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

This project includes the following notebooks:

- 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

The notebooks require the following software to run locally:

- 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/Tharun-Design/python-data-visualization

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.