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COSI 114b

HW 2 Write Up

I looked through the reviews and found several words I could add to my feature dictionary that have increased precision, recall, f1-score, and most importantly for this case accuracy. These feature words include: ‘run’, ‘funny’, ‘car’, ‘chase’, ‘movie’, and ‘boring’. Their dictionary value was:

'run': 4, 'funny': 5, 'car': 6, 'chase': 7, 'movie': 8, 'boring': 9.

I then tried various different hyper parameters to achieve the best accuracy value for this test. I found the best batch size to be 16, the number of epochs to be 5, and the eta value to be 0.06. I manually ran several different combinations and as well separately did a for loop for each value to attempt as many combinations as I could and I found the previously mentioned values to yield the best results.

My Full Output Displayed:

Epoch 1 out of 5

Average Train Loss: 0.6889262112730985

Epoch 2 out of 5

Average Train Loss: 0.6865179218956954

Epoch 3 out of 5

Average Train Loss: 0.684252548639222

Epoch 4 out of 5

Average Train Loss: 0.6836066455764744

Epoch 5 out of 5

Average Train Loss: 0.6829276556599168

Confusion Matrix:

[[46. 55.]

[22. 77.]]

For the neg class

Precision: 0.6764705882352942

Recall: 0.45544554455445546

F1: 0.5443786982248521

For the pos class

Precision: 0.5833333333333334

Recall: 0.7777777777777778

F1: 0.6666666666666666

Accuracy: 0.615