4] MLP

a) Loading the dataset: (Multi-feature digit dataset)

Input Layer:

This dataset consist of features of handwritten numerals (0-9). 2000 patterns are digitized in binary in which 200 patterns are for each class. As we need 3-class dataset we will be taking first 600 patterns.

Hidden Layer:

The output of input layer is given to the hidden layer as input. 3 activation units are used for hidden layer.

Output Layer:

This gives the final prediction.

The feed-forward algorithm:

1. Start with initial guess of parameters:
2. is used to calculate (output of hidden layer)
3. Update the parameters using

Equation for calculating

Z

Equation for updating