Project 1 (CS 675)

In this project we will write a series of solvers for the following linear classifiers:

1. Regularied least squares
2. Hinge loss
3. Regularized hinge loss
4. Logistic regression
5. Adaptive learning rate for hinge

The outline of the project is given in the file project1_startingpoint.py on the course
website. You may use this as a starting point. The code for input and output
are already given in the course site. Your task would be to complete the five
functions in this file.

The input to your program is the data file and the train labels given in the datasets
posted course on the website. For example to run your project on the breast cancer
data with trainlabels.0 you would type

python project1.py breast_cancer/breast_cancer.data
breast_cancer/breast_cancer.trainlabels.0

Submit your assignment by copying it into the directory
/afs/cad/courses/ccs/f20/cs/675/001/<ucid>.
For example if your ucid is abc12 then copy your solution into
/afs/cad/courses/ccs/f20/cs/675/001/abc12.

Your completed assignment is due by midnight October 11th 2020