Name:

CSCI S-89 Introduction to Deep Learning

Assignment 1

**Problem 1 (20 points)**

Please load ‘Housing\_Data.csv’ - the housing data in Singapore. This data set is also available at <https://www.kaggle.com/chenzhiliang/housing-data>. Using Keras, build a Neural Network with one hidden layer which has two neurons, predict the price based on ‘floorArea’ and ‘bedrooms’. Here, you can implement either batch or mini-batch gradient descent algorithm. Make sure to use appropriate loss and activation functions. Plot the train and test errors versus iteration step.

SOLUTION:

**Problem 2 (45 points)**

Construct the Neural Network you used in Problem 1 without the use of packages. Implement the Backpropagation “manually” and plot the test and train errors.

SOLUTION: