TASK:

In this assignment, you will create effective data visualizations for a given dataset using Python libraries like Matplotlib, Seaborn, or Plotly. You will apply principles of chart design to evaluate and improve the effectiveness of data visualizations, and communicate data insights to a specific audience using appropriate language and visual cues.

Instruction Prompts:

1. Locate a dataset (e.g., from Kaggle, UCI Machine Learning Repository) from the list of "Repositories for Finding Suitable Datasets," located in Class Resources, or use one provided by your instructor. The dataset should include at least 8 variables or different types.
2. Using Python and appropriate data visualization libraries, create at least two different visualizations for each variable in the dataset selected in Prompt 1 above. Your visualizations should include at least one bar chart, one line chart, one scatter plot, and one histogram.
3. Evaluate the effectiveness of your visualizations and identify at least two areas for improvement based on principles of chart design (e.g., clarity, simplicity, consistency).
4. Using your improved visualizations, create a final report that communicates data insights to a specific audience. The report should include appropriate language and visual cues for the intended audience.