Department of Information Technology

LAB PRACTICE IV

LIST OF LAB ASSIGNMENTS

Title of Assignments	
Demonstrate use of tensorflow and pytorch by implementing simple code in python	
Demonstrate use of KERAS and Theano by implementing simple code in python	
Implement Feedforward neural networks with Keras and TensorFlow MNIST Digit dataset	https://pyimagesearch.com/2021/05/06/implementing-feedforward-neural-networks-with-keras-and-tensorflow/
Implement Feedforward neural networks with Keras and TensorFlow CIFAR dataset	https://pyimagesearch.com/2021/05/06/implementing-feedforward-neural-networks-with-keras-and-tensorflow/
Build image classification model using CNN on fashion MNIST dataset.	https://www.kaggle.com/code/gpreda/cnn-with-tensorflow-keras-for-fashion-mnist/notebook
Build image classification model using CNN on pneumonia X RAY IMAGE dataset.	https://www.kaggle.com/code/madz2000/pneumonia-detection-using-cnn-92-6-accuracy/notebook
Build image classification model using CNN on FOOD dataset.	https://www.kaggle.com/code/derrickmwiti/convolutional-neural-network-cnn/notebook
Build Brain tumour classification model with CNN	https://www.kaggle.com/code/sisharaneranjana/fashion-mnist-classification-with-cnn
Build Recurrent Neural Network by using the numpy library	https://towardsdatascience.com/implementing-recurrent-neural-network-using-numpy-c359a0a68a67
Implement a simple autoencoder to reconstruct MNIST digits. Add sparsity constraint on the encoded representations	https://towardsdatascience.com/how-to-make-an-autoencoder-2f2d99cd5103

Use Autoencoder to implement anomaly detection on credit card dataset	https://github.com/curiousily/Credit-Card-Fraud-Detection-using-Autoencoders-in-Keras
Implement the concept of image denoising using autoencoders on MNIST data set	https://keras.io/examples/vision/autoencoder/
Implement object detection using Transfer learning on food dataset	
Implement image classification using transfer learning on animal dataset	
Implement the Continuous Bag of Words (CBOW) Model.	