Python Data Visualization Examples

This repository contains two Jupyter Notebooks that serve as a practical guide to data visualization in Python. The examples utilize two of the most popular plotting libraries: **Matplotlib** and **Seaborn**.

Whether you're a beginner learning to plot your first graph or a seasoned data scientist looking for a quick reference, these notebooks provide clear, commented code to help you create a variety of informative and visually appealing charts.

Files

- Data_Visualization_using_Matplotlib.ipynb
  This notebook focuses on Matplotlib, the foundational plotting library for Python. It demonstrates how to create common static plots, including:
  - Scatter Plots
  - Line Plots
  - Bar Charts
  - Histograms
- Data_Visualization_using_Seaborn.ipynb
  This notebook explores Seaborn, a high-level library built on Matplotlib. Seaborn is known for its ability to produce attractive and complex statistical plots with minimal code. It includes examples of:
  - Distribution Plots (e.g., displot, histplot)
  - Relational Plots (scatterplot, lineplot)
  - Categorical Plots (boxplot, violinplot)
  - Heatmaps and Pair Plots

Getting Started

To run these notebooks, you'll need to have Jupyter and the necessary Python libraries installed.

Prerequisites

- Python 3.6+
- Jupyter Notebook

Installation

You can install all the required libraries (Pandas, Matplotlib, and Seaborn) using pip:

pip install jupyter pandas matplotlib seaborn

How to Run the Notebooks

1. **Clone the repository** to your local machine:
   git clone https://github.com/your-username/your-repository.git

2. **Navigate** into the repository directory:
   cd your-repository

3. **Launch Jupyter Notebook** from your terminal:
   jupyter notebook

This command will open a new tab in your web browser with the Jupyter interface. From there, you can open and run the notebooks.