PROGRAMMING ASSIGNMENT-2

CAP-5415

1. Overview

In this assignment I have developed a CNN architecture with different specifications at different steps. Then I have also plotted the loss and accuracy of all the models in the result section. **Please note that the loss is in the form of hundred percent in the loss graphs.**

2. Results

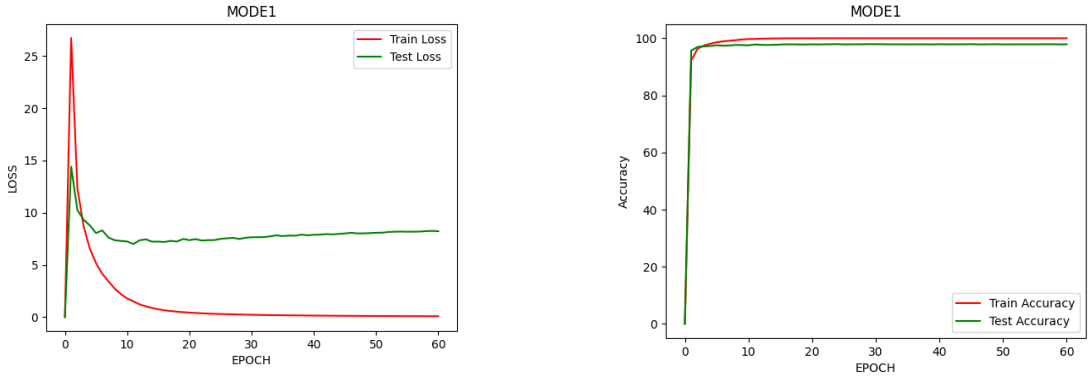

Fig 1: STEP 1

MODE 1: Average loss: 0.0822 Average Accuracy: 97.95%

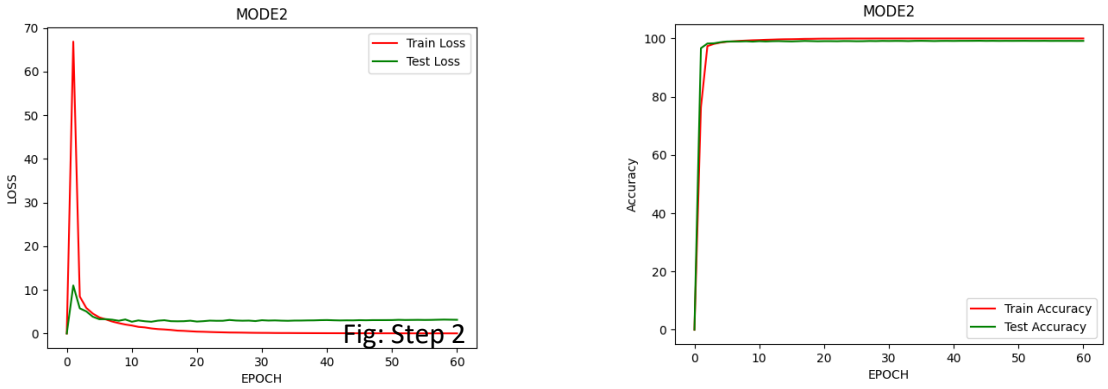

Fig: Step 2

Fig 2: STEP 2

MODE 2: Average loss: 0.0315, Average Accuracy: 99.21%

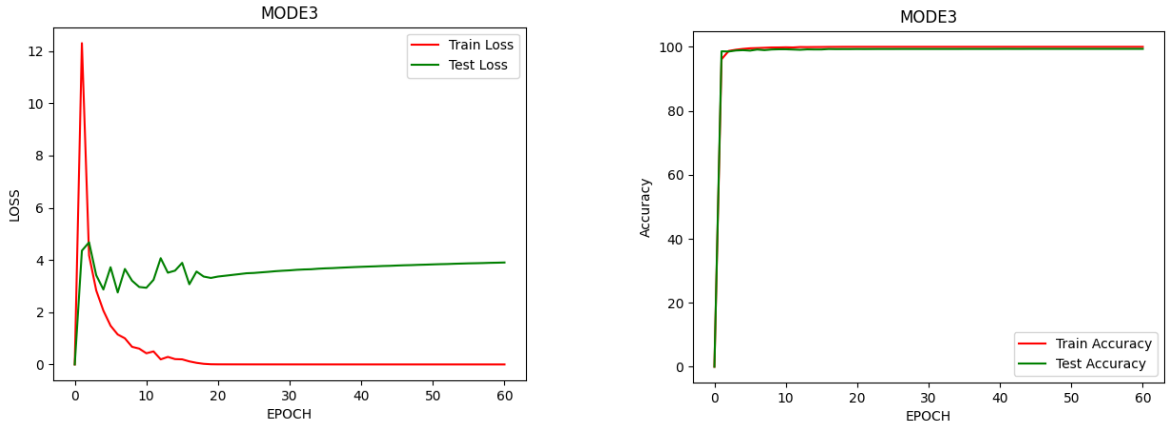

Fig 3: STEP 3

MODE 3: Average loss: 0.0391, Average Accuracy 99.37%

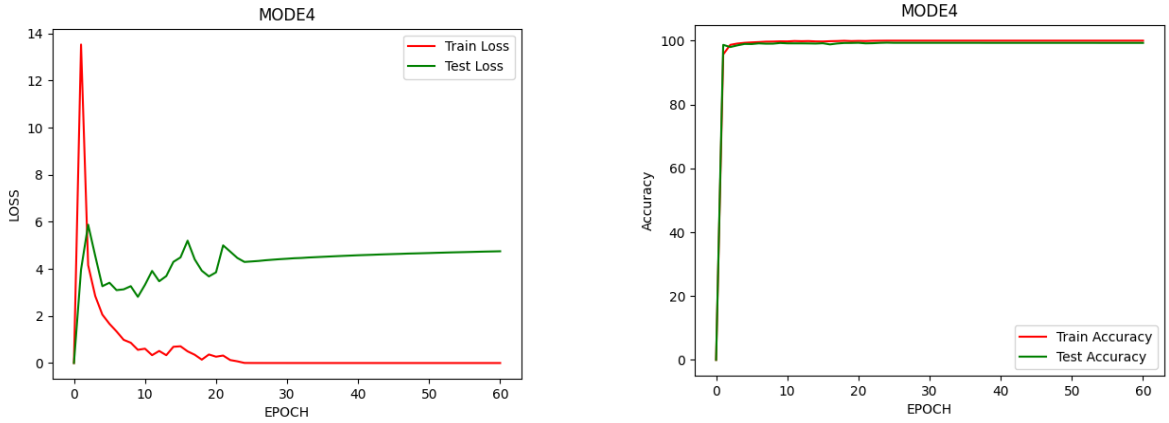

Fig 4: STEP 4

MODE 4: Average loss: 0.0475, Average Accuracy: 99.38%

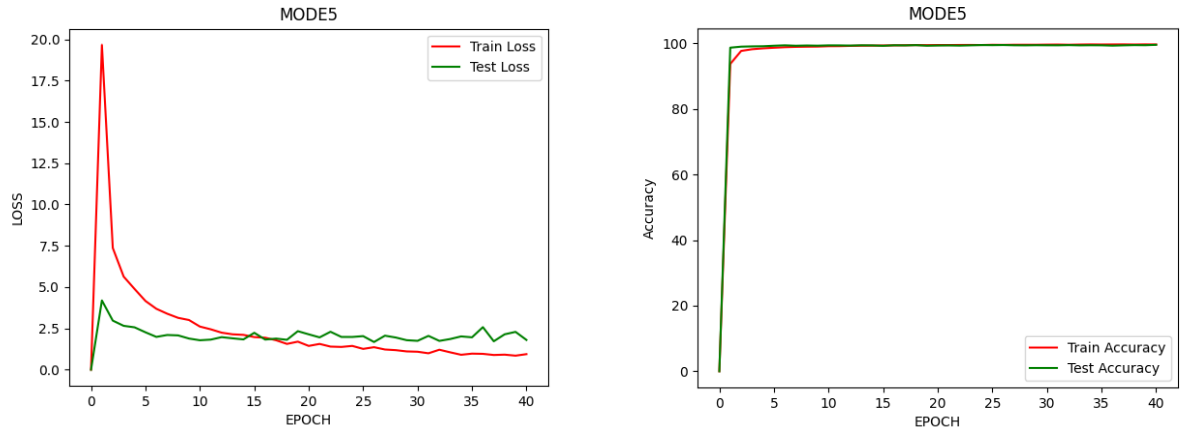

Fig 5: STEP 5

MODE 5: Average loss 0.0180, Average Accuracy: 99.57%

CONCLUSION FROM THE RESULTS

- Mode 5 has the best results both in the case of loss and accuracy.
- Cross Entropy Loss is used.
- At MODE 2 the loss is reduced after adding in the convolution layer
- ReLu performs better than Sigmoid in this case.
- Adding an extra fully connected layer does not affect the model whereas makes it unnecessary.

GITHUB LINK:
https://github.com/Akashdeep1000/Basic_cnn_architecture/tree/main