Math 402/403 Final Project Peer Review

Project Author: _____ Reviewer: _____

Motivation and Overview of the Data: ____/10 (10 very important points!)

Is the purpose of the project clear? What questions do the project try to answer? How could the objective be clarified?

The author should *briefly* review what is already known about the research questions and what techniques others have used to study these questions. How well does the author explain the scope of the project and how it fits into existing research? How could the explanation be improved?

Does the author give an overview of the data? Do they evaluate the validity of the data source? Do they defend why this data set is relevant to the project objective? What is missing from the overview of the data?

Data Collection and Cleaning: ____/25

The author should explain how the data was collected and include any corresponding code (possibly in an auxiliary file). Is the collection procedure clear? Are there any missing references or potential legal problems with the way the data was gathered?

The author should explain how the data was cleaned and include any corresponding code (possibly in an auxiliary file). Is the cleaning procedure clear? Does the data need more cleaning, and if so, how? If there is little or no data cleaning, the author should strongly defend why no cleaning is needed.

How does the author handle missing, badly formatted, or incorrect data? Does the author justify their choices of what they removed, edited, reformatted, or left unchanged?

The author should justify any newly engineered features. Are there any additional features that should be engineered? If there is little or no feature engineering, the author should strongly defend why no feature engineering is needed.

Code Quality and Robustness: ____/15

Evaluate the readability of the code throughout the project, especially code for scraping or cleaning. Go through the "Code Quality Checklist" on Learning Suite for Math 403. Do they comment their code neatly? Are variable names reasonable? Does every function have an appropriate docstring? Can you tell what the code does just by looking at it? How would you improve the code to make it more readable?

Is the code efficient? Make suggestions for eliminating loops where possible. Identify any other suspicious code and explain how to fix it.

How robust is the cleaning and scraping code? Could the code be easily modified so that it is usable for similar data sets, or so it could handle the same data set but with more data points? Identify parts of the code that aren't general enough and make suggestions for improving it.

Data Visualization and Analysis: ____/20

The author should use summary statistics and visualizations to display and describe the data with some depth. What parts of the data are still mysterious or unexplained?

How well do the visualizations and analysis contribute to answering the questions from the introduction? Are there any questions that are not addressed adequately?

Are the visualizations readable? Do they convey the information clearly, and in an aesthetic way? Identify any visualizations that don't make sense, that should be made with a different kind of plot, or that can be simplified or otherwise improved.

Evaluate the validity of the analysis and conclusions about the data. Does the author avoid bias? Are any of the conclusions statistically unsound? Point out anything that you find suspicious.

Quality of Communication: ____/20

Find and correct grammatical mistakes.

Is the presentation clear and easy to follow? What parts of the project are the most confusing, and why? Make suggestions for improvement.

Identify wordy passages and suggest ways to shorten them. Where does the author use an entire paragraph to say something that could be said in a single sentence? Are there any $50-words that could be replaced with a 50¢-word? Is there any unnecessary repetition?

Impressiveness: ____/10

If you are an employer, how much does this project make you want to give the author a job? How could it be improved to make you more eager to hire the author? Explain.

Other comments:

Total Score: ____/100