

### Homework 3

**Deadline: March 25, 11:59 PM**

Write a 5-page (maximum) report to explain your models, implementation, and results for the following questions.

Please submit two files: **one PDF file (your 5-page report)** and **one compressed (.zip) file** for your code.

**Question 1)** The UCI Machine Learning Repository has many classification problems:

<https://archive.ics.uci.edu/ml/datasets.php>

Choose one of these problems/datasets, and implement Logistic Regression and Gaussian Naïve Bayes for that problem. Is GNB better than LR?, or LR is better? why?

**Question 2)** We saw two versions of training LR. The first one was without parameter regularization (without  $P(W)$ ), and the second one was with  $P(W)$ . Compare these two LR training algorithms in your dataset (defined in Question 1).

If you have any questions, please contact me: [Mahdi-khodayar@utulsa.edu](mailto:Mahdi-khodayar@utulsa.edu)