10th Aug 2018

**Attendance: 10%, Continuous evaluation: 70%, Viva-20%**

**Assignment No. 2**

1. For previous “House Votes” and “[Breast Cancer](http://web.cs.iastate.edu/~cs573x/labs/lab1/breast-cancer-wisconsin.arff)” dataset use single layer perceptron for classification.
2. For both datasets use multilayer perceptron(one hidden layer) for classification. Use scikit- learn MLPClassifier and backpropagation algorithm to implement it.
3. Compare the accuracy for “House Votes” dataset with one, two and three hidden layers multilayer perceptron.
4. Download and Analyse “House Prices” Dataset from <https://www.kaggle.com/c/house-prices-advanced-regression-techniques/data>.
5. Manually convert all categorical features into One-hot Encoding features in the “House Prices” dataset.
6. Apply multilayer perceptron for regression( with one and two hidden layers) and predict house prices. Use 90% of train data as training set and 10% as test .
7. Calculate the mean and standard deviation for the error in prediction with respect to test set. Plot the graph for the same using matplotlib.

Submit a report with result.