STAT5P87   **Week 5 Lab**

Due Date: Thursday February 6th

- **Instructions:**

    - Labs should be submitted electronically as an **single** R script (.R file) on Brightspace.

        * Please be sure to use R version 3.6.1 or greater.
        * Solutions should not use any additional packages.
        * I will make sure that R can find and load the required data sets, otherwise the code should run as submitted.

    - There is no coding style requirement for the lab.

1. In this lab we will implement the quadratic discriminant analysis (QDA) classifier as a nonlinear classification method (see accompanying slides). Consider a QDA classifier for the vowel data ('vowel_training.csv' and 'vowel_testing.csv' on Brightspace), where y is the multiclass output and x_1-x_9 as inputs. The goal of the lab is the implement the QDA algorithm, use the training data to fit the classifier, and report the accuracy on the testing data.