Assignment one:

Please download this dataset from kaggle and use it for this assignment.

Please do try and attempt to answer all the questions, as a lot of the questions are made to help you explore and read ahead of next week's class.

Submission Dateline: 22nd January 2024 10am.

1. Visualizing Distributions:

- Create histograms to visualize the distributions of sepal length, sepal width, petal length, and petal width.
- Generate box plots to compare the distributions of these features across different Iris species (Iris setosa, Iris versicolor, and Iris virginica).

2. Exploring Relationships:

- Create scatter plots to examine relationships between pairs of numerical features, such as sepal length vs. sepal width, petal length vs. petal width, etc.
- Use scatter plots to visualize how numerical features relate to Iris species.
- Generate a correlation matrix to quantify the strength of relationships between pairs of numerical features.

3. Analyzing Categorical Features:

- Create a bar chart to visualize the frequency distribution of Iris species.
- Use a pie chart to compare the proportions of different Iris species in the dataset.

4. Enhancing Visualizations:

- Customize plot titles, axes labels, and legends to make visualizations more informative.
- Adjust plot colors, line styles, and markers to improve readability.
- Experiment with different plot types (e.g., violin plots) to find the most effective visualizations for the Iris data.

5. Annotating Plots:

- Add text annotations to highlight important features or trends in the data.
- Incorporate arrows or markers to draw attention to specific data points.

Remember to:

- Import necessary libraries (Pandas, Matplotlib).
- Load and explore the Iris dataset.
- Clean and preprocess data as needed.
- Create clear and informative visualizations.
- Save and display plots using Matplotlib functions.
- Push code and visualizations to the GitHub repo.
- Submit the GitHub link via the provided Google form.
  https://docs.google.com/forms/d/e/1FAIpQLSdZgB4YrL7rvCz0ukU_BAp-xGNf5v9ZlVpCdg63QvdZEqE6Jg/viewform?usp=pp_url