



# **MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY**

(Autonomous Institution – UGC, Govt. of India)

DEPARTMENT OF COMPUTATIONAL INTELLIGENCE

## **REPORT ON ONE WEEK FDP ON “MACHINE LEARNING AND DEEP LEARNING” IN ASSOCIATION WITH INTEL UNNATI**

**JULY 27, August 16-19, 2023**

The Department of Computational Intelligence organized One Week FDP on “**MACHINE LEARNING AND DEEP LEARNING**” IN ASSOCIATION WITH **INTEL UNNATI** from July 25-31,2023 for the Faculty Members,

### **1.Objective of the Workshop:**

The aim of the Workshop is to provide hands on experience using Intel Unnati Server and Open source mobaxterm, Python-Jupyter Notebook and gain an in-depth knowledge on Machine Learning concepts ,Neural Networks and Deep Learning concepts with practical implementation of various algorithms.

### **Highlights**

- To understand basic concept of Machine Learning Mechanisms and implementation of them in real time environment
- Demonstrated connection establishment with Intel Unnati servers from local systems
- Worked with Mobaxterm to connect with jupyter notebook to establish connection with servers and to execute various machine learning and deep learning algorithms
- To design case studies on concepts like linear regression and so on
- To understand Deep Learning concepts and activation function and implementation with different data sets
- Illustrated usage of various data sets and their application over concepts of machine learning and deep learning

## **2.Schedule**

### **Day 1:**

#### **Morning and Afternoon Session's:**

- Inauguration of FDP
- Brief introduction of Machine Learning Concepts
- Overview of Supervised and Unsupervised Learning
- Practical Session 1: Open-source MobaXterm Installation Review

### **Day 2:**

#### **Morning and Afternoon Session's:**

- KNN Algorithms and integration
- Brief introduction Gradient Decent and cost functions
- Concepts of Test and Train Splits and Linear regression
- Bias -Variance and Trade off
- Practical Session 2: Gradient Decent with Linear regression with Real Time Implementation on Data Sets.

### **Day 3:**

#### **Morning and Afternoon Session's:**

- Introduction to Neurons and Feed forward networks
- Backward propagation to find loss function
- Practical approach on concepts of activation function and bias calculations
- Cost function and overfitting concepts and real time implementations

### **Day 4:**

#### **Morning and Afternoon Session's:**

- Brief introduction Convolutional Neural Networks
- Concepts on Layers of CNN like Pooling and Padding
- Practical approach on CNN with data sets with various pooling and padding ratios
- Image identification and testing and training
- Quiz on topics covered

## **Day 5:**

### **Morning and Afternoon Session's:**

- Brief introduction on Keras Layers for Convolutional Neural Networks
- Case study on image classification and identification with data sets
- Testing and Training data validation
- Clarification of doubts on topics covered
- valedictory session

### **Note:**

1. Morning session is from 9:30am to 1pm with a tea break from 11.00 to 11.15 am.
2. Afternoon session is from 1.30:00pm to 3.55 pm
3. The Workshop was inaugurated by the **Principal, Dr VSK Reddy** , along with **HOD of CI, Dr D.Sujata** , Instructor from Intel . About 30 Faculty Members have registered

# Photos Gallery

