google (built on top of TensorFlow)	Facebook	Microsoft	Eclipse (Commercial)
Multilayer Neural Networks	Convolutional layers, recurrent layers, or dense layers.	Research	CNN and RNN	CNN, RNN, LSTM, RNTN
Voice / Image Recognition, NLP	Voice / Image Recognition, NLP	Distributed Training	Voice Training, Handwriting Detection, Image Recognition	Works with Apache Hadoop and Spark
2.3.1	2.4.0	1.7.0	2.7.0	1.0.0
DeepMind, Dropbox, AirBnB	NVIDIA, Wells Fargo, Ford, Qualcomm	Twitter, SalesForce, University of Oxford	Skype, Cortana, Xbox	US Bank, Livongo, Novetta

10:18 AM | 5-Day FDP on Machine Learning Using Pyth... 49

The valedictory of the FDP was conducted after completion of all the sessions. In the beginning of the valedictory function many of the participants have shared their experiences in attending the FDP and all the participants have appreciated the FDP.

REC

Dr Shantharama Rai

Mrs. SHARANYA P. S.

55 others

11:58 AM | 5-Day FDP on Machine Learning Using Pyth... 58

After the participant's feedback the president of the function Dr. Shantharama Rai C, Principal, AJIET has addressed the gathering about the quality of the activities conducted in the institute and the future activities planned by the institute. He has also requested the participants to attend the future activities conducted by the institute.

Mrs.Sharanya P S was the master of ceremonies of the Valedictory programme. The FDP Programme ended with a Vote of thanks by the programme convenor and Head of the Dept of ISE, Dr. Nagesh H.R.

Coordinators

- 1.Mrs. Aruna Kumari G K
- 2.Dr. Govinda Raj P
- 3.Mrs.Vineetha Pais

HOD - ISE

Dr. Nagesh H.R

Principal

Dr.Shantharama Rai C