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# Explore and Summarize Data

## REVIEW

## CODE REVIEW

## HISTORY

### Meets Specifications

Congratulations, you have passed this project! 🎉🎉🎉

Good job on further improvements, plots visualizations have been well polished, final plots section also further improved, great report!

Looking forward to your next work!

### Code Functionality

All code is functional (e.g. No Error is produced and RMD document is not prevented from being knit.)

The project almost never uses repetitive code where a function would be more appropriate. The code references variables by name instead of using constants or column numbers.

### Project Readability

All complex code is adequately explained with comments. It is always clear what the code is doing and how and why any unusual coding decisions were made.

The code uses formatting techniques in a consistent and effective manner to improve code readability. All lines are shorter than 80 characters.

Markdown syntax is used in the RMD file to improve readability of the knitted file.

## Quality of Analysis

The project appropriately uses univariate, bivariate, and multivariate plots to explore most of the expected relationships in the data set.

Questions and findings are placed between blocks of R code regularly so it is clear what the student was thinking throughout the analysis.

Reasoning is provided for the plots made throughout the analysis. Plots made follow a logical flow. Comments following plots accurately reflect the plots' contents.

The project contains at least 20 visualizations. The visualizations are varied and show multiple comparisons and trends. Relevant statistics (e.g. mean, median, confidence intervals, correlations) are computed throughout the analysis when an inference is made about the data.

Visualizations made in the project depict the data in an appropriate manner that allows plots to be readily interpreted. Choice of plot type, variables, and aesthetic parameters (e.g. bin width, color, axis breaks) is appropriate.

Plots visualizations been well improved, great job!

**Additional Note:** With some color themes, you'll see that data points with lighter colors are less visible due to low contrast difference with the background. This can be dealt with by darkening the plot's background color with `theme_dark()` layer.

## Final Plots and Summary

The project includes a Final Plots and Summary section containing three plots and commentary. All plots in this section reflect what has been explored in the main body of the analysis.

The plots are well chosen and the plots fulfill at least 2 of the criteria. The plots are varied and reveal interesting trends and relationships.

All plots have appropriately selected variables and are plotted in a way that accurately conveys the data/information (i.e findings in Final Plot 1 do not depend on the findings of Final Plot 2).

All plots are labeled appropriately (axis labels, plot titles, axis units) and can be read and interpreted easily. Plots are scaled appropriately.

The reasoning and findings from each plot are explained and the text about each plot is descriptive enough to stand alone. Comments reflect the contents of the plots that they are associated with.

## Reflection

The project includes a Reflection section discussing the analysis performed.

The section reflects on how the analysis was conducted and reports on the struggles and successes throughout the analysis. The section provides at least one idea or question for future work. The section explains any important decisions in the analysis and how those decisions affected the analysis.

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