Report

In this assignment we have implemented the Neural Networks in which we have tested real world dataset “Iris”.

We have pre-processed the data for removing some null values and standardizing and scaling the attributes. We have used pandas for all the above things. This helps in efficient running of our code as NN algorithm accepts only numeric data.

Then we have used that preprocessed data to build a neural net. Here, the input is pre-processed dataset, iterations, number_of_neurons, and activation function.

Result:

Note: No Of Iteration are fixed at 5000. No repeatation for each change-4					
Activation Function	**Hidden layer 1 neurons no**	**Hidden layer 2 neurons no**	**learning Rate**	**Minimum Total Error**	**Comments**
Sigmoid	4	2	0.05	4.379	
Sigmoid	4	2	0.3	3.506	
Sigmoid	15	10	0.3	2.004	Getting min error at hidden layers(15,10) and with learning rate 0.3
Sigmoid	15	10	0.3	4	
Sigmoid	10	10	0.1	3.5	
Relu	4	2	0.05	17.5	
Relu	4	2	0.3	22.5	
Relu	15	10	0.3	15.5	
tanh	4	2	0.05	9.93	
tanh	4	2	0.3	8	
tanh	15	10	0.3	9	