CSCI4155/CSCI6505: Assignment 3

This assignment must be submitted on paper at the beginning of the class on Thursday, October 8, or left in my mailbox (talk to Barbara at the front desk in the CS building). Late submissions are not accepted. The answers must again fit on a single page.

1. Write an MLP program to learn the Boolean XOR function and plot the learning curve.

2. In the previous assignment you were given a data set `data1.mat` and used a SVM function and likely a cross validation function to see if you can predict the data. In this assignment I would like you to implement a simple perceptron and and MLP, and to evaluate these learning machines against the SVM and the same data set. You should thereby write your own cross validation routine so that you can compare them on exactly the same validation data.

   (a) Plot a graph of your choice to illustrate the performance of the different methods.

   (b) Write a short paragraph that discusses the results.

Please remember to label the graph sufficiently so that a viewer can make sense of it. Also, I expect you to work on this assignment in the tutorial and to be prepared this Thursday (Oct 1) in case you have questions.