Note: Solution for the exercises will be on GitHub.

Day 10: Data Visualization Basics (Using Matplotlib & Seaborn)

☐ Introduction to matplotlib.pyplot
☐ Line Plot, Bar Chart, Histogram
☐ Introduction to seaborn
☐ Styling and labeling plots
☐ Saving plots as image files

◆ **1. Import required libraries**

```
import pandas as pd

import matplotlib.pyplot as plt

import seaborn as sns
```

◆ **2. Load the sample CSV**

```
df = pd.read_csv("sample_day9.csv")

print(df.head())
```

◆ **3. Line Plot — Plot Age vs Salary**

```
plt.plot(df["Age"], df["Salary"], marker='o')

plt.title("Age vs Salary")

plt.xlabel("Age")

plt.ylabel("Salary")

plt.grid(True)

plt.show()
```

◆ **4. Bar Chart — Count of people per age**

```
df["Age"].value_counts().sort_index().plot(kind='bar')

plt.title("Count of People by Age")

plt.xlabel("Age")
```

Note: Solution for the exercises will be on GitHub.

plt.ylabel("Count")

plt.show()

◆ 5. Histogram — Distribution of Salaries

plt.hist(df["Salary"].dropna(), bins=5, color='skyblue', edgecolor='black')

plt.title("Salary Distribution")

plt.xlabel("Salary")

plt.ylabel("Frequency")

plt.show()

◆ 6. Seaborn Example — Age vs Salary

sns.scatterplot(data=df, x="Age", y="Salary", hue="Name")

plt.title("Seaborn: Age vs Salary")

plt.show()

◆ 7. Save your plot to file

plt.plot(df["Age"], df["Salary"], marker='o')

plt.title("Age vs Salary")

plt.savefig("age_salary_plot.png")

📝 Mini Task

- Load the provided CSV.

- Plot one line chart and one histogram.

- Try styling them with titles, labels, and different colors.

- Save one of your plots to a PNG file.