DATA-Science Internship Project

Project Name: Iris Flower Dataset Analysis

Project Overview: This project involves analyzing the famous Iris flower dataset, which contains measurements of sepal and petal dimensions for three species of Iris flowers: Setosa, Versicolor, and Virginica. Using Python and popular libraries like pandas, NumPy, and Matplotlib (or Seaborn), the project performs various analyses, including data loading, filtering, statistical analysis, and visualization of distributions.

Project Structure:

- `iris_dataset.csv`: The dataset file containing the Iris flower measurements.
- `iris_analysis.ipynb` (or `iris_analysis.py`): The main Python script (Jupyter Notebook or Python script) containing the code for data analysis.

Functionality:

- Load the Iris dataset and perform basic data exploration.
- Filter data based on specific criteria (e.g., petal length, sepal width).
- Calculate statistics such as mean, median, and standard deviation.
- Visualize distributions of petal and sepal measurements using histograms and box plots.
- Answer specific questions about the dataset, such as finding flowers with the highest and lowest petal lengths.

Dependencies:

- Python 3.x
- pandas
- NumPy
- Matplotlib (or Seaborn)

Example Outputs:

- Histograms showing the distribution of petal lengths for each species.
- Box plots comparing the sepal widths of different Iris species.
- Statistical summary tables display mean, median, and standard deviation of measurements.