Final Project

MATH2411

Introduction

Students are required to do a group project. The project will require you to do some computer programming based on `R`. At the end of the semester, each team is required to submit a report on your project as well as the corresponding `R` code file. A guideline for its length is at most **5 pages** (excluding references, tables and figures). The total number of figures and tables is **at most 5**. All team members are expected to contribute to all aspects of the project work (statistical analysis, coding, writing). Students will be asked to provide confidential feedback about the work contribution of his/her team members through peer evaluations.

You are free to use any data set if you like.

Sections for Final Project

The final project should include the following sections.

1. **Introduction/Background**
   - Why you are interested in this problem?
   - Assume that your audience is not an expert in statistics, what do people need to know to understand?
   - From where did the data come? Is this an experiment or observation study? Who collected the data? Why are the data collected?
   - What are the questions of interest that you hope to answer?
2. **Methods**
   - Summarize and explore the data.
   - What analyses are most appropriate to answer the question of interest?
   - Describe the analyses used.
3. **Result**
   - Present relevant graphics.
   - Interpret result of the analysis.
4. **Conclusion/Summary**
   - What are your conclusions?

Code

You are required to upload the `R` code together with your report. Please write clean and readability code. Document your code with comments so that the grader can understand the link between your code and your report.

Submission

You need to submit a report and a `R` code in one `.zip` file on Canvas. The file name of your zip file should be `Group#YOUR_GROUP_NUMBER.zip`, where you need to replace YOUR_GROUP_NUMBER with your group number. Only one team member needs to submit the zip file. The file should contain the following:

1. Your report in `.pdf` format. The report should be **11 point Times New Roman, and double spaced**. The report should be **no more than 5 pages** (excluding references, tables and figures). The total number of both figures and tables is **at most 5**.
2. Your `R` code needs to be ready to run on any computer with `R` and `R` Studio installed, not just yours. For instance, all dependent data files must be included (and in the folder that is referenced in your code); Your code needs to check if the required libraries are installed (and install them if needed); There should be absolutely no run-time error.

Grading

The grading of the team project depends on the following.

1. Whether you follow the instruction for different sections of the report. (65%)
2. English writing of the report (typos and grammers). (15%)
3. Well documented code. (20%)