Project Deliverable 2

Due Date: April 4, 2023

For this assignment, each team needs to provide 3 items: **a written report in pdf format**, **predictions (response values) for the test data in a csv format** and **working code in python notebook format**.

1. The report is going to be a continuation of the report you created for project deliverable 1. This report must include the contents from project deliverable 1 (previous 4-page report) and then add the following sections (no more than additional 2 pages, i.e., a total of no more than 6 pages):
   a. Description of the new predictive models (use at least 2 new models that you did not use in the previous deliverable) and provide justification for the following:
      i. model selection
      ii. resampling method(s) utilized during training
      iii. performance metric used to gauge the prediction accuracy of the model
   b. Representation of results: confusion matrix, accuracy, sensitivity, specificity, ROC curve and any other relevant plots
   c. Conclusion: describe why the selected model produces such results

2. Obtain the best model on the training data set and then apply that model on the test data set
   a. Report the predicted (y_hat) values for the samples in the test data set in a csv format

3. A working code should be in python notebook format and satisfy the following criteria:
   a. The code should run without any modification from the TA/Instructor
   b. The code should include comments describing each of the steps