

# **STA 9705/70500 Multivariate Statistical Methods**

## **Final Project Description**

It is a group project and each group should have at least two people, but no more than four people. You would apply appropriate techniques that you have learned in this course to single or multiple data sets. Note that the number of techniques used in the project should be at least the same number of people in your group, i.e., a group of two people needs at least two techniques, a group of three people needs at least three techniques, and a group of four people needs at least four techniques. The potential techniques are listed at bottom.

The final report must have following sections: objective(s) of analysis, data description, a sufficient introduction to the methods (including their assumptions and limitations), how you implement the methods, complete interpretations of the results and conclusions, and appendix where you put SAS codes and relevant outputs. The report (without appendix) should have at least 5 pages with single space and 11pt font size. The data source and references must be clearly cited in the report. You should find the data set by yourself and it cannot be the one that has been already analyzed in class. Do not hesitate to let me know if you have any question.

### **Possible techniques:**

- Multivariate hypothesis testing
- Multivariate analysis of variance
- Discriminant and classification analysis
- Multivariate regression
- Canonical correlation
- Principal component analysis
- Factor analysis
- Cluster analysis