**CSE-6363-007 Programming Assignment 1 (Spring 2024)**

**Due Date: 11:59 pm 02/25 (Sunday) (upload file in canvas)**

**Problem 1: [40 points]**

Implement Linear regression using gradient descent. You should implement your code in the provided linear\_regression.py file. This python file takes a csv file which contains a feature as input and a target label. The first 24 rows assigned as training and the remaining represent the test data. Once running the following command, it will predict the salary as an output.

$python3 linear\_regression.py linear.csv

**Problem 2: [60 points]**

Implement Logistic regression using gradient ascent algorithm and Newton method. You should implement your code in the provided logistic\_regression.py file. This python file takes two csv files as inputs, which are training and testing csv files. For example, in the following usage scenario, log\_training.csv is the training input csv file and log\_testing.csv is the testing input csv file.

$python3 logistic\_regression.py log\_training.csv log\_testing.csv

Output the Accuracy score of prediction.

***\*\*\* Do not add or remove libraries and do not modify load\_data() function in any of the python files. \*\*\****

**Submission Format:**

Submit a zipped folder containing linear\_regression.py and logistic\_regression.py to canvas. The folder name should be in the format of FIRSTNAME\_LASTNAME\_10DigitUTAID.zip