Alternative Libraries of Streamlit

1) Dash by Plotly: For building data driven web app with Python
    a. Pros:
        i. More customizable
        ii. Support interactive visualisation using Plotly
    b. Cons:
        i. Complex setup than streamlit
    c. Example: https://plotly.com/examples/

2) Gradio: Quick for AI & ML model demo of Web app
    a. Pros:
        i. Easy to use than streamlit
        ii. Specically for ML model deployment
        iii. Built in hosting option
        iv. Supports python functions
    b. Cons:
        i. Limited flexibility for custom UI design
        ii. Less control over layout compared to Dash
    c. Example: https://www.gradio.app/playground

3) Panel by Holoviz: Flexible tool for building interactive dashboards with Python
    a. Pros:
        i. Works with multiple plotting libraries (Matplotlib, Bokeh, Plotly, etc.)
        ii. More flexible than Streamlit for complex layouts
        iii. Can integrate with Flask and FastAPI
    b. Cons:
        i. Learning takes time than streamlit
        ii. Layout customization requires more effort
    c. Example: https://panel.holoviz.org/reference/index.html

4) Flask: Backend Framework that serve dynamic web pages.
    a. Pros:
        i. Fully customizable web apps
        ii. Supports various front-end frameworks (React, Angular, etc.)
        iii. Scalable and production-ready
    b. Cons:
        i. More effort needed to build interactive dashboards
        ii. No built-in UI components like Streamlit
    c. Example: Not available on official website.
5) Taipy: Framework designed for AI and data-driven applications with a GUI.
    a. Pros:
        i. Built-in state management for interactive dashboards
        ii. More control over app behavior compared to Streamlit
    b. Cons:
        i. Steeper learning curve
        ii. Limited UI customization options
    c. Example: https://docs.taipy.io/en/latest/gallery/

MORE FRAMEWORKS WITH TABLE VIEW DETAILS:

Framework	Ease of Use	UI Customization	Best For	Backend Required?
Streamlit	✅✅✅	❌ Limited	Quick dashboards	No
Dash	✅✅	✅✅✅	Interactive visualizations	No
Gradio	✅✅✅	❌ Limited	AI/ML demos	No
Panel	✅✅	✅✅	Jupyter dashboards	No
Voila	✅✅✅	❌ Limited	Jupyter notebooks	No
Flask + React	❌ Harder	✅✅✅	Full web apps	Yes
PyWebIO	✅✅✅	❌ Limited	Simple web apps	No
NiceGUI	✅✅✅	✅	FastAPI integration	No
Taipy	✅✅	✅✅	AI/ML apps	No
Bokeh	✅✅	✅✅✅	Real-time charts	No
Django + HTMX	❌ Harder	✅✅✅	Full web apps	Yes
Reflex (Pynecone)	✅✅	✅✅	Python full-stack apps	No
JustPy	✅✅	✅	Python-driven UI	No
Shiny (Python)	✅✅	✅✅	Analytics dashboards	No

Final Thoughts: Which One Should You Choose?

- **For quick dashboards: 👉 Streamlit or Dash**
- **For ML model demos: 👉 Gradio**
- **For advanced customization: 👉 Flask/FastAPI + React**
- **For working with multiple plotting libraries: 👉 Panel**
- **For AI/ML applications with better state management 👉 Taipy**
- **For production-grade data applications 👉 Django + HTMX or Flask + React**