

## Why Data Visualization?

Data visualization helps in understanding complex data and conveying insights in an easily digestible manner.

Add Image: A bar chart and line chart merging into one, signifying clarity from chaos.

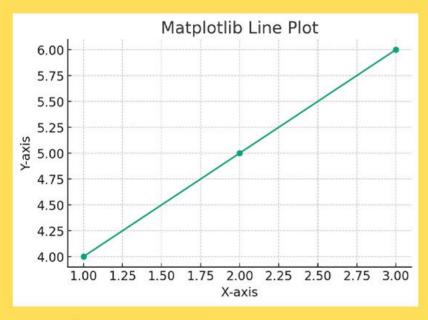


### 1. Matplotlib

The grandfather of Python visualization libraries. Versatile and customizable.

```
import matplotlib.pyplot as plt

# Matplotlib Visualization
plt.figure(figsize=(6, 4))
plt.plot([1, 2, 3], [4, 5, 6], marker='o')
plt.title("Matplotlib Line Plot")
plt.xlabel("X-axis")
plt.ylabel("Y-axis")
plt.grid(True)
plt.show()
```



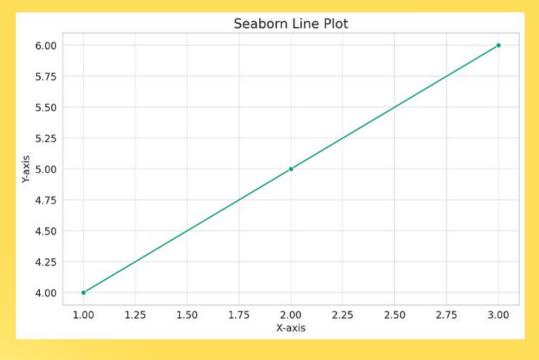
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#### 2. Seaborn

Built on Matplotlib, it offers beautiful and statistical visualizations out of the box.

```
# Seaborn Visualization
sns.set_style("whitegrid")
sns.lineplot(x=[1, 2, 3], y=[4, 5, 6], marker="o")
plt.title("Seaborn Line Plot")
plt.xlabel("X-axis")
plt.ylabel("Y-axis")
plt.show()
```



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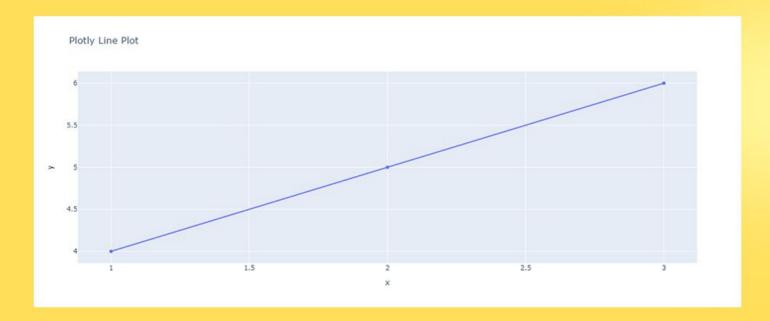


### 3. Plotly

Interactive and web-ready visualizations. Great for dashboards!

```
import plotly.express as px

# Plotly Visualization
fig = px.line(x=[1, 2, 3], y=[4, 5, 6], title="Plotly Line Plot", markers=True)
fig.show()
```

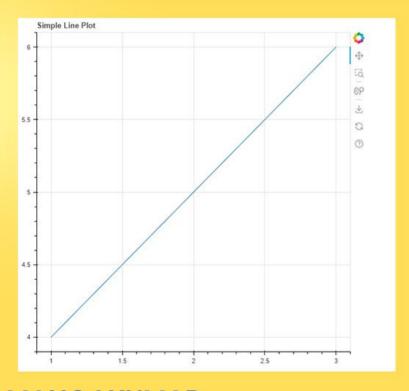




#### 4. Bokeh

Interactive and versatile. Ideal for web applications and large datasets.

```
from bokeh.plotting import figure, show
p = figure(title="Simple Line Plot")
p.line([1,2,3], [4,5,6])
show(p)
```



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### **Start Visualizing!**

Data visualization brings life to numbers.
Start experimenting and share your creative plots!





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# Join our Python course to learn more.

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