

Assignment 1

In this assignment you need to implement stochastic gradient ascent algorithm on the given dataset to estimate the parameters of logistic regression model for binary classification. You may want to refer to my slides for the objective/likelihood function of logistic regression.

The format of the data is as follows. Each line represents one example and has four columns. The first column is the sample id, the next three columns are the features and the last column is the class label (0 or 1). The data is given in the file named **data.txt**. The output of your code should contain the values of the parameters. You should also mention the number of iteration you performed to produce the output.

Your code should preferably be in C or C++ or Java or Python. You are free to use any other language. But, you must not use any available library/API for stochastic gradient descent algorithm.

Submit your code and the output in separate files. While submitting the assignment, you should name your code and output files as follows:

Code file: code-<your roll no with all letters in small>.<extension for code>

Output file: output-<your roll no with all letters in small>

For example, if your roll no is AE100090 and you used c language, then your code file name will be: **code-ae100090.c**

This assignment will carry 4 marks in your final grade.