1. **Implement xor gate using simple neural network?**

2. **Implementing Feed forward neural networks with Keras and TensorFlow**

   a. Import the necessary packages

   b. Load the training and testing data (MNIST/CIFAR10)

   c. Define the network architecture using Keras

   d. Train the model using SGD

   e. Evaluate the network

   f. Plot the training loss and accuracy

3. **Build the Image classification model by dividing the model into following 4 stages:**

   a. Loading and preprocessing the image data

   b. Defining the model's architecture

   c. Training the model

   d. Estimating the model's performance

4. **Use Autoencoder to implement anomaly detection. Build the model by using:**

   a. Import required libraries

   b. Upload / access the dataset

   c. Encoder converts it into latent representation

   d. Decoder networks convert it back to the original input

   e. Compile the models with Optimizer, Loss, and Evaluation Metrics

5. **Implement the Continuous Bag of Words (CBOW) Model. Give any 4-5 lines paragraph. Stages can be:**

   a. Data preparation

   b. Generate training data

   c. Train model

   d. Output

Lab Practice IV (Deep Learning)   PR-25M

Q. explain use of following packages
  ① Tensorflow ② Kerras ③ theano ④ pyTorch

Q. What is mean by feed forward Neural Network.

Q. what is Mean by MNIST (Dataset) in details?

Q. what is Mean by CIFAR10 (Dataset) in detail?

Q. explain Autoencoder, How to to use in anomaly detection.

Q explain Continous Bag of word (CBOW) model

Q. explain object detection detection using Transfer learning of CNN.

Q. explain RNN, LSTM?

Q. what is Activation function & list the activation function.

Q. what is mean by deep Learning & Application of deep learning?

Q. what is softman activation function, when it's used

Q. list the loss function? explain loss func.

Q. list the optimizer? explain SGD optimizer

Q. what is overfitting? How to avoid it?

Q. what is mean by image classification & How it's done in deep learning

Q. what is meen by Social Network analysis & How it's done in deep learning

Q. what is mean by Speech Recognition - give example of any speech recognition System.

Q. what is mean by Recommender system - give example of Recommder system.

Q. What is mean by Natural language processing. How NLP is done using deep learning - give example of NLP?