

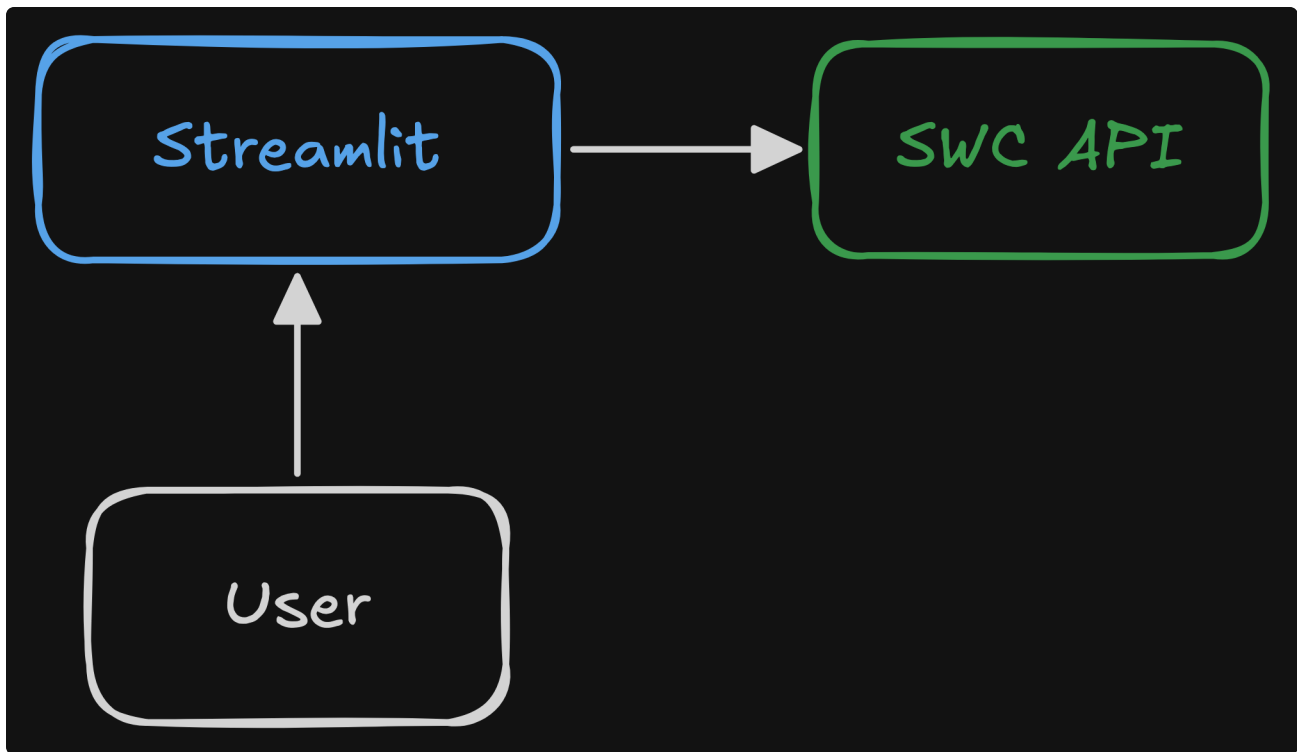
Chapter 11 - Using APIs in Streamlit Data Apps

- Data App: a web application displaying your data science models, graphs, chart, and spreadsheets
 - Streamlit: Open source Python library data app which help you create colorful and interactive web apps
 - You can host this on web hosting platforms or Streamlit Community Cloud

Engaging Users with Interactive Visualizations

- Types of analytics products:
 - Tabular reports: presents rows and columns of data in a spreadsheet format → provides a detailed view of data
 - Visualizations: charts, graphs, maps and other images that gives context and color to the data
 - Communicate ideas that are hard to see in spreadsheet
- Streamlit supports both tabular data and visualization
 - provides built-in widgets: application controls such as sliders and select boxes that allow user to filter and interact with the data in real time
 - Streamlit follow design principle of [Promoting Forward Progress](#)
 - `streamlit run your_script.py` you can generate an app using this command
- `nflverse` : rich set of open source libraries and data files containing NFL data
 - `nfl_data_py` : Python library to interact with data

Creating Your Streamlit App



- Streamlit app will include an entrypoint file (`streamlit_football_app.py`)
 - entrypoint file to set initial configuration and create the page navigation
 - `st.session_state` : mechanism to share information between pages in the application
 - `st.navigation` : make a multi-page app with a shared navigation bar
- to run Streamlit App: `streamlit run filename.py`

Creating the Team Rosters Page

- Will call the SportsWorldCentral API $\xrightarrow{\text{then}}$ manipulate the data using pandas $\xrightarrow{\text{then}}$ display the pandas DataFrame

Create the Team Stats Page

- Reuse data that was stored in SessionState $\xrightarrow{\text{then}}$ loads data from `nfl_data.py` $\xrightarrow{\text{then}}$ manipulate data (custom columns + total_tds (calculated + created) + join tables) $\xrightarrow{\text{then}}$ display chart

Deploy Streamlit

- [Prep and deploy your app on Community Cloud - Streamlit Docs](#)
- [Deployment tutorials - Streamlit Docs](#)

Additional Resources

- [Streamlit documentation](#)[Streamlit API cheat sheet - Streamlit Docs](#)
- [Streamlit API cheat sheet - Streamlit Docs](#)
- [Streamlit for Data Science: Create interactive data apps in Python : Richards, Tyler, Treuille, Adrien: Amazon.de: Books](#)
- [Get started with Streamlit - Streamlit Docs](#)
- [GitHub - streamlit/streamlit: Streamlit — A faster way to build and share data apps.](#)
- [Chart elements - Streamlit Docs](#)
- [Streamlit • A faster way to build and share data apps](#)
- [Streamlit Crash Course: From Zero to Data App - YouTube](#)
- [GitHub - joeyagreco/leeger: Instant stats for any fantasy football league.](#)
- [OpenDota API](#)
- [GitHub - nflverse/nfl_data_py: Python code for working with NFL play by play data.](#)