DATA VISUALIZATION

Seaborn

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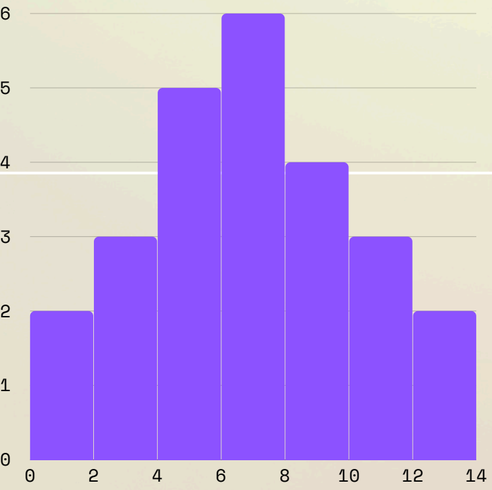
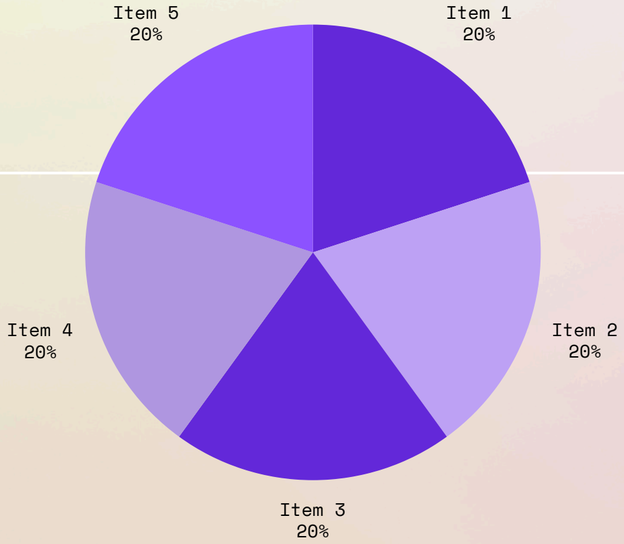
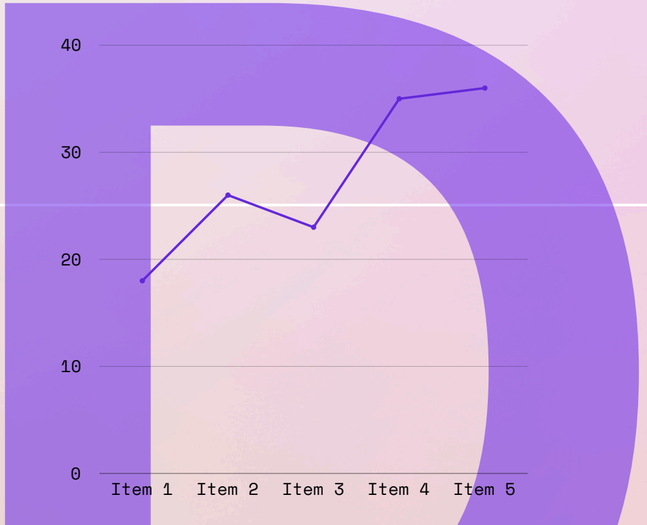
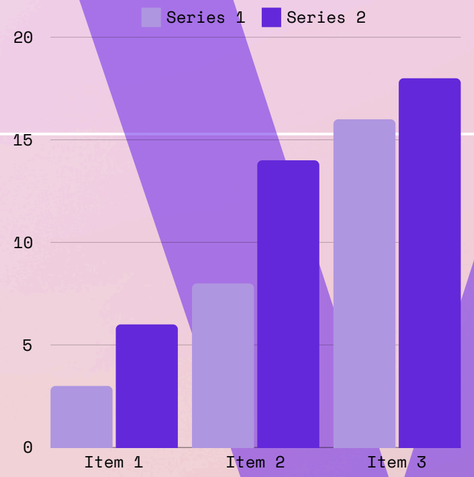
Intro

Data visualization transforms complex data into visual formats like charts and graphs, making insights clearer and easier to understand.









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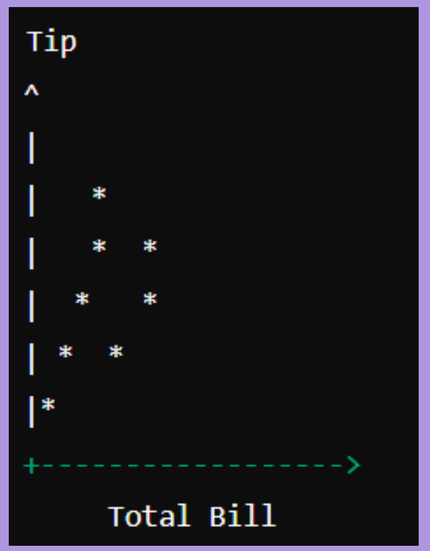
Seaborn

Seaborn is a Python library for statistical data visualization, providing beautiful, informative charts and easy integration with pandas.

```
import seaborn as sns
import matplotlib.pyplot as plt
sns.scatterplot(data=sns.load_dataset('tips'), x='total_bill', y='tip')
plt.show()
```



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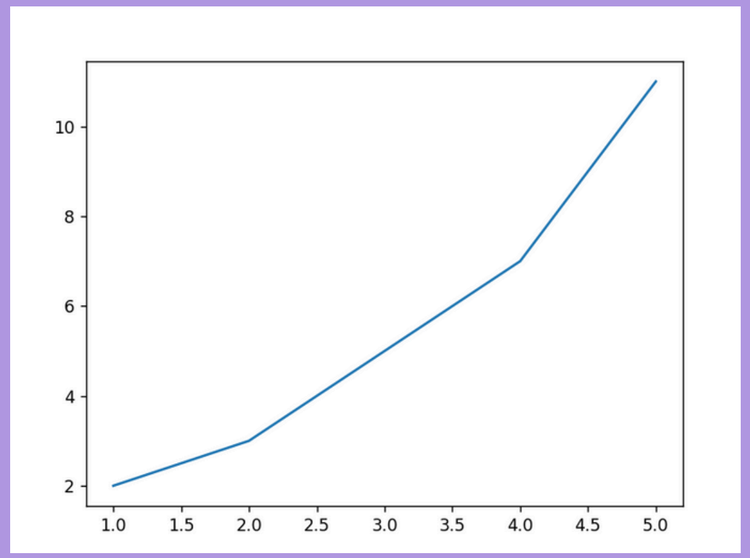
Matplotlib

Matplotlib is a Python library for creating static, animated, and interactive visualizations. It provides extensive plotting capabilities, including line, bar, scatter plots, and more, with customizable features.




```python
import matplotlib.pyplot as plt

# Sample data
x = [1, 2, 3, 4, 5]
y = [2, 3, 5, 7, 11]

# Create and display the plot
plt.plot(x, y)
plt.show()
```

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One time thing

```
pip install pandas

pip install matplotlib

Pip install seabotn as sns
```

Always have to do

```
import pandas as pd

import matplotlib.pyplot as plt

import seaborn as sns
```

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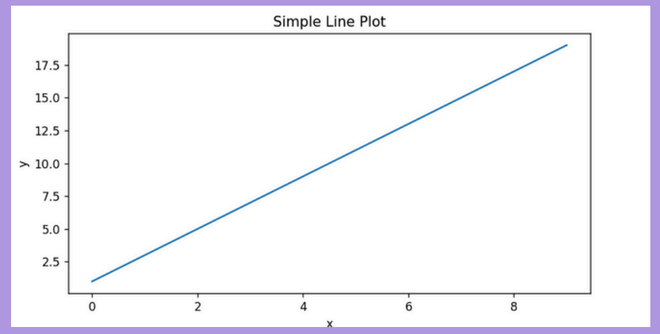
line chart

A line chart displays data trends over time by connecting data points with a continuous line. It's useful for visualizing changes and patterns in sequential data.

Bar chart

Histogram

heatmap



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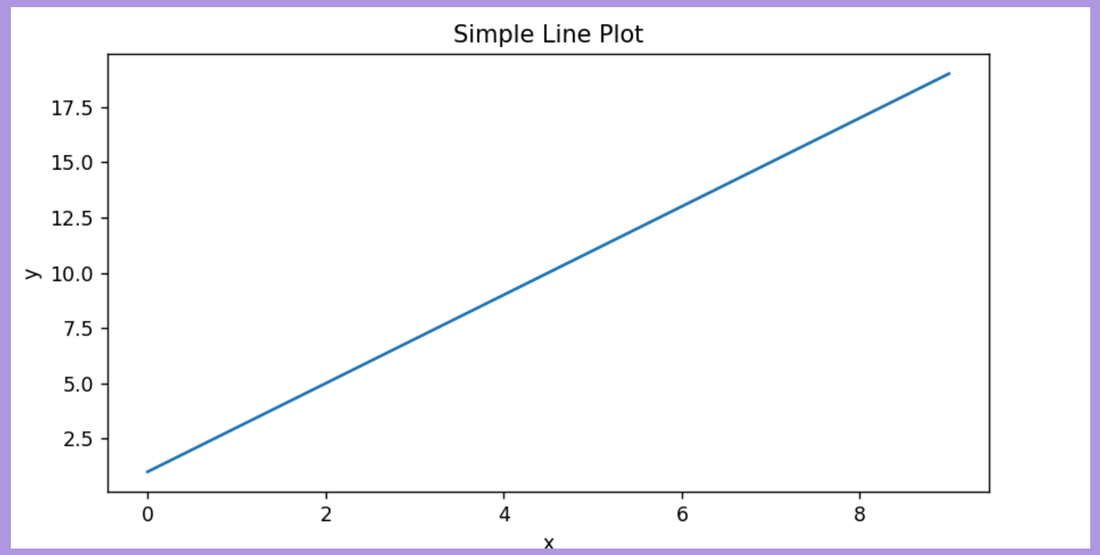
code

```python
import seaborn as sns
import matplotlib.pyplot as plt
import pandas as pd

# Create some example data
data = pd.DataFrame({
    'x': range(10),
    'y': [2*i + 1 for i in range(10)]
})

# Create a line plot
plt.figure(figsize=(8, 4))  # Set the figure size
sns.lineplot(data=data, x='x', y='y')
plt.title('Simple Line Plot')
plt.show()
```

output



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