Project Final Report

I306 Statistics for Informatics

Overview

The final report synthesizes all your previous work into a cohesive statistical analysis. You will also extend your analysis with regression modeling.

Due: End of Week 15 **Points:** 50

Report Structure

Your final report should be a polished document that could be understood by someone unfamiliar with your previous milestones. Use `echo: false` in your code chunks so that only output (not code) appears in the final document.

1. Introduction (5 points)

- Introduce your dataset and its context
- State your research questions
- Explain why these questions are interesting or important

2. Data Description (5 points)

Summarize your dataset:

- Source and collection method
- Key variables used in your analysis
- Any data cleaning or transformations performed

(You may build on and adapt content from Milestone 1)

3. Exploratory Analysis (10 points)

Present your most informative visualizations:

- Include 3-4 key figures developed or adapted from Milestone 2
- Each figure should have a caption and interpretation
- Focus on visualizations that set up your statistical analyses

4. Statistical Analysis (10 points)

Present your inferential analyses:

- Include your hypothesis test(s) and confidence interval(s) from Milestone 3
- Clearly state conclusions in context
- Discuss any limitations

5. Regression Analysis (15 points)

Extend your analysis with regression modeling:

- Fit at least one regression model (linear or logistic, as appropriate)
- Interpret coefficients in context
- Assess model fit and assumptions
- Discuss what the model reveals about your research questions

6. Conclusions (5 points)

- Summarize your key findings in both statistical (what are the numbers?) and substantive (what do they mean?) terms
- Discuss limitations of your analysis
- Suggest directions for future analysis and research

Formatting Requirements

- Use professional formatting throughout
- All figures and tables should have captions
- Use `echo: false` to hide code

Submission

Submit your `.qmd` source file and rendered output (PDF or HTML) to Canvas by the due date.

Grading Rubric

Component	Points	Criteria
Introduction	5	Clear context and research questions
Data Description	5	Complete, accurate description
Exploratory Analysis	10	Effective visualizations with interpretations
Statistical Analysis	10	Correct methods, valid interpretations

Component	Points	Criteria
Regression Analysis	15	Appropriate model, correct interpretation
Conclusions	5	Thoughtful synthesis with limitations

Tips

- This is synthesis of the project milestones, but should be more cohesive and developed, addressing any feedback on your milestones
- Tell a coherent story from introduction to conclusion
- Proofread carefully—this is a professional document