DASHBOARD DEVELOPMENT

Introduction:

In this task, we created an interactive data visualization dashboard using Tableau Public to explore the famous Iris dataset. The Iris dataset contains measurements of iris flowers from three species — *Setosa*, *Versicolor*, and *Virginica* — across four attributes: sepal length, sepal width, petal length, and petal width.

The goal was to develop a dynamic and user-friendly dashboard that allows users to visually explore the relationships between these features and differentiate between species. Interactive filters enable on-the-fly data segmentation, helping in identifying patterns and insights efficiently without manual data analysis.

Steps Undertaken:

Step 1: Data Loading

The Iris CSV dataset was imported into Tableau Public via the **Text File** connection. The dataset columns were inspected and verified for correct data types.

Step 2: Visualization Creation

Several key visualizations were created to represent the data visually:

- **Scatter Plot:** Plotted sepal length versus sepal width, color-coded by species, to observe how species cluster by these attributes.
- **Box Plot:** Displayed distribution of petal length across species, showing variation and spread within each species group.

Step 3: Dashboard Assembly

The visualizations were arranged into a clean dashboard layout within Tableau. Components were resized for clarity and flow.

Step 4: Interactive Filtering

An interactive filter based on the species field was added, allowing users to select specific species and instantly update all visualizations accordingly. The filter was configured to apply to all relevant charts to maintain coherence.

Step 5: Insights and Analysis

Users can easily compare flower measurements and observe distinctions among species. For example, *Iris setosa* clearly separates in sepal dimensions from the other species. Petal length distributions reveal distinct medians and ranges for each species.

Conclusion:

This task demonstrated the power of interactive dashboards for exploratory data analysis. Tableau's drag-and-drop interface allowed rapid visualization and easy assembly of charts into an interactive dashboard. The filter functionality provided dynamic control, empowering users to focus on particular species and uncover data patterns visually.

Such dashboards facilitate data-driven decision-making by summarizing complex datasets into intuitive visual formats. This project reinforced fundamental data visualization concepts and practical dashboard development skills applicable across various datasets and industries.