# CSE 375/381 Lab 4: Bayesian Decision Surfaces

First, we set up our environment and import the libraries needed to run the code.

Then we read the data from "binclass.txt" file for **Part 1**.

Then separate the features and the output to ease the display process.

Then display the data using the *plot.scatter*.

Then create our *GaussianNB* model and *fit* the data then *predict* to test the model and calculate the accuracy.

Then create a *meshgrid* with the *linspace* with the interval from the *min* and *max* of each feature to give a hand in drawing the decision boundary.

Then predict the *yhat* of the *linspace* intervals to draw the decision boundary using the *contourf*.

For **Part 2** we are doing the same steps unless we change the data file name to "binclassv2.txt"