

Homework #3

GitHub: https://github.com/pballou/ECGR_4106/tree/master/Homework

Problem 1

1. RNN results:
 - a. Sequence = 10
 - i. Train loss: .1318
 - ii. Validation accuracy: .5030
 - iii. Training time: 4.49 seconds
 - b. Sequence = 20
 - i. Train loss: .1253
 - ii. Validation accuracy: .5212
 - iii. Training time: 8.48 seconds
 - c. Sequence = 30
 - i. Train loss: .1291
 - ii. Validation accuracy: .5294
 - iii. Training time: 11.1 seconds
2. LSTM results:
 - a. Sequence = 10
 - i. Train loss: .1214
 - ii. Validation accuracy: .5050
 - iii. Training time: 3.93 seconds
 - b. Sequence = 20
 - i. Train loss: .1067
 - ii. Validation accuracy: .5010
 - iii. Training time: 7.36 seconds
 - c. Sequence = 30
 - i. Train loss: .1349
 - ii. Validation accuracy: .4929
 - iii. Training time: 11 seconds
3. GRU results:
 - a. Sequence = 10
 - i. Train loss: .1344
 - ii. Validation accuracy: .5010
 - iii. Training time: 4.03 seconds
 - b. Sequence = 20
 - i. Train loss: .181
 - ii. Validation accuracy: .5253
 - iii. Training time: 7.5 seconds
 - c. Sequence = 30
 - i. Train loss: .1758

- ii. Validation accuracy: .5132
- iii. Training time: 10.9 seconds

Problem 2

1. LSTM results:
 - a. Sequence = 20
 - i. Train loss: 1.23
 - ii. Validation accuracy: 58.43
 - iii. Training time: 10 minutes
 - b. Sequence = 30
 - i. Train loss: 1.22
 - ii. Validation accuracy: 58.59
 - iii. Training time: 11 minutes
 - c. Sequence = 50
 - i. Train loss: 1.21
 - ii. Validation accuracy: 59.21
 - iii. Training time: 13 minutes
2. GRU results:
 - a. Sequence = 20
 - i. Train loss: 1.39
 - ii. Validation accuracy: 55.96
 - iii. Training time: 10 minutes
 - b. Sequence = 30
 - i. Train loss: 1.37
 - ii. Validation accuracy: 56.35
 - iii. Training time: 11 minutes
 - c. Sequence = 50
 - i. Train loss: 1.37
 - ii. Validation accuracy: 56.8
 - iii. Training time: 13 minutes