## **Deep Learning – 1 Week**

#### **Module 1 - Introduction**

- Introduction to Deep Learning
- Deep Learning vs Machine Learning
- Different techniques
- Installing Tensorflow | Keras

### **Module 2 - Introduction to Artificial Neural Network (ANN)**

- Artificial Neural Networks (ANNs): Concept
- Activation Functions
- Feed Forward Neural Networks
- Back Propagation
- Cost Functions

# Module 3 - Introduction to Convolutional Neural Network (CNN)

- Introduction to CNN
- Working of CNN
- Convolutional Layer | Pooling | Flatten

## **Module 4 - Introduction to Recurrent Neural Network (RNN)**

- Introduction to RNN
- Introduction to LSTM
- RNN vs LSTM

#### **Module 5 - Model Performance Metrics**

- Confusion Matrix
- Precision Score | Recall Score | F1 Score
- Overfitting and Underfitting
- Learning rate | Batch Size
- Outliers

## **Highlights & Projects**

- Concept of Neural Networks
- Activation Functions
- MNIST Handwritten Digit Prediction
- Google Stock Price Prediction
- Spam Email Detection
- Daily Recordings will be provided
- Completely Hands On Session