**WEEK 1 ASSIGNMENT - FOREST FIRE DETECTION**

1. **WHAT IS DL?**

Deep learning is a technology which is used for mimic the human brain and then human behaviour and brain functionality. such as the way of thinking, rational thinking, decision making, learning, and performing tasks like a human and it performs the task by analyzing the each artificial neuron in detail.

1. **WHAT IS NEURAL NETWORK AND ITS TYPES?**

Neural networks are machine learning models that mimic the complex functions of the human brain. These models consist of interconnected nodes or neurons that process data, learn patterns, and enable tasks such as pattern recognition and decision-making. The Types include

* ANN- ARTIFICAL NEURAL NETWORKS
* FNN-FEED FORWARD NETWORKS
* CNN-CONVOLUTIONAL NURAL NETWORK
* RNN-RECURRENT NEURAL NETWORK
* LSTM – LONG SHORT-TEERM MEMORY
* GAN – GENERATIVE ADVERSARIAL NETWORK

1. **WHAT IS CNN IN SIMPLE WORDS?**

A Convolutional Nural Network-CNN is an Extension of the ANN- Artificial Neural Network used for the processing the complex images and Video processing in the field of computer vison.

1. **CREATE SHORT NOTES ABOT THE PIPELINE WE HAVE DISCUSSED IN A LECTURE.**

The Project Pipe line as follows in steps:

1. Data Collection and Data Loading: from Kaggle - [the-wildfire-dataset](https://www.kaggle.com/datasets/elmadafri/the-wildfire-dataset) .
2. Image Processing and Image Augmentation: Training the model in possible diff’ Scenarios
3. Building a CNN Model: Using TensorFlow.
4. Testing and Evaluation: Using Performance Metrics.