Gowtham SB
www.linkedin.com/in/sbgowtham/   Instagram - @dataengineeringtamil

🎯 FINAL GUIDE: Plotting from CSV using `matplotlib`

✅ What You'll Learn

- Read data from a CSV file

- Plot graphs using `matplotlib`

- Add labels, titles, grids

- Save your plot as an image

📄 Sample CSV File (`data.csv`)

```
Month,Sales
January,100
February,120
March,90
April,150
```

🧠 Python Code (Without Pandas)

```python
import matplotlib.pyplot as plt
import csv

months = []
sales = []

# Reading the CSV file
with open('data.csv', 'r') as file:
    reader = csv.DictReader(file)
```

```
    for row in reader:
        months.append(row['Month'])
        sales.append(int(row['Sales']))

# Creating the plot
plt.plot(months, sales, marker='o', color='blue')
plt.title("Monthly Sales Report")
plt.xlabel("Month")
plt.ylabel("Sales")
plt.grid(True)
plt.tight_layout()

# Display the plot
plt.show()

# Save the plot
plt.savefig("sales_plot.png")
```

📦 Bonus: Pandas Version (Cleaner)

```
import pandas as pd
import matplotlib.pyplot as plt

df = pd.read_csv('data.csv')
plt.plot(df['Month'], df['Sales'], marker='o')
plt.title("Monthly Sales Report")
plt.xlabel("Month")
plt.ylabel("Sales")
plt.grid(True)
plt.tight_layout()
plt.show()
```

📌 Output

- A line graph with months on the X-axis and sales on the Y-axis

- Optional: saved as `sales_plot.png`

📄 RESESUME PROJECT DESCRIPTION 🧾

Project: Data Visualization using Python and Matplotlib

- Developed a Python-based data visualization script to read sales data from CSV files and generate dynamic line plots using matplotlib.
- Automated the generation of monthly sales graphs, including labels, markers, grid, and saving as images.
- Gained hands-on experience with CSV handling, matplotlib styling, and exporting visualizations for reports.

💬 HOW TO EXPLAIN IN INTERVIEW

➤ Q: Can you explain your matplotlib project?

A:

> Sure! I created a mini data visualization tool using Python. It reads a CSV file with sales data using the `csv` or `pandas` library and then uses `matplotlib` to plot a clean, labeled line graph. I added customization like axis labels, markers, grids, and saved the final chart as an image file. This helped me understand both CSV parsing and real-time plotting automation.

➤ Q: Why did you choose matplotlib?

A: I chose matplotlib because it's simple yet powerful. For basic to advanced graphs, it offers complete control over styling, annotations, and exporting. It also integrates well with pandas for handling data frames.

➤ Q: Can you improve this further?

A:

Yes! I can add dynamic user inputs, generate multiple chart types (bar, scatter, etc.), or even create a dashboard using `streamlit` or `dash` to make it interactive.

About the Author

Gowtham SB is a **Data Engineering expert, educator, and content creator** with a passion for **big data technologies, as well as cloud and Gen AI** . With years of experience in the field, he has worked extensively with **cloud platforms, distributed systems, and data pipelines**, helping professionals and aspiring engineers master the art of data engineering.

Beyond his technical expertise, Gowtham is a **renowned mentor and speaker**, sharing his insights through engaging content on **YouTube and LinkedIn**. He has built one of the **largest Tamil Data Engineering communities**, guiding thousands of learners to excel in their careers.

Through his deep industry knowledge and hands-on approach, Gowtham continues to **bridge the gap between learning and real-world implementation**, empowering individuals to build **scalable, high-performance data solutions**.

Socials

🎥**YouTube** - https://www.youtube.com/@dataengineeringvideos

📷**Instagram** - https://instagram.com/dataengineeringtamil

📷**Instagram** - https://instagram.com/thedatatech.in

🤝**Connect for 1:1** - https://topmate.io/dataengineering/

💼**LinkedIn** - https://www.linkedin.com/in/sbgowtham/

🌐**Website** - https://codewithgowtham.blogspot.com

💻**GitHub** - http://github.com/Gowthamdataengineer

💬**Whats App** - https://lnkd.in/g5JrHw8q

✉**Email** - atozknowledge.com@gmail.com

Gowtham SB
www.linkedin.com/in/sbgowtham/   Instagram - @dataengineeringtamil

 ▦ **All My Socials** - https://lnkd.in/gf8k3aCH