PROJECT 2 REPORT
MACHINE LEARNING 2
ECE 780

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This project is to learn a model for image classification and visualization of a trained model using deep learning techniques.

Task 1 : Resnet-152 model is used for fine tuning using the concept of transfer learning.
RESULT
For Epoch =2

Datasets	**Training Accuracy(%) after fine tuning**
CIFAR-10	86.86%
MNIST	68.77%

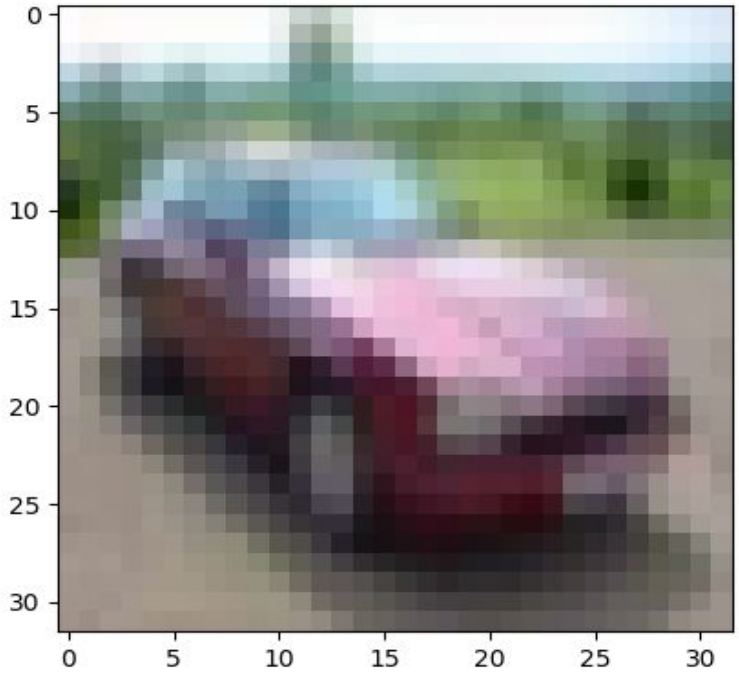
Task 2 : A CNN model is designed and classified using CIFA-10 and MNIST datasets and the results are compared with ResNet-152 model.
RESULT
For Epoch =10

MNIST(%)	CIFA-10(%)	RESNET(CIFA-10)	RESNET 152(MNIST)
97.47	68.76%	95%	76.66%

Task 3 : With the trained CNN model, visualization is performed using CIFA-10 and MNIST dataset for certain layers.

RESULTS

Visual representation of trained CNN model for CIFA- 10


0
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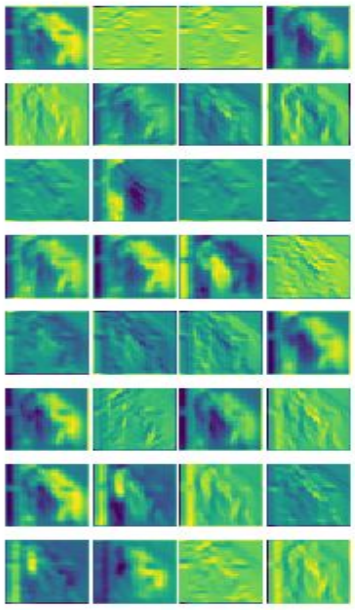

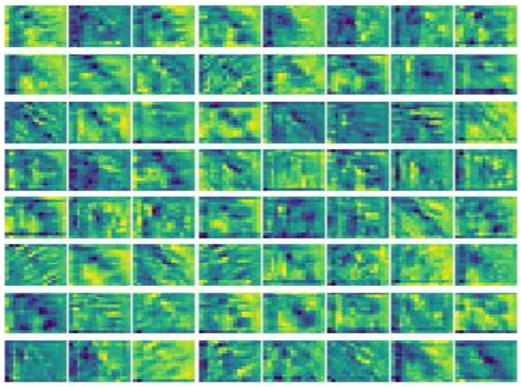

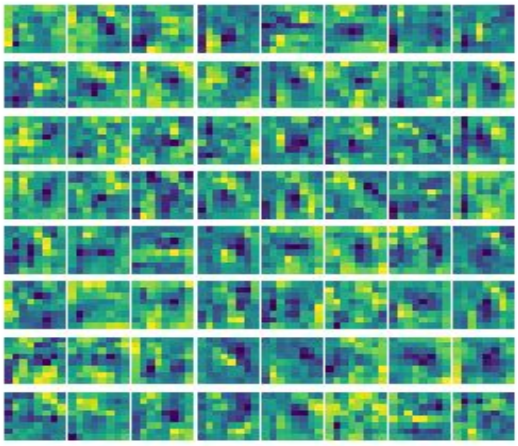

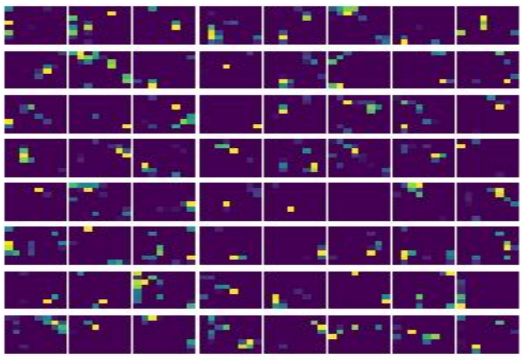

Visual representation of trained CNN model for MNIST dataset