

STA 141 Rubric

	Exceptional – A+	Good – A	Acceptable – B	Poor – C	Inadequate – D
Text	The text is a concise, skeptical presentation of novel insights that are supported by strong evidence in the data and by external sources. For each unexpected result, multiple explanations are proposed and investigated. Potential errors in the data are identified and their impact on the results is addressed. There is a concise, big picture description of the strategy used to discover each insight, with a critical examination of its shortcomings.	The text is a skeptical presentation of insights that are supported by strong evidence in the data. For each unexpected result, an explanation is proposed and investigated. Potential errors in the data are identified and their impact on the results is addressed. There is a concise description of the strategy used to discover each insight, with a critical examination of its shortcomings.	The text presents plausible insights that are supported by some evidence in the data. For each unexpected result, an explanation is proposed. Potential errors in the data are identified, but their impact on the results is not fully addressed. There is a description of the strategy used to discover each insight, with some examination of its shortcomings.	The text presents insights that are superficial or not well-supported by evidence in the data. Unexpected results and potential errors in the data are noted but not discussed. There is a description of the strategy used to discover each insight.	The text presents insights that are not supported by or contradict evidence in the data. Unexpected results and potential errors in the data are ignored. There is limited description of the strategy used to discover each insight.
Figures	The figures are unique and carefully selected to support the text without being redundant. Each figure is accompanied by a detailed written interpretation. Each has a title and axis labels (with units). Important details can be seen clearly. Each group has a distinct point or line style, so the figures remain legible in black and white. Legends are included when appropriate.	The figures are carefully selected to support the text without being redundant. Each is accompanied by a detailed written interpretation. Each has a title and axis labels (with units). Important details can be seen clearly. Each group has a distinct point or line style, so the figures remain legible in black and white. Legends are included when appropriate.	The figures are carefully selected to support the text. Each has a title and axis labels. Each is accompanied by a written interpretation. Important details can be seen clearly. The figures remain mostly legible in black and white. Legends are included when appropriate.	The figures support the text. A few are missing a title or axis labels. Important details are sometimes obscured by overplotting or bad scaling. The figures remain mostly legible in black and white. Legends are included when appropriate.	The figures do not support the text. Many are missing titles and axis labels. Important details are obscured by overplotting and bad scaling.
Code	Transforming, visualizing, processing data should consist of succinct and proficient uses of packages when possible (i.e. aggregating with groupby in Pandas). Reusable code should be represented as a function with appropriate documentation. Iteration is used to avoid repeated code. Code is robust to small changes in underlying data. Clear explanations in markdown or comments to describe the each step of the data analysis.	Less than optimal solutions are used, but code is robust to small changes in underlying data. Iteration is used to avoid repeated code. Variable names are descriptive. Transformations and aggregation is vectorized with arrays or dataframes. Good explanations of each step is provided.	Variable names may not be descriptive, some hard-coding may be apparent. Code performs the intended task, but does not always use the best tool for the task (i.e. using a list when a dict is better). Transformations are not always vectorized. Unclear documentation is prevalent, but some effort is made.	Extensive hard-coding or code that would not be robust to changes in data. Unnecessary steps and not using features in packages. Little to no documentation.	Very difficult to understand code and unclear motivation. No documentation. Misuse of python and its packages.

Suggestions:

Give variables descriptive names.

Put spaces around operators and after commas.

Use a comment or markdown to explain each “paragraph” of code.

Place import statements at the beginning

Display the measurement unit for each axis.

Put a title and axis labels on every figure.

Adapted from Nick Ullé's 141A Rubric