Report

Architecture summary(Alexnet-based) –

1. 3 conv2d layers – (1 – 32) (32-64) (64-128)
2. 1 linear layer + dropout + 1 linear layer

ReLU- activation

CrossEntropy loss criteria and Adam optimizer

Training datset – split into 80:20 for train: validation

Hyper Parameters

1. Lr = 0.005 epochs = 20

A graph of a line graph

Description automatically generated with medium confidence

A graph with a line

Description automatically generated

Accuracy over 10000 is 86.3. Ref (log1.txt) -could be a bit more stable

1. Lr = 0.001 , epochs = 20

A graph of a line

Description automatically generated

A graph with a line

Description automatically generated

Accuracy = 87.44 (log2.txt)

1. Final choice, epochs = 40, lr = 0.001

A graph of a line graph

Description automatically generated

A graph with a line

Description automatically generated

Accuracy over 10000 is 88.65

Key Observations and Some Challenges

1. Smoothen out losses curves depicting stable behavior.
2. Accuracy goes to ~89% for the model
3. Accuracy begins from 74% so model effectively learns and improves its accuracy.
4. At around 35 epochs while accuracy is a flat the validation losses rise a bit (slight overfitting) but not that high.