Homework #3
CS 539, Fall 2021

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100 points total [6% of your final grade]

Due: October, 1, 2021 by 11:59pm
    [no submission will be accepted after October 3, 2021 at 11:59pm]

Delivery: Submit via Canvas

In this assignment, you will implement logistic regression with **stochastic** gradient descent in python3. In stochastic gradient descent, you are supposed to update theta (i.e., w and b) by a training example (refer to GD_vs_SGD.pdf or online resources).

In this problem, you will implement the logistic regression algorithm. We provide the following files:
   a) part1.py - You will implement several functions. Do not change the input and the output of the functions.
   b) test1.py - This file includes unit tests. Run this file by typing 'nosetests -v test1.py' in the terminal. No modification is required.
   c) GD_vs_SGD.pdf – a pseudo code showing the difference between (batch) gradient descent and stochastic gradient descent. This document is for your information.

What to turn in:
   • Submit to Canvas your part1.py.
   • This is an individual assignment, but you may discuss general strategies and approaches with other members of the class (refer to the syllabus for details of the homework collaboration policy).