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- 20/04/2024	**Batch-** 2023-2024

CO-Mapping

Exp. No.	Name	CO1	CO2	CO3
09	**CNN as a feature extractor**	✓	✓	-✓ -

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-9

Goal: Task is to implement CNN as a feature extractor.

To do: Write a code that takes an input image, extract features using any one pretrained CNN model at any 3 different layers and display the extracted features as image. Do it for 5 randomly chosen images from the below given data set.

Data set: Stanford Car Data set

http://ai.stanford.edu/~jkrause/cars/car_dataset.html

Models: ResNet-50, VGG-16, VGG-19, InceptionNetv3

Framework: TensorFlow Keras

Help: https://keras.io/api/applications/