# First page:

We can characterize data visualization libraries using the following factors:

**Interactivity**: Whether the library offers interactive elements.

**Syntax**: What level of control the library offers, and whether it follows a specific paradigm.

**Main Strength and Use Case**: In what situation is the library the best choice?

|  |  |  |  |
| --- | --- | --- | --- |
| Library | Interactive Features | Syntax | Main Strength and Use Case |
| Matplotlib | Limited | Low-level | Highly customized plots |
| seaborn | Limited (via Matplotlib) | High-level | Fast, presentable reports |
| Bokeh | Yes | High- and low-level, influenced by grammar of graphics | Interactive visualization of big data sets |
| Altair | Yes | High level, declarative, follows grammar of graphics | Data exploration, and interactive reports |
| Plotly | Yes | High- and low-level | Commercial applications and dashboards |

[source](https://learnpython.com/blog/python-libraries-data-visualization/)

# Second page Highlighting Open Source Data Visualization Tools:

There are numerous open source data visualization tools available today, each with its own unique features and benefits. Let's take a closer look at some of the top ones:

**RawGraphs**

RawGraphs is one of the best open-source data visualization tools out there. It's easy to use and efficient, offering over 30 visualization models. It provides great data security from outside intruders and allows users to save and share their work with others.

**Plotly**

Plotly is a popular open-source data visualization tool that allows users to create interactive and visually appealing graphs. It supports over 40 unique chart types, including 3D charts, statistical graphs, and SVG maps. Plotly integrates well with many programming languages, including Python, R, and Julia.

**Tableau Public**

Tableau Public is a free software that allows anyone to connect to a spreadsheet or file and create interactive data visualizations for the web. It's a great tool for storytelling and is used by journalists, data geeks, and many others who need to visualize and share data on the web.

**PyGWalker**

PyGWalker is a Python library that simplifies the data analysis and visualization workflow in Jupyter Notebook. It turns your pandas dataframe into a Tableau-style user interface for visual exploration. Pronounced like "Pig Walker", it integrates Jupyter Notebook with Graphic Walker, an open-source alternative to Tableau, allowing data scientists to analyze data and visualize patterns with simple drag-and-drop operations.

[Source](https://ecoagi.ai/articles/open-source-data-visualization-tools)

# Third one:

**Dash**

Dash is an open-source framework for building data visualization interfaces. Released in 2017 as a Python library, it’s grown to include implementations for R, Julia, and F#. Dash helps data scientists build analytical web applications without requiring advanced web development knowledge.

[source](https://realpython.com/python-dash/)