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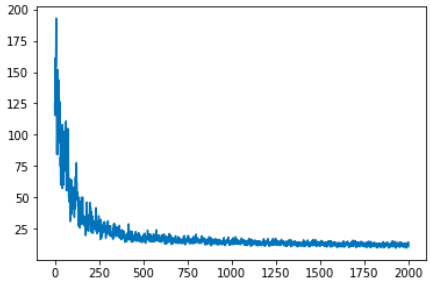
(2016ME20793)

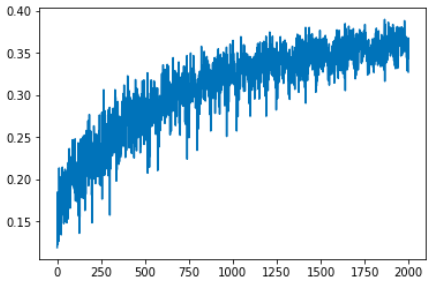
Part C

First I have tried increasing number of layer but I didn't get much accuracy. Then I decided to take one layer and increase decrease the neuron from 100 to 400. The trend was like increasing in accuracy and the decreasing. The tuned value of neurons is 315. Then I increased the number of iteration the training accuracy is going to be increased and testing becomes constant. So I implemented regularization to overcome overfitting. Keeping product of learningrate and iteration constant. I first increased the iterations and decreased the learning rate but nothing happens even accuracy got worse. So I increased the learning rate and decreased the iteration to 2000 or 2500 and got a good accuracy.

Graphs for layer = 315, learningRate = 0.3, batchSize = 80, iteration=2000,

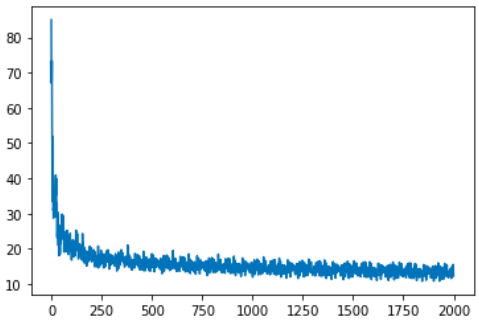



Error

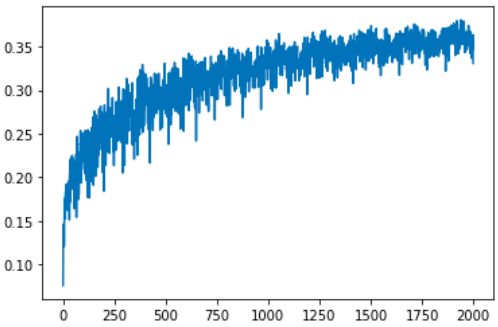



accuracy

Graphs for layer = 100, learningRate = 0.3, batchSize = 80, iteration=2000,




Error




accuracy

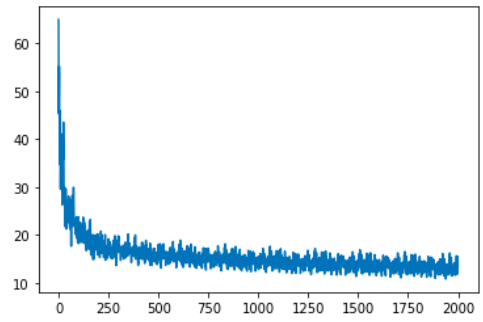
Partd

Hyper parameters

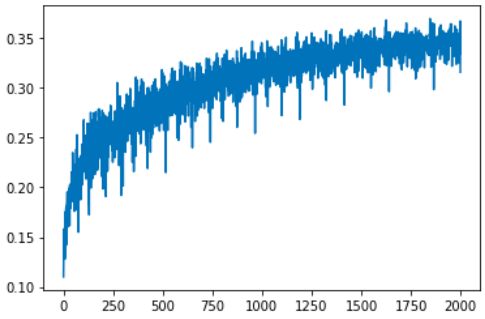
Learning rate = 0.3
maxIteration = 3000
batchSize = 80
layer = 315

I have tried gabber filter but my accuracy got decreased so I decided to submit without filter. I have tried dct and fft also but I'm not able get the logic of using them. Also tried HOG for edge extraction getting memory error.

Graph. For gabber filter

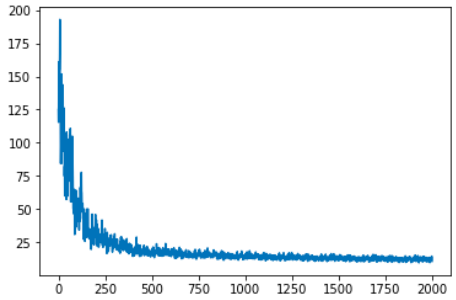



Error

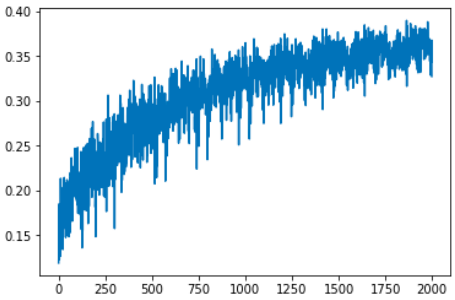



accuracy

Graph without filter




Error




accuracy