

# Meaningful Report Title

*your name*

*date*

## Instructions:

Delete the Instructions portion from your final write-up. The report you submit should look like a professional report you would submit for work. The objective of the midterm is to develop a professional report using the tools and techniques you have learned in the first half of the class. A grading rubric is provided, please reference it closely for guidance on writing your report.

Consider the CO2 Emission data available on Kaggle: <https://www.kaggle.com/datasets?search=CO2>

Your boss has asked you for a report explaining the current state of knowledge on CO2 emissions. Develop a report that uses at least three datasets from Kaggle or any other source of information on CO2 emissions.

### Your report should:

1. Include 5 sections - section headers are provided below. Include subsections as needed.
2. Address any data cleaning challenges - be sure to discuss the challenges in the text and include the corresponding code in the RMD file.
3. Ask 3 research questions that include 2 or more variables each.
4. Develop plots and univariate descriptive statistics to shape the research questions.
5. Conduct appropriate statistical analysis based on limited exploratory techniques we have used in class so far.
6. Include at least 3 different equations for exploratory analysis (these could be mean, median, frequencies, proportions, etc., they do not need to be complex - write the equations in the text)
7. Develop at least 3 bi-variate/multivariate plots to explore relationships.
8. Write a concluding section that suggests next steps for understanding the problem.

### Required:

- The final product that you turn in must be a .pdf file with a corresponding .rmd file.
- All plots, tables, and other types of figures should look as professional as possible. You should have appropriate titles, x- and y- labels, and legends (if necessary). All plot elements should be clear and easy to read. Go beyond the bare minimum and read further on how to customize your plots and tables.
- The report should be around 3000 words (10-12 pages in length depending on figures and tables).

## Overview

## Data Selections and Cleaning

## Research Questions & Exploratory Data Analysis

## Statistical Analysis

## Conclusions and Future Work