School of Computer Science Engineering and Technology

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

CO-Mapping

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	CO1	CO2	CO3	
Q1-Q4	V	\checkmark		

Objectives

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

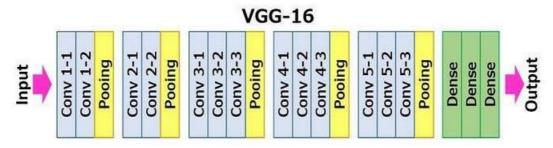
CO2: To articulate different problem of classification, detection, segmentation, generation and understand existing solutions/ deep learning architectures.

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 datasetwith 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.