**Data Mining Lab 10**

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We have a dataset of 70,000 rows. Each row consists of a 28x28 image. 60,000 rows are used for training while 10,000 rows are used for training. We have a total of 10 categories. Next X\_train and X\_test are divided by 255 to normalize the values. The MLP classifier is created and has the following attributes

* Solver = Adam
* 4 neurons hidden layer
* Random State = 1
* Number of iterations = 100

The accuracy achieved is 81%

I tried multiple different ways to improve the model

* Learning Rate: 0.001, Number of Layers: 5, Number of Iterations: 1000
* Learning Rate: 0.001, Number of Layers: 4, Number of Iterations: 500
* Learning Rate: 0.0001, Number of Layers: 5, Number of Iterations: 1000
* Learning Rate: 0.01, Number of Layers: 4, Number of Iterations: 1000

Achieved an accuracy of 83.4%