

## CSCI4155/CSCI6505: Assignment 4

This is an individual assignment. Assignments must be submitted in electronic format to prof4155@cs.dal.ca with subject line A4 by the beginning of the **Thursday Class, October 17, 2013**. Late assignments not accepted.

This assignment is based on data sets that are contained in the file `dataA4.zip` on the course wiki page.

1. The data for this assignment are in the file `dataFit`. The matrix `dataFit1` provides example feature values  $\mathbf{x}$  in the first 2 columns of this matrix, and corresponding  $y$  values in the last column. The second matrix, `dataFit2` only provides the feature values  $\mathbf{x}$ . Write a program that uses gradient descent to predict the corresponding  $y$  values for `dataFit2`, and submit these completed matrix (first two columns are the  $\mathbf{x}$  values, 3rd column is your prediction of the corresponding  $y$  values). Send this matrix as `.mat` file to prof4155@cs.dal.ca. Also submit your matlab program. [5]
2. The second problem is similar, except that it is a classification problem. The matrix `dataClass1` provides examples of a pair of feature values in the first 4 columns, while the label of 0 or 1 is provided in the 5th column. The matrix `dataClass2` provides again only feature values, and it is your task to predict the corresponding labels. Submit you predictions as well as your program to prof4155@cs.dal.ca. Also submit your matlab program. [5]

Please only send one email with all you attachments. If you have to resubmit then please include all attachments. We will only mark the latest submission before the deadline.