RIT

STAT 614 Applied Statistics

Fall 2021

Project Description

The objective of this project is to get hands on experience analyzing a dataset using techniques learned in this course. The learning outcomes of this project include (but are not limited to):

- Practice identifying a proper dataset and associated hypotheses
- Determining what kinds of questions can be answered from your analysis
- Analyzing data with the use of statistical software
- Making conclusions and recommendations based on your analysis

Project Proposal Due December 1st, 2021

Please describe your dataset. Provide your variables and determine what types of variables you will be using (continuous, categorical). Is there a response variable? Are there factors/predictor variables? Provide the total number of observations in your dataset. Try to have a least 50 observations, but no more than 1000. These are just suggested guidelines. In your proposal, identify some questions you will be able to answer through your analysis and why you are trying to answer them. What are your objectives? What type of statistical analysis do you plan on performing (ex. Two-sample t-test, Two-Factor ANOVA, Multiple Regression, etc.). This proposal should be one page.

Final Report Due December 12th, 2021

This report must be written to a good level of professionalism, must have a logical flow and must have all relevant sections expected from a technical report (i.e. Introduction, Analysis, Conclusion and Recommendations). You should demonstrate use of statistical software throughout the project. Figures and Tables should be labeled and referenced within the report.

Final report must be no more than 5 pages*. Title page and Appendix are excluded from page requirement)*

Some Notes for your analysis and conclusions:

- Give the null and alternative hypotheses for your analysis
- Make sure to verify any assumptions for your analysis.
- Interpret your results! Please make inference from your data analysis with respect to the questions you are trying to answer (this includes predictions or confidence intervals, parameter interpretation, figures to help understand results, etc.)
- Include your dataset in your submission

Grading:

The Project Proposal is worth 5 points of the final project grade. I will provide individual feedback to each submission.

The Final Report will be graded as follows:

- Overall report quality, layout and professionalism (10 pts)
- Objectives and Data Description (20 pts)
- Analysis (40 pts)
  - Assumptions Verified
  - Correct Hypotheses
  - Correct Analysis
- Conclusions and Recommendations (25 pts)