

Assignment 3

The test accuracies corresponding to the given width and depth are shown below in the table.

Batch Size - 128

Epochs - 10

n- number of input features

Width----> Depth	n/4	n/2	n	2n	4n
2	86.05	86.5	85	85.5	87.99
4	87.5	83.99	86.05	80	85.05
8	85.5	86	77.99	80.5	50
16	50	50	50	50	50
32	50	50	50	50	50

As observed the highest accuracy was obtained with **4n** width and **2** layers which is **87.99%**. It is comparable to logistic regression from Assignment 1 with hyperparameter **C=1000**. The accuracy with **2n** width and **4** depth and **8** depth respectively i.e., **80%** and **80.5%** are almost equal to the logistic regression with C=1000 which was **81%**. The accuracy with **n** width and **8** depth i.e., **77.99%** is almost equal to the logistic regression with **C=100** i.e. **77.5%**.