CAP5415 - COMPUTER VISION

Programming assignment 4

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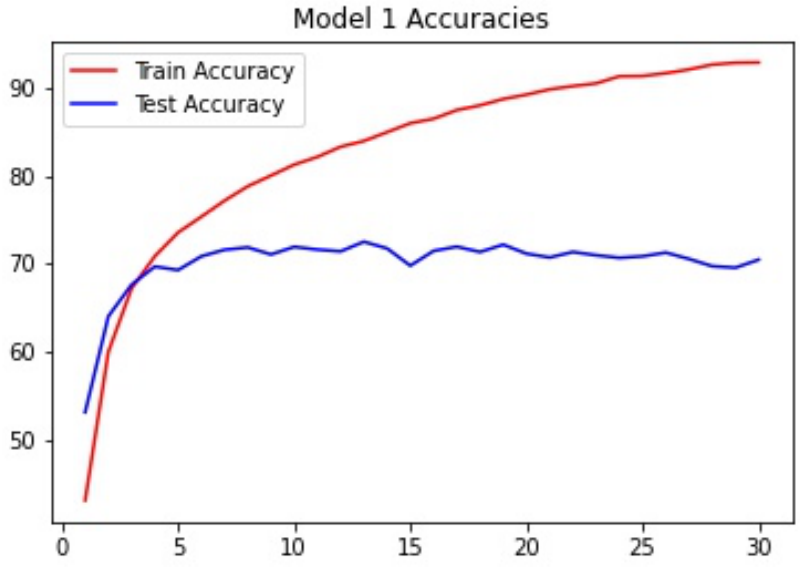
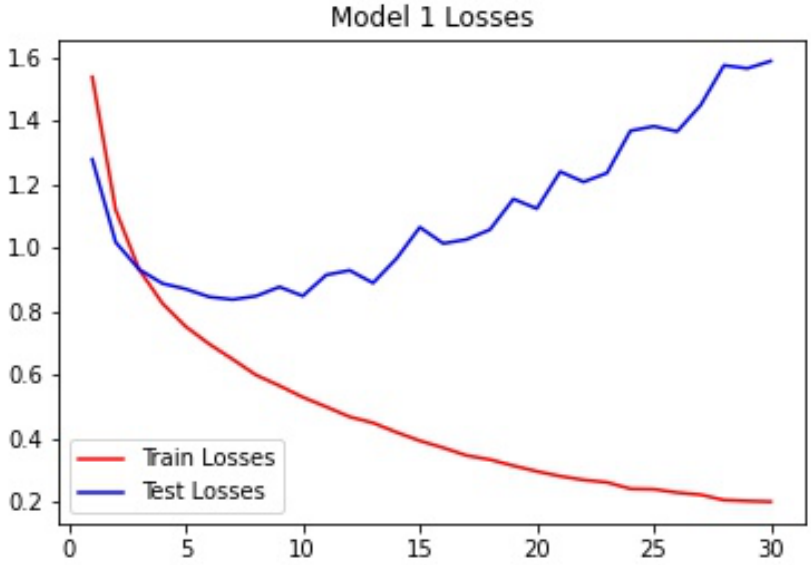
Model 1:

Train accuracy: 92.81%
Test accuracy: 70.10%

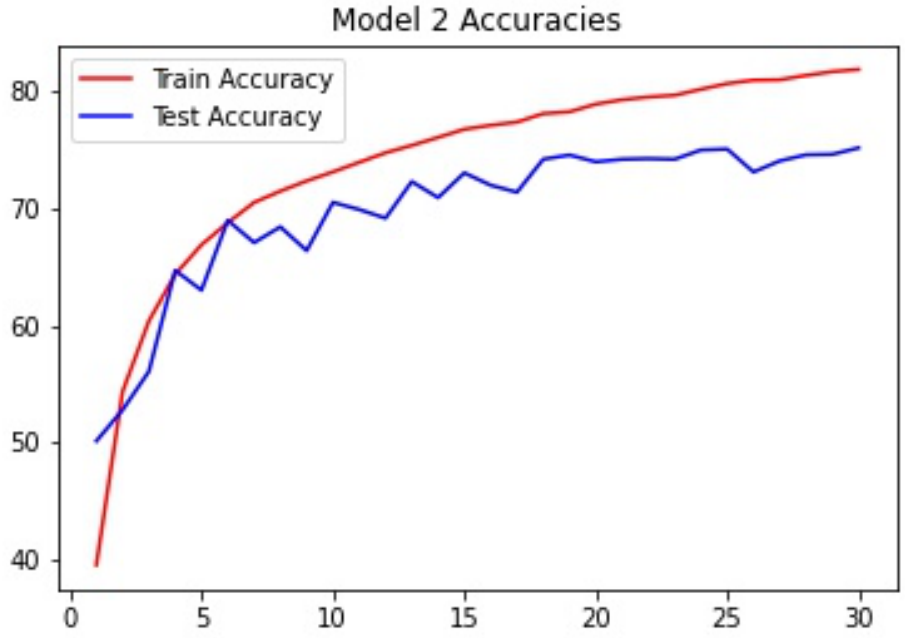
Conv layers: 3 (followed by 3 Maxpool layers)
FC layers: 3 (not followed by Softmax because using CrossEntropy Loass)

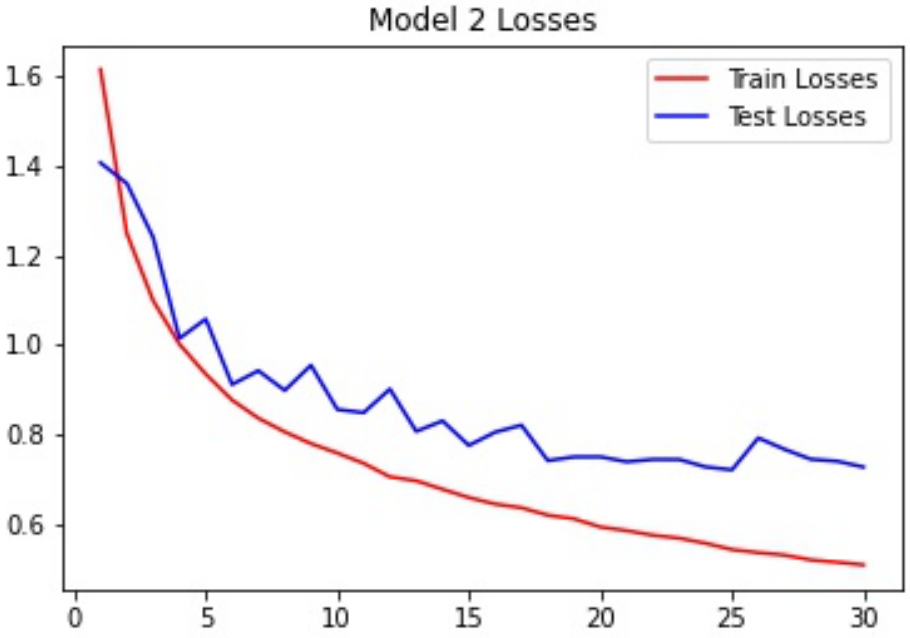




Model 2:
Train accuracy: 81.92%
Test accuracy: 75.21%

Conv Layers: 5 (followed by maxpool layers, also added dropout 50% and batch norm)
FC Layers: 3





Summary:

- Model 1 is clearly overfitting because while the train accuracy is improving the test accuracy has stalled
- The test loss of model 1 has drastically gone up compared to the training loss
- Model 2 is also slightly overfitting but thanks to the dropout layer (0.5) and the batch normalization layer, the model was able to normalize.
- In model 2 the train and test losses and accuracies follow a similar pattern and hence we can say that it's not overfitting like model 1.
- It is also notable that the model1 one has higher train accuracy than model 2 train accuracy
- But the model 2 test accuracy is greater than the mode 1 test accuracy