Visualizing Data in Python

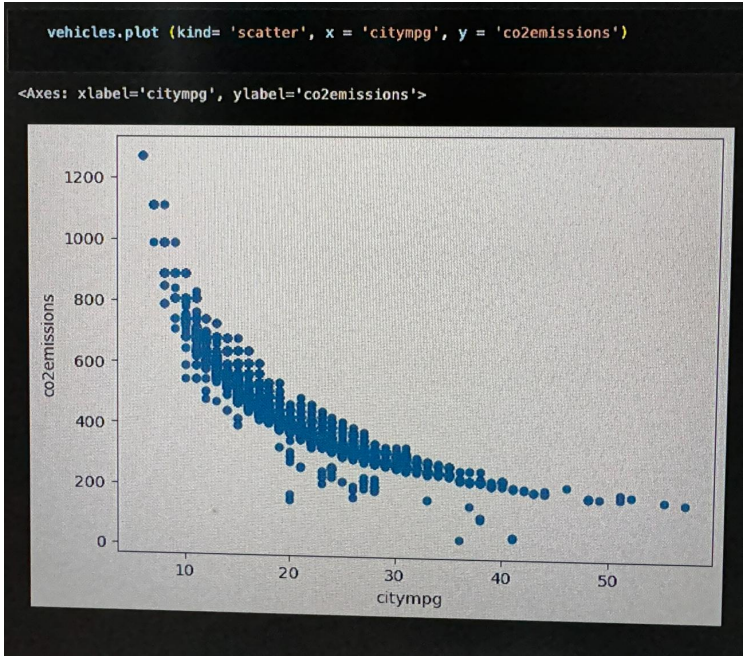
Creating Engaging Visualizations for Data Analysis

Introduction

- Understanding the insight of vehicles efficiency.
- Exploring city MPG, drive, Co emissions and year.
- Overview of different types of visualizations used.
- Tools and libraries used for the data visualization.

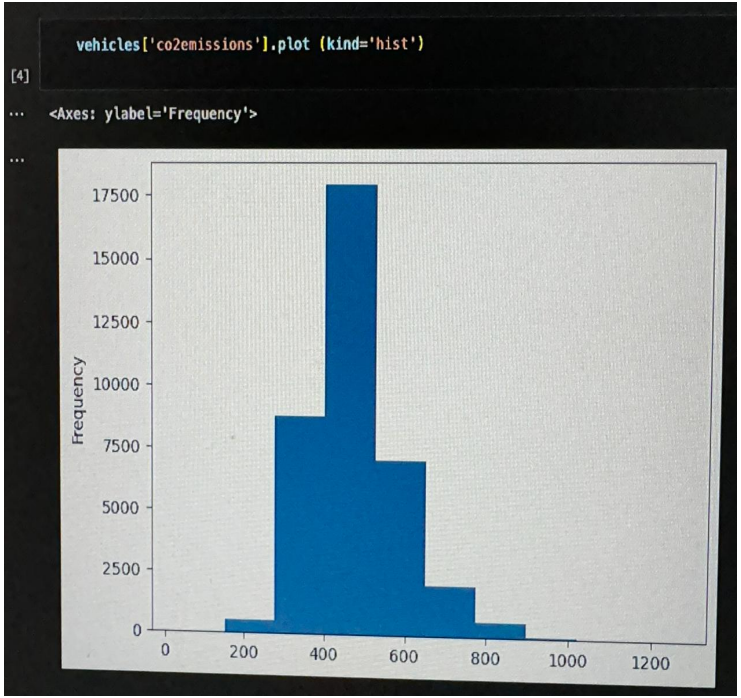
Relationship Visualization

- Importing pandas libraries to visualize the data
- Utilizing matplotlib for smoother visualization
- Implementing scatter plots to display relationship variability between ‘city mpg’ and ‘co emission’ in the data set.
- Reports shows- Vehicles with high mileage emits less carbon.



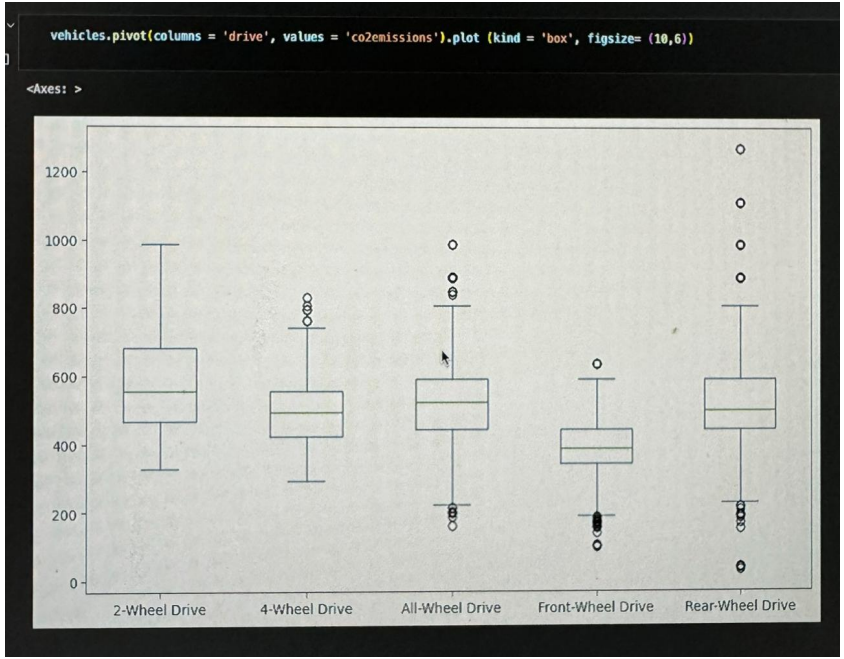
Distribution Visualization

- Visualizing a data sets with histogram
- Using hist plot for visualizing the shape distribution of a continuous variable which is Co emission.
- The diagram shows the continuous variable ‘co emission’ ranges from 200 to over a thousand permile.
- Most vehicles fall in 300 to 700 per mile.



Comparison Visualization

- Creating a table that represent the x axis and y axis.
- The x axes represent a column in the data set which is ‘Drive’ and the y axes is the cell values.
- Creating a Box plot to visualize the comparison ‘drive’ and ‘co emissions’.
- The diagram shows that ‘front wheel drive’ have lower emissions than other types of cars.



Composition Visualizations

- Plotting Bar charts to compare different categories by groups.
- Group by ‘year’ and ‘drive’.
- Aim here is to understand the important index ‘drive’ how much it contributes to the whole.
- The bar chart plot shows how all ‘drive’ makes the numbers.

Best Practices

- Choosing the right visualization based on data and goals
- Ensuring clarity and simplicity in visualizations
- Implementing color schemes for effective communication
- Decision making after visualizing and understanding of the data.