Machine Learning – ITCS 6156

Homework – 3

Status: Complete

I have implemented the Neural Network training function and predicting function. And those works very fine with very high accuracies.

Analysis:

The Neural Networks is a very power full tool for classification but is very easily get overfitted. There are lot many parameters on which it is tuned. They are: number of hidden layers, number of nodes in each hidden layer, weights at each level for each node, learning rates at different levels and regularization parameter (if included). Since so many to tune the time for training is very high compared to other classifiers.

Challenges Faced:

The easiest part of the assignment is implementing forward pass but the backward pass is very complex to code in a generic way. The main challenge I faced to tune the parameter values in such a way that it produces high accuracies and at the same time should be more generalized.

Future Work:

I would like to implement regularization parameter method and to automate different type of performance metrics.