

**Group Assignments:**

- Group 1: Sam Pascal, Christopher Hopkins, Ryan Green
- Group 2: Chang Liu, Bill Wu
- Group 3: Suzie Davis, Pragya Jain, Kathryn Li
- Group 4: Yuka Chen, Jack Lo, Adela Yang
- Group 5: Connor Cabrey, Grady Keene
- Group 6: Chaytanya Kumar, Pape Seye
- Group 7: Jeremy Joy, Stephen Hornbeck
- Group 8: Michael Knight, Bulin Li, Zack Webb
- Group 9: Connie Mpofo, An Nguyen

**Due Dates:** Initial Project Proposal - **Thursday March 25**  
Final Project Presentation - **Monday, May 2**

**Objective:** As a group you will undertake a statistical inquiry from the development of the problem through to the analysis and presentation of the final results. It is intended to provide you with the opportunity to experience the entire statistical process and to synthesize the concepts and techniques that we have been developing throughout the semester. The project will entail

- Identifying a problem of interest
- Collecting data to address the problem
- Analyzing the data using appropriate statistical methods
- Critically evaluating the results and methodology
- Presenting the results in a clear and coherent manner.

**Requirements:**

- **Initial Project Proposal** – written proposal due **Thursday, March 25**.

The project proposal must include:

1. **Problem Statement:**

The proposal should be a 1-2 page document. It should begin with a clear statement of the statistical problem that you want to address including stating specific claims you'd like to address, why the problem is of interest, and who is the target audience. The problem can come from any area of interest but must be well defined in terms of the problem you are investigating. You want to make it an interesting question that uses the statistical techniques we have covered this semester. It should not be an exercise in descriptive statistics. The project may not be one you've already completed for another class unless you can justify that this project extends that project in some statistically meaningful way.

2. **Identify a data set that is relevant to your question.**

I have put on the Canvas suggestions for online data sources. The library is an excellent source of data. You may also get ideas for good data sources from professors or others with experience in your discipline.

3. **Proposed Method of Analysis:**

For the proposed problem, state what methods you will utilize to analyze the claims you are making.

- **Project Proposal Meeting** – as a group you will meet with me during the week of March 28 – April 1 to discuss your project proposal. At that meeting we will discuss any adjustments to the project and finalize your proposal.

- **Final Presentation** – A 15 minute group presentation during the final exam period on May 2 where you will present your results to the class as a short conference style presentation. Each group member must be involved in the presentation. Your presentation should include
  1. **Statement of the problem:** Describe the questions you address and any key issues surrounding the questions.
  2. **Data collection:** Explain how you collected the data. Include any questions you asked. Also, include response rates if you collect the data yourself using a survey.
  3. **Analyses:** Describe the analyses you did. Be ready to explain why you believe these methods are justified.
  4. **Results:** Present relevant descriptive statistics. Include tables or graphs that support your analyses (be judicious here--too many tables and graphs hurt the clarity of your message).
  5. **Conclusions:** Answer your question of interest.
  6. **Discussion:** What implications do your results have? Does your conclusion hold for a wider population or just the data set you analyzed? What could be done to improve the study if it was done again? What types of biases might exist?
  7. **References**
- **Written Summary Report** - Each group will also provide me with a written report that summarizes your results and includes the presentation slides and the RMarkdown files (minus any superfluous information) that you used to arrive at your results.

**Evaluation:** Your project will be evaluated on the following:

- Project Proposal – well-defined, clear problem statement, interesting
- Data collection – appropriate to problem
- Data analysis – appropriate to problem, conclusions are substantiated by data
- Presentation – clear, relevant – did you answer the question of interest?
- Written Summary Report – well written summary of your project, the analyses undertaken, remedies applied and the results
- Participation – effort you invested in the group

The final evaluation will be a combination of my assessment, your classmates' assessments of the presentation, and your individual evaluation of the project, your participation and the other group member's participation.