

Streamlit

Build Dashboards that are Lit 🔥

Nick Muoh

What is Streamlit?

*A powerful  python library that
allows us to build interactive web
apps for data  dashboards or ML
 models*

Do I need front-end web development experience?



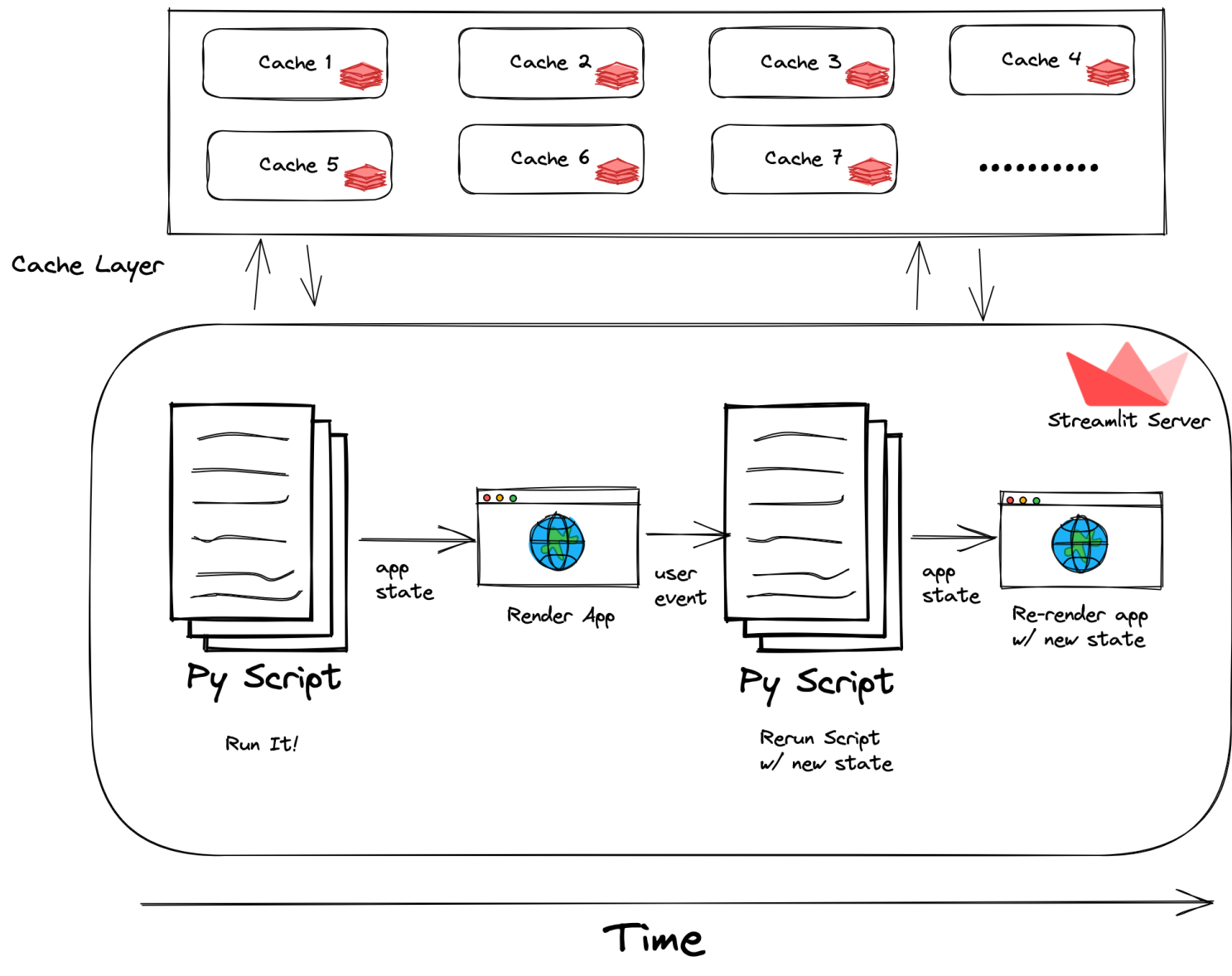
Pros

- Streamlit is accessible for everyone who understands Python. There is no requirement for HTML and CSS.
- It has a wide range of UI components. It covers almost every common UI component such as checkbox, slider, a collapsible sidebar, radio buttons, file upload, progress bar, etc. Moreover, these components are very easy to use.
- It supports multiple interactive visualization libraries such as Matplotlib, OpenCV, Vega-Lite, etc.

Cons

- While not difficult, Streamlit does require some time to learn its own syntax.
- Streamlit is not that flexible. It is only based on Python, offers a limited set of widgets, and doesn't integrate with Python Notebooks.
- Compared to other tools running large scripts can be inefficient.
- Streamlit's Data caching cannot keep track of changes to the data happening outside the function body.

Streamlit Architecture Overview



In summary...

1. Streamlit apps are Python scripts that run from top to bottom
2. Every time a user opens a browser tab pointing to your app, the script is re-executed
3. As the script executes, Streamlit draws its output live in a browser

4. Scripts use the Streamlit cache to avoid recomputing expensive functions, so updates happen very fast
5. Every time a user interacts with a widget, your script is re-executed and the output value of that widget is set to the new value during that run.
6. Streamlit apps can contain multiple pages, which are defined in separate `.py` files in a `pages` folder.

Demo Time

