



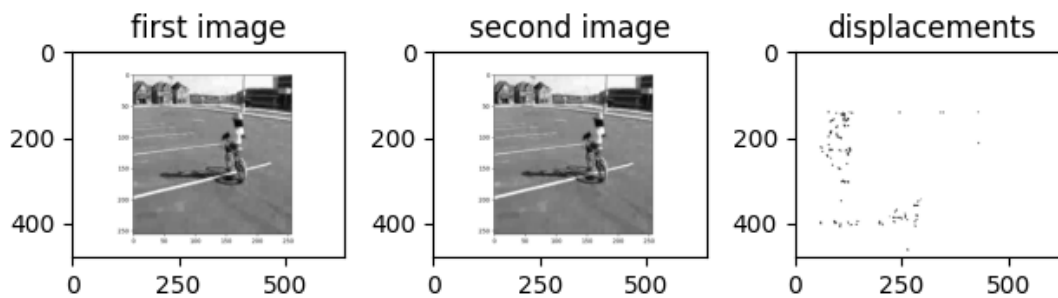
ASSIGNMENT – 3

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Branch: Data Science and Engineering

1 Question 1

Output :



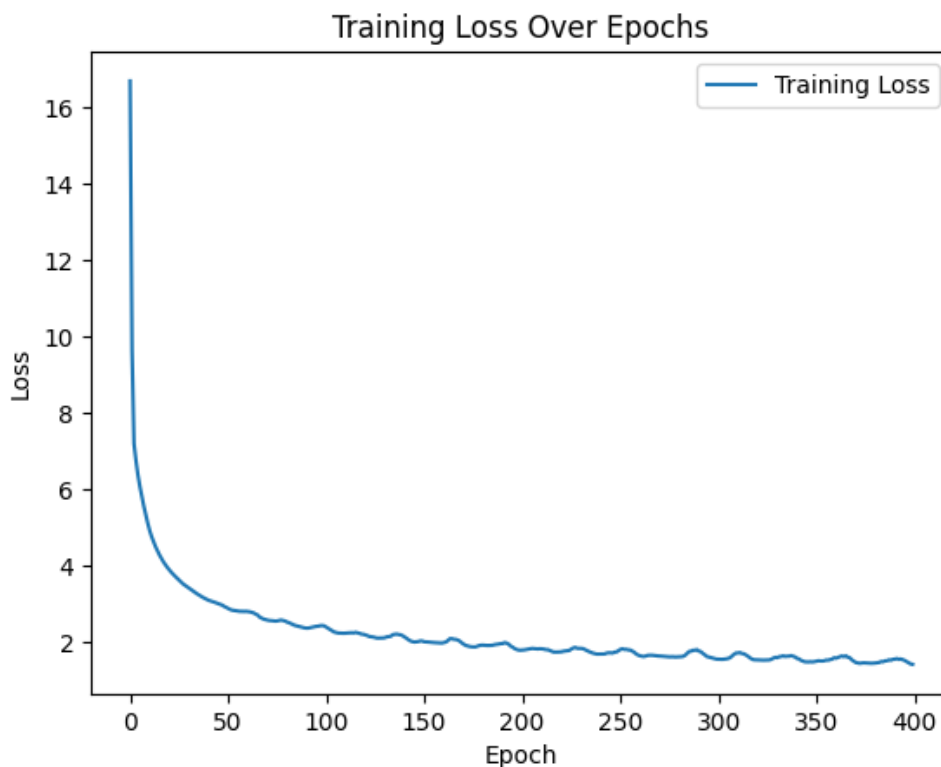
2 Question 2

On Mnist dataset

2.1 Part 1

1-hidden layer neural network in NumPy

Output :

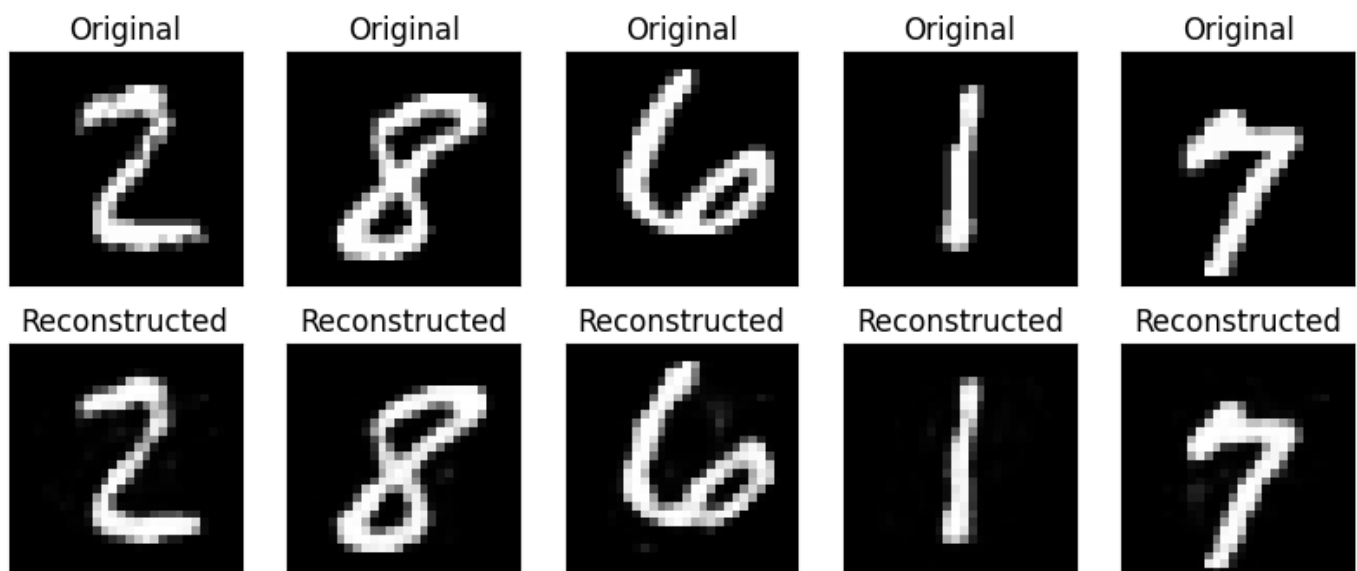
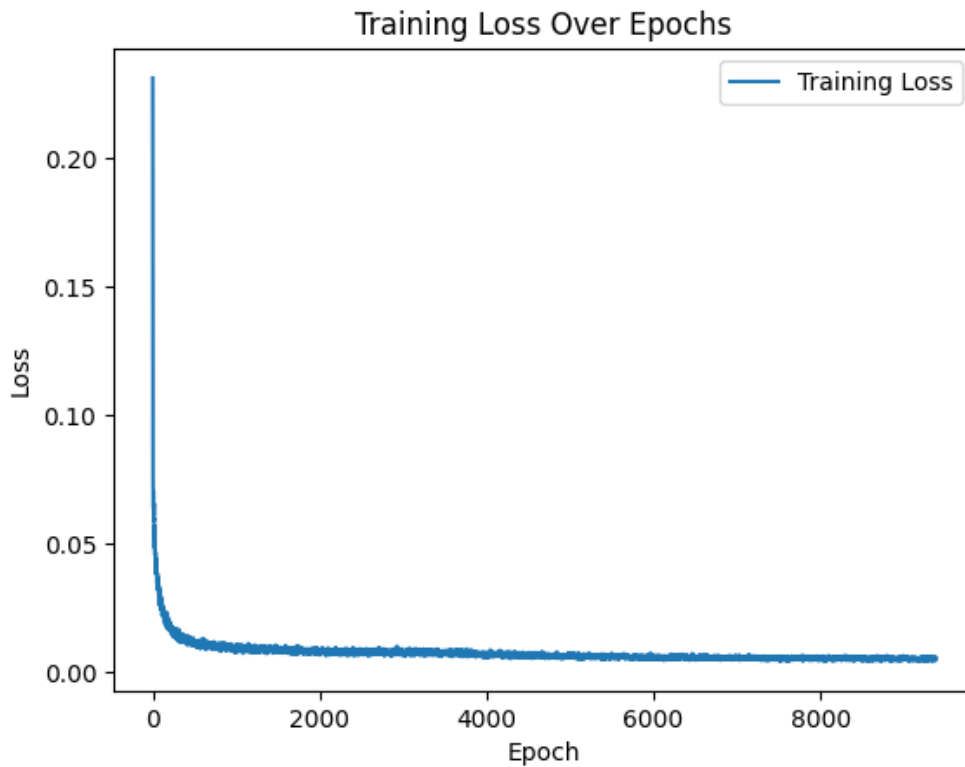


Accuracy = 0.7511



2.2 Part 2

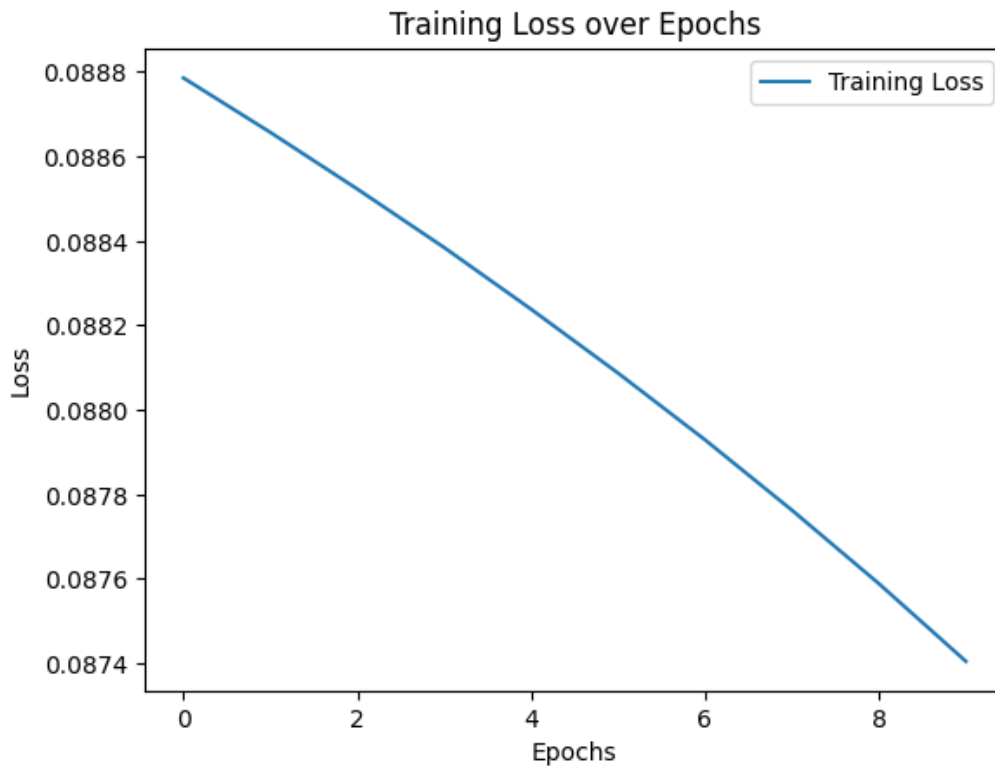
1-hidden layer autoencoder Output :





2.3 Part 3

3 layer Multi Layer Perceptron Output :

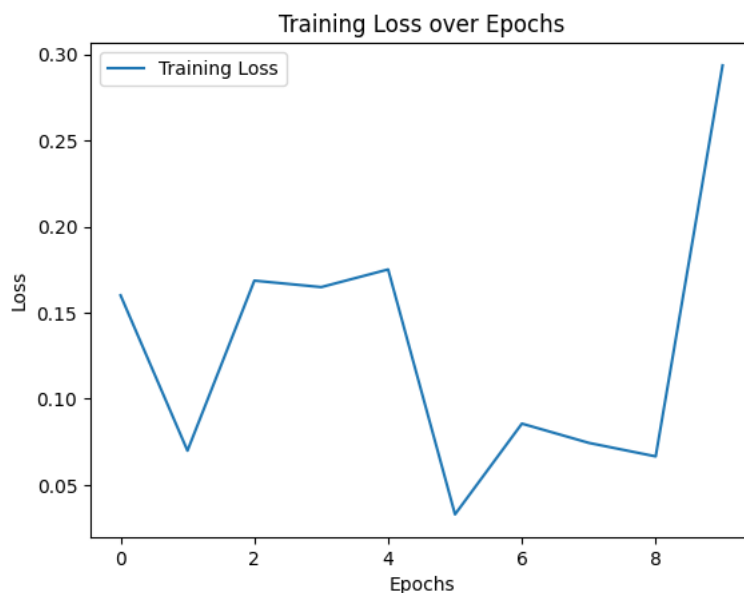


Test Accuracy: .3048

2.4 Part 5

LeNet

Output :



Accuracy on the test images: .9786



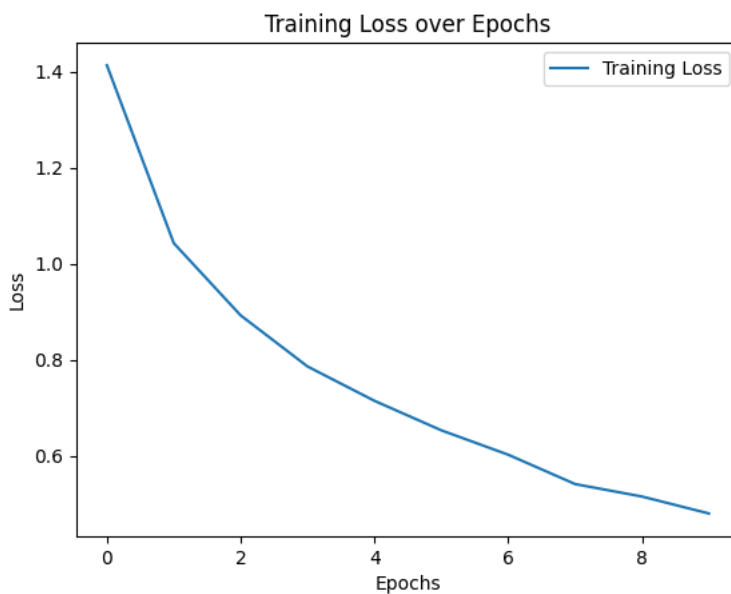
ASSIGNMENT – 3

3 Question 3

All parts on Cifar10 dataset

3.1 Part 1 : 3 CONV + 1 FC layers CNN

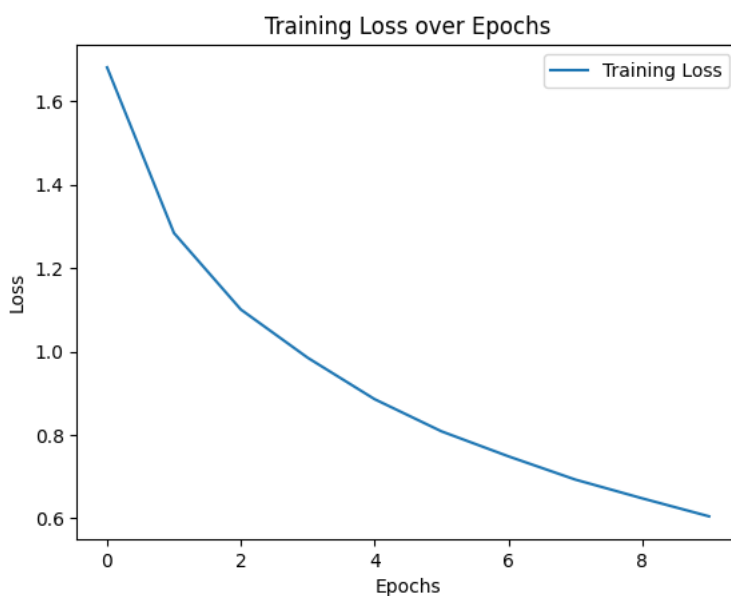
Output :



Accuracy on the test set: .7773

3.2 Part 2 : AlexNet

Output :



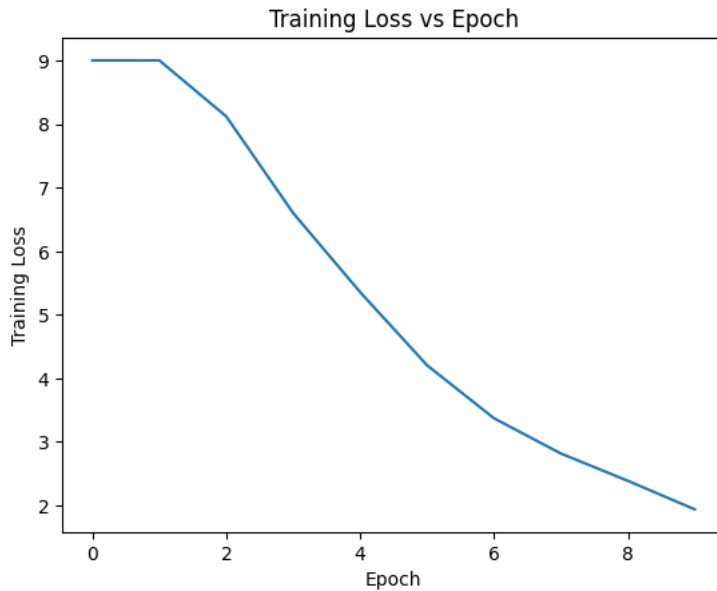
Accuracy on the test set: .6961



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3.3 Part 2 : VGG16

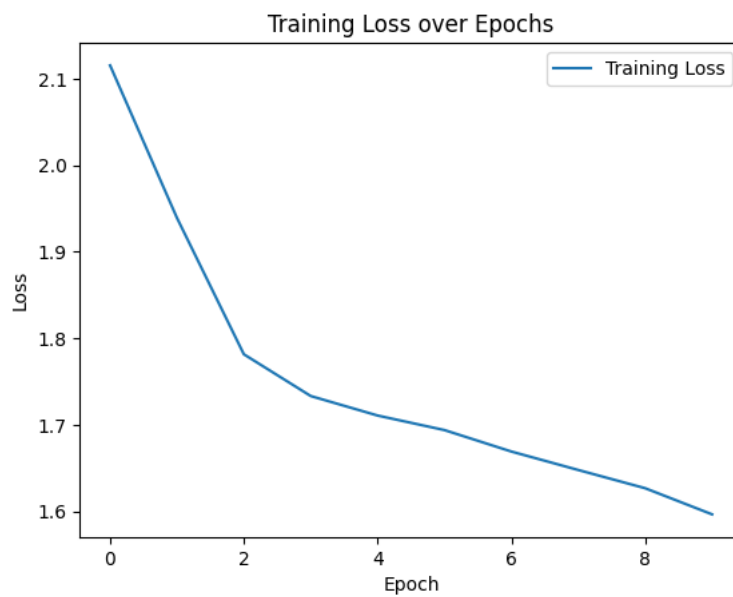
Output :



Test Accuracy: .7825

3.4 Part 2 : GoogLeNet

Output :



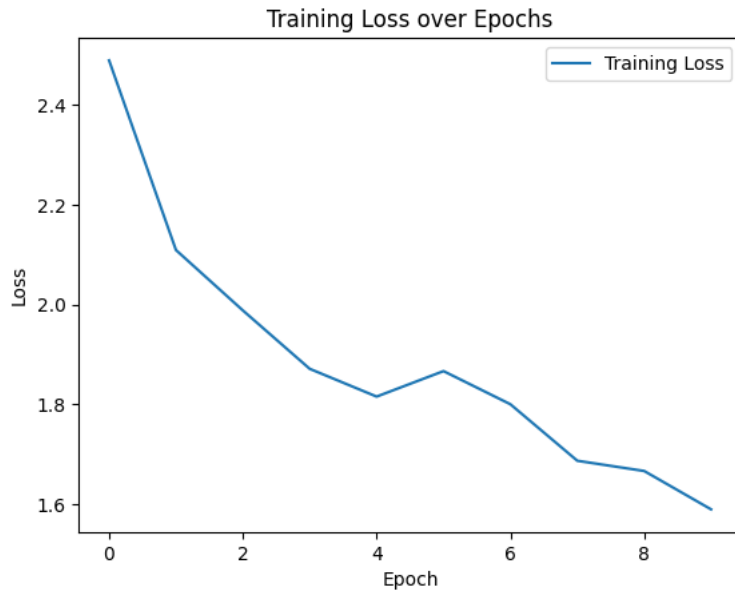
Test Accuracy: .4210



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3.5 Part 2 : RESNET152

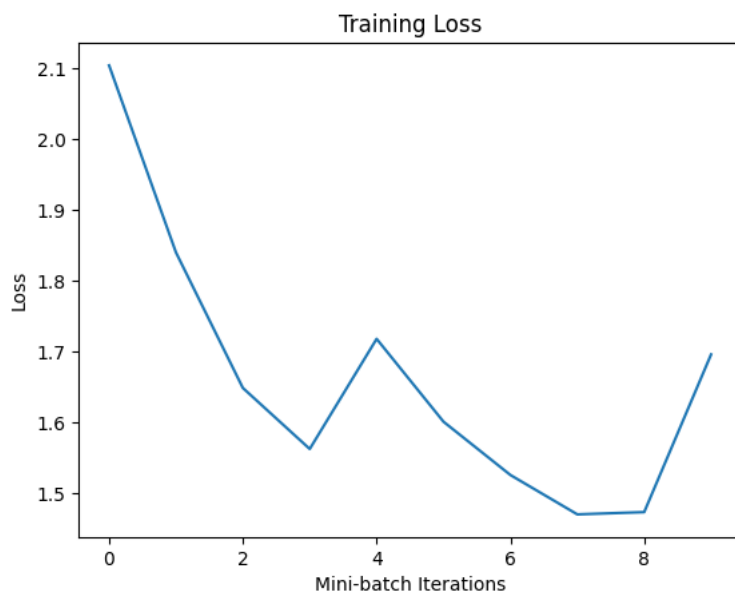
Output :



Test Accuracy: .47

3.6 Part 2 : EfficientNet-b1

Output :



Test Accuracy: .3756



4 Question 4

Image from imagenet dataset

4.1 Part 1

Output :

