

School of Computer Science Engineering and Technology

Course-B. Tech	Type- General Elective
Course Code- CSET-335	Course Name- Deep Learning
Year- 2024	Semester- Even
Date- 26/02/2024	Batch- 2023-2024

CO-Mapping

	CO1	CO2	CO3
Q1-Q4	√	√	

Objectives

CO1: To explain the fundamentals of deep learning, Convolution neural network.

CO2: To articulate different problem of classification, detection, segmentation, generation and understand existing solutions/ deep learning architectures.

CO3: To implement a solution for the given problem and improve it using various methods transfer learning, hyperparameter optimization.

Assignment-5

Goal: Exploring the existing deep neural network VGG-16 design for Digit classification using MNIST dataset with the help of Keras library.

1. Refer to the VGG-16 architecture shown below:



Design the model to classify the MNIST images. Use VGG-16 pre-trained model and add additional layers to classify the MNIST dataset and train it. Observe the accuracy over the test data.

2. Change the no. of the convolution layer to two instead of three at the place of conv-3, conv-4, and conv-5. Observe the change in performance and number of parameters.
3. Change the number of neurons to 2048, 1024, and 512 number of neurons by keeping the architecture same as Q.1 . Observe the performance of the network.
4. Change the no. of filters to 64 for all the convolution layers in the VGG-16 architecture and analyze the performance.