

Project 1 Info

Project Overview

Future projects that focus on specific correlation structure, such as hierarchical models, will include a suggested dataset, but for the first course project you will select a dataset to explore generalized linear models. The data should either be binary, counts, or ordinal responses.

You are welcome to work individually or with one partner for this project. For the report, you should identify a research question of interest to explore with data visualization and regression modeling.

The report should contain sections such as introduction, data overview + data visualization, statistical procedures, and results and discussion. The following is a rubric that will be used to assess the report. All items are graded with the following scheme, where some have multipliers:

1. **No Credit:** Criterion was not addressed or was written in a way that was not understandable.
2. **Beginning:** Ideas are not clear and supporting ideas are not presented.
3. **Developing:** Ideas are identified but not well supported and developed or are minimally supported and developed.
4. **Advanced:** Ideas are clearly identified and are adequately supported and developed.

Report generalities	Points	Multiplier
Spelling, grammar, writing clarity	/12	3
Paragraphs, section labels	/4	1
Appendix with complete code	/4	1
Figures (reporting, labels, captions) included in text	/4	1
Citations for papers and packages used	/4	1
Acknowledgments for other resources	/4	1

Introduction	Points	Multiplier
Project motivation	/4	1
Data source and study design	/4	1
Research question	/4	1

Data Overview + Data Visualization	Points	Multiplier
Variables with units and descriptive statistics	/4	1
Titles, Labels, and Captions	/4	1
Figure Clarity	/4	1
Figure Quality	/4	1

Statistical Procedures	Points	Multiplier
Define model to fit (with complete notation)	/8	2
Defense of model choice	/4	1

Statistical Procedures	Points	Multiplier
Discuss model fitting procedure	/4	1

Results	Points	Multiplier
State and assess model assumptions	/8	2
Concise evidence statement for estimated model	/4	1
Summarize estimates from final model (intervals)	/4	1

Discussion	Points	Multiplier
Discuss Results in the context of the research question	/4	1
Scope of Inference: how can the results be generalized?	/4	1