STAT 425 Project 1 Description
Department of Mathematics and Statistics, University of Calgary, Winter 2022

Instructor: Dr. Bingrui (Cindy) Sun

1 Requirement

Find a suitable data set from a completely randomized experiment.

Define the research question(s) clearly.

Explain the background of the research problem concisely.

Apply a variety of graphic and numerical methods to analyze the data. The methods you can choose from include and are not limited to: Boxplot, QQ plot, histogram, five number summary, Sharpiro-Wilk test, Levene's test, ANOVA, fixed effects model, parametric multiple comparison and confidence intervals, random effects model, intraclass correlation coefficient, transformation, Kruskal-Wallis test and multiple comparison. The selection of these methods should depend on the need of your data set, do not overload your project with unnecessary or inappropriate methods.

State and interpret the data analysis results clearly in the context of the data set. Make inference based on the final model if possible.

The majority of the work needs to be original, especially the data analysis part. Simple reproduction of existing study results is not acceptable. Literature review on existing results should be cited properly.

Refer to the 'Presentation Rubrics' file in the 'Content-Project Information' folder in D2L for detailed expectations for your presentation.

Each presentation lasts 10 minutes, including a 6-minute presentation and a 4-minute question-and-answer period for the audience. **Presentations take place through Zoom meetings on Monday/Wednesday/Friday 9-9:50am**.

You are allowed to work in a group of two or three people. If you want to work in a group, please inform Cindy your team construction by **January 21**, Friday, only one team member

needs to do so, please cc your teammates. Team presentations will take place before individual presentations.

2 Grading Scheme

Project 1 is worth 20% of the total evaluation.