DS 222 Assignment-2

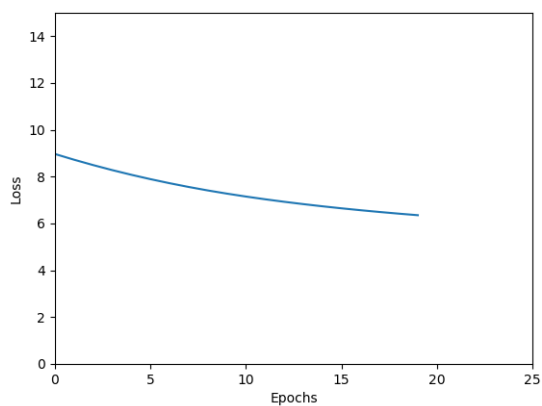Abhinav Anand, SR - 13954

1 Part a

Numnber of epochs - 20

1.1 Decreasing Learning Rate

Initial Learning Rate = 0.3
Regularization = 0.003

- Decreasing Factor : 0.95

- Train Time : 524.92 secs

- Test Time : 1.53 secs

- Train Accuracy : 56.56 %
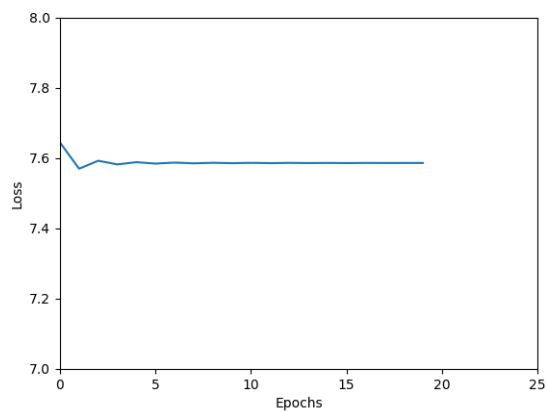
- Test Accuracy : 51.82 %

1.2   Constant Learning Rate

Initial Learning Rate = 0.3
Regularization = 0.001

- Train Time : 715.033 secs

- Test Time : 1.928 secs

- Train Accuracy : 57.9 %

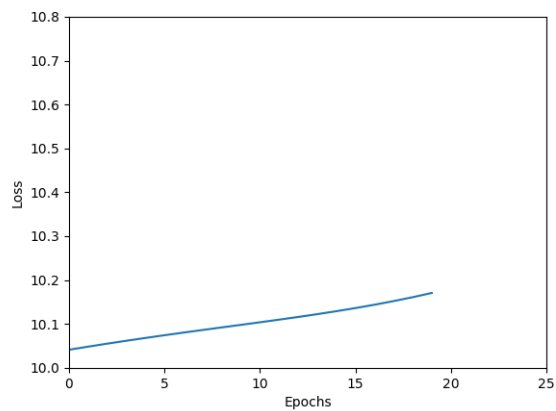- Test Accuracy : 52.1 %

1.3   Increasing Learning Rate

Initial Learning Rate = 0.1
Regularization = 0.01

- Increasing Factor : 1.05

- Train Time : 484.40 secs

- Test Time : 1.34 secs

- Train Accuracy : 40.1 %

- Test Accuracy : 38.4 %

2 Part b

2.1 Parameter Server choice

I used JBosen parameter server framework. Hadoop does not support parameter server framework and parameter server integrated with Spark is not stable.

2.2 BSP Settings

2.3 SSP Setting

2.4 Bounded Asynchronous