DATA 410/STAT 538 Winter 2022 Project Report Grading Rubric

	5	3	1	0
Exploratory data analysis	Establishes excellent understanding of data structure and generation process. Variables are precisely described. Proper numerical and graphical summaries are presented in the report.	Establishes good understanding of data structure and generation process. Variables are adequately described. Some numerical and graphical summaries are presented in the report.	Establishes sufficient understanding of data structure and generation process. Variables are described, but not in detail. Few numerical and graphical summaries are presented in the report.	Parts of the data are missing or completely ignored. Little to no discussion of variables. Numerical and graphical descriptions are not relevant or ignored.
Scientific inquiries	Clearly and thoroughly explores all research questions using appropriate methodology. Makes conclusions on all questions.	Answers research questions sufficiently using appropriate methodology. Conclusions on only positive results.	Vaguely answers questions using dubious methodology. Insufficient number of research questions asked (<3). Does not conclude research questions.	Research questions are not appropriate. Analysis methodology is not appropriate. No conclusions. The report is incomplete, and no scientific knowledge is demonstrated or gained.
Regression analysis	Provides excellent understanding of statistical inference for regression. Multiple methods are used to answer all questions. Formulae and calculations are clear and concise. Code is reproducible.	Provides good understanding of statistical inference for regression. Multiple methods are used, but maybe inappropriate or repetitive. Formulae and calculations are understandable. Code is reproducible.	Provides sufficient understanding of statistical inference for regression. Regression methods are inappropriate or repetitive. Formulae and calculations are unclear. Code contains errors or is not reproducible.	Limited or poor understanding of statistical inference for regression. Clearly wrong methodology is used. No calculations are explained or provided. Code was not submitted.
Scientific Communication	No spelling, grammar, or punctuation errors in the text. The paper is organized in a logical manner and concise for the content. Presents tables and figures that are clear and accurate, and each figure/table is referenced and explained in the main body text.	A few (3-5) errors in spelling, grammar or punctuation. The material is presented well, but with some misplaced sections. Presents tables and figures that have good explanations. Most tables/figures referenced in the text.	Many spelling, grammar or punctuation errors (>5). Tables and figures that have lack explanation and do not have sensical captions. Few tables/figures referenced in the text.	Excessive spelling, grammar or punctuation errors (>8). Little concern for presentation of results and no figure/table titles or explanations. No tables/figures referenced in the text.
Creativity	Shows a lot of creative thoughts in addressing the topic, graph design, and data issues. Integration of multiple topics discussed in class.	Shows some creative thoughts in addressing the topic, graph design, and data issues. Some regression techniques integrated into analysis.	Shows very little creative thoughts in addressing the topic, graph design, and data issues. Few regression techniques integrated into analysis.	Shows no creative thoughts in addressing the topic, graph design, and data issues. One regression technique is used, with no consideration of others.

*Keep in mind that there can be part marks for each section. For example, if you do an excellent job of describing the data, but maybe you miss a group of variables in your dataset for some reason, you would receive 2.75. When I'm marking, I will be highlighting phrases in this rubric to explain marks.