Assignment-2 Report

CSE 4238

Submitted to,

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Exp No	Hyper parameter	Loss & Accuracy
1	batch_size = 20 num_iters = 20000 input_dim = 180*180 num_hidden = 200 output_dim = 10	Epoch: 1 Iteration: 500. Loss: 2.3034706115722656. Accuracy: 9.672772175344722 Epoch: 2 Iteration: 1000. Loss: 2.2987241744995117. Accuracy: 9.672772175344722 Iteration: 1500. Loss: 2.301450729370117. Accuracy: 9.672772175344722 . . . Epoch: 15 Iteration: 14000. Loss: 1.7953771352767944. Accuracy: 25.58139534883721 Iteration: 14500. Loss: 1.7786626815795898. Accuracy: 36.344926939699526 Epoch: 16 Iteration: 15000. Loss: 1.6191895008087158. Accuracy: 37.147561226589836 Iteration: 15500. Loss: 1.91265070438385. Accuracy: 33.834122247376
2	batch_size = 30 num_iters = 40000 input_dim = 180*180 num_hidden = 200 output_dim = 10 learning_rate = 0.01	Epoch: 1 Iteration: 500. Loss: 2.3058223724365234. Accuracy: 9.775674006997324 Epoch: 2 Iteration: 1000. Loss: 2.3049724102020264. Accuracy: 10.146120600946697 Iteration: 1500. Loss: 2.3036177158355713. Accuracy: 10.146120600946697 . . . Epoch: 48 Iteration: 46000. Loss: 0.7611070871353149. Accuracy: 63.099403169376416 Iteration: 46500. Loss: 0.7857435941696167. Accuracy: 63.84029635727516 Epoch: 49 Iteration: 47000. Loss: 0.6987397074699402. Accuracy: 67.64766412842148 Iteration: 47500. Loss: 0.4539714455604553. Accuracy: 67.19489606915003

In first experiment the loss is 1.91 and accuracy is 33.83 after 16 epochs. In second experiment the loss is 0.45 and accuracy is 67.195 after 16 epochs.
So, with the increment of epoch, loss decreases and accuracy increases.
To increase accuracy and to decrease loss we need to increase batch size and number of iteration.

03. Show the Loss vs Iteration graph.
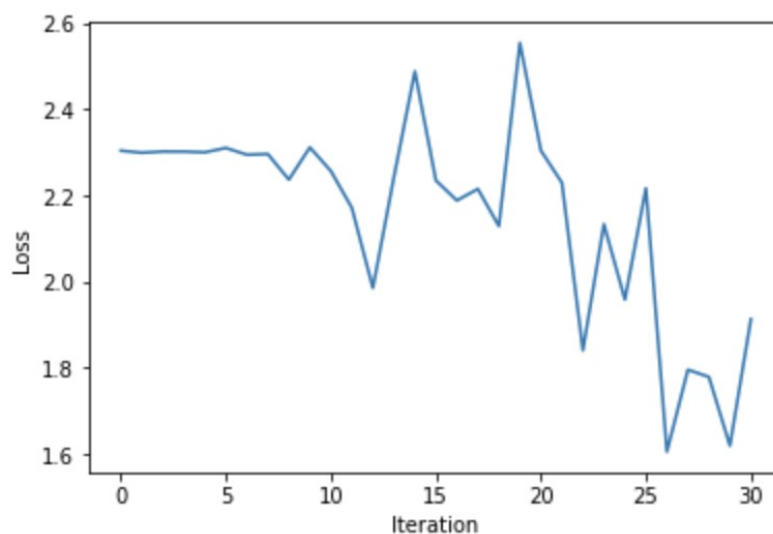
05. Upload your code in Github and share the link in your report.
https://github.com/Shachi1/SC_assignment2.git