

Data Visualization Guide (Matplotlib & Seaborn)

This guide covers two popular Python visualization libraries: **Matplotlib** and **Seaborn**.

1 Matplotlib Overview

Matplotlib is the most widely used Python library for static and animated visualizations.

Features:

- Highly customizable
- Works with NumPy & Pandas
- Can generate a wide variety of charts

Use Cases:

- Stock Market Trends
 - Sales & Financial Charts
 - Scientific Research
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2 Seaborn Overview

Seaborn is a high-level library built on Matplotlib, designed for beautiful statistical visualizations.

Features:

- Pre-configured themes
- Works well with Pandas DataFrames
- Built-in statistical functions

Use Cases:

- Heatmaps for correlation analysis
 - Distribution plots for data insights
 - Statistical modeling in research
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3 Comparison Table: Matplotlib vs. Seaborn

Feature	Matplotlib	Seaborn
Ease of Use	Requires more lines of code	Less code, easier to use
Customization	Highly customizable	Pre-configured themes
Interactivity	Limited	Works well with Pandas
Performance	Best for small & large datasets	Best for statistical analysis