

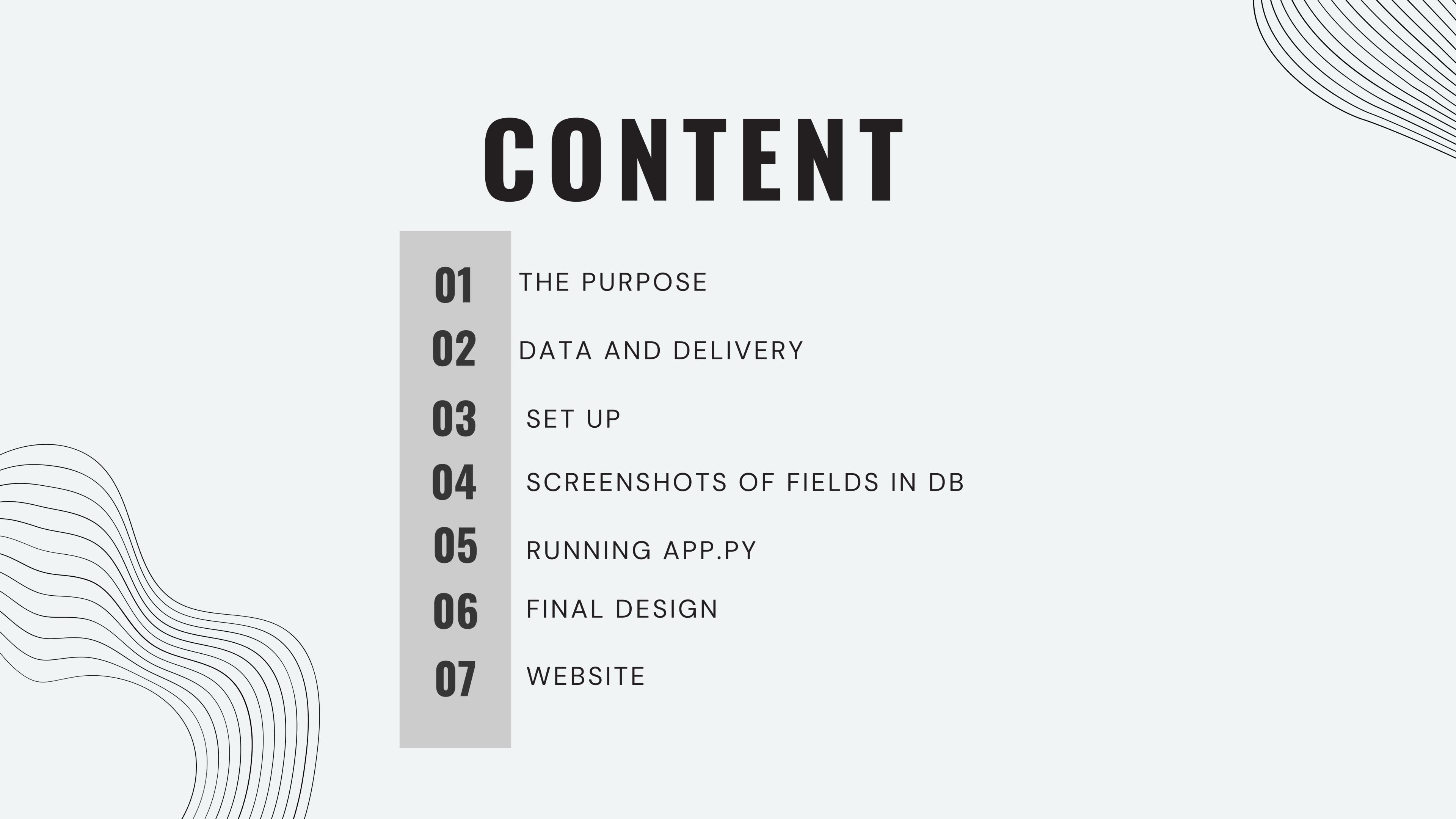


CHARGING STATIONS

ELECTRIC

DATA PROJECT

CONTENT

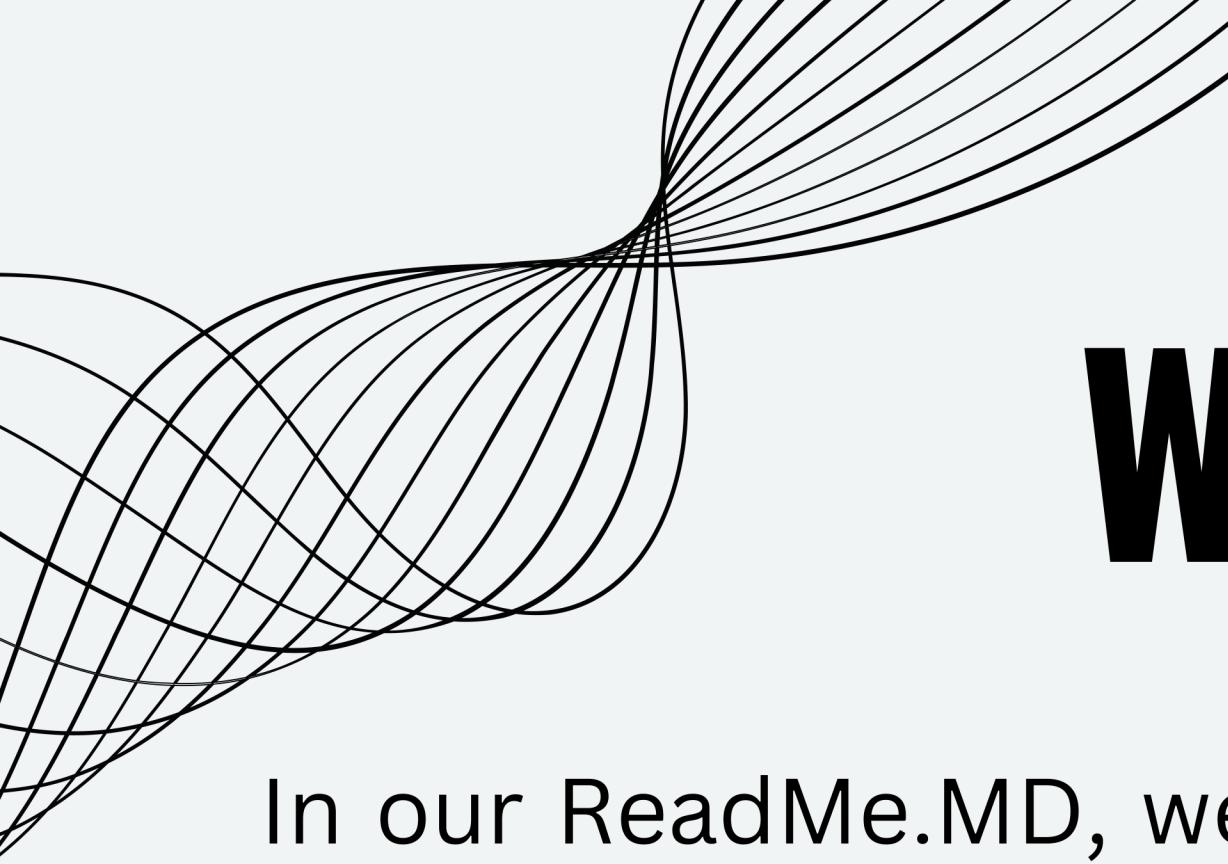
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The Purpose

- THIS PROJECT AIMS TO CREATE A COMPREHENSIVE ANALYSIS OF ELECTRIC VEHICLE CHARGING INFRASTRUCTURE, PROVIDING USERS WITH VISUALIZATIONS AND VALUABLE INSIGHTS.
- THE USERS WILL BE QUICKLY ABLE TO PULL THE INFORMATION RELATED TO ELECTRIC VEHICLE CHARGING LOCATIONS IN THE STATE OF CALIFORNIA. ADDITIONAL ATTRIBUTES SUCH AS OWNERSHIP TYPE IS ALSO AVAILABLE.

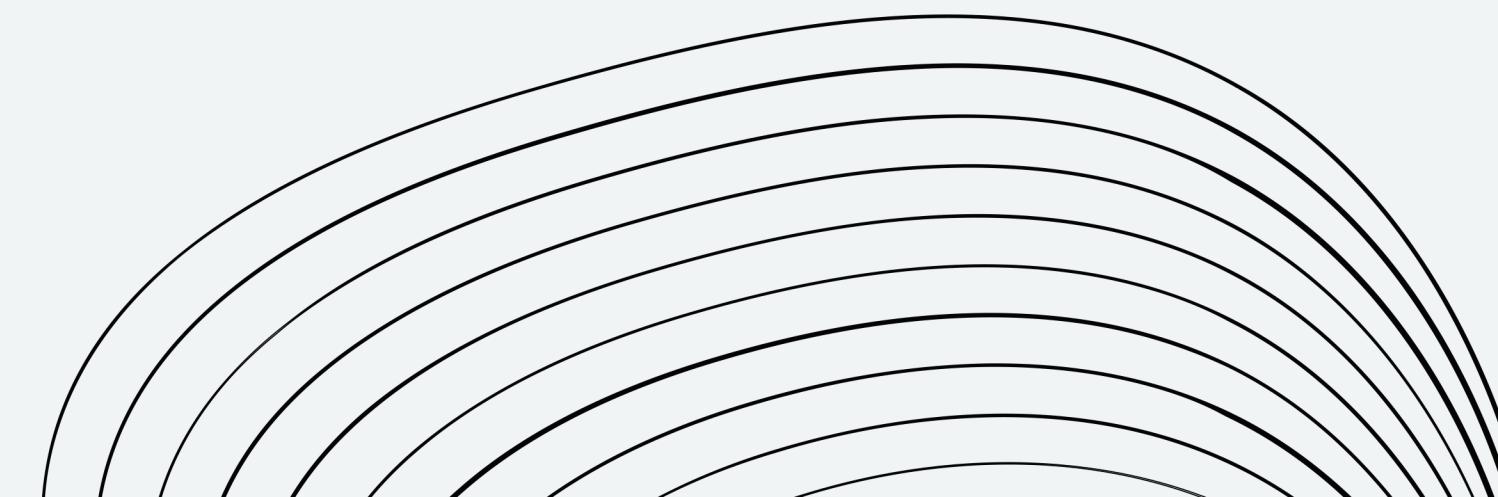
Data and Delivery





Website Set Up

In our ReadMe.MD, we show users how to quickly get started with using EV Chargers Dashboard/Website. Here are the steps that need to be followed:

1. Users should clone the Git repository to their preferred location.
 2. Users should run the 'EV_stations_code_updated-Copy1.ipynb' notebook with a local connection to SQLite database setup.
 3. Users should run the 'DF to app.py' python file, and follow the link from the terminal output to access the website.
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Running database setup

The database setup depends on the JSON, OS, Pandas, and SQLAlchemy libraries. Additionally, a local connection to port 5000 must be accessible.

When run with proper setup, users will receive the following success message:

Fields present in database:

- Total counts of electric stations was over 79000 with over 50 attributes
- The highest number was for the State of California

The following fields are in the database:

- id
- station name
- street address
- city
- state
- zip
- latitude
- longitude
- owner type code



Running ‘app.py’

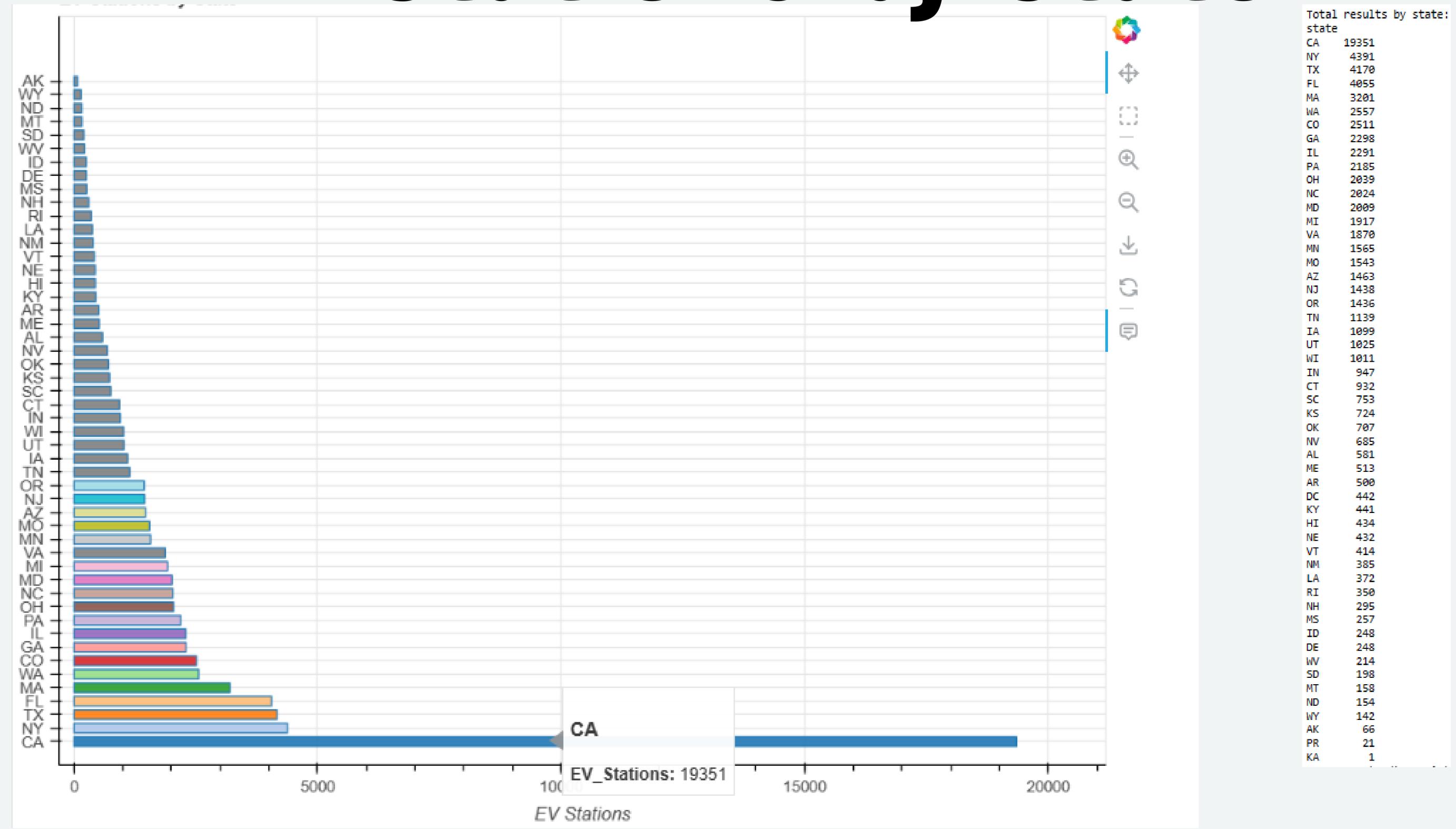
Run app.py in a terminal with python and the following libraries installed:

- Flask
- SQLAlchemy
- json

After doing so, follow the following selected link as it appears in your terminal:
little bit of body text

Website and Visuals

EV Stations by State

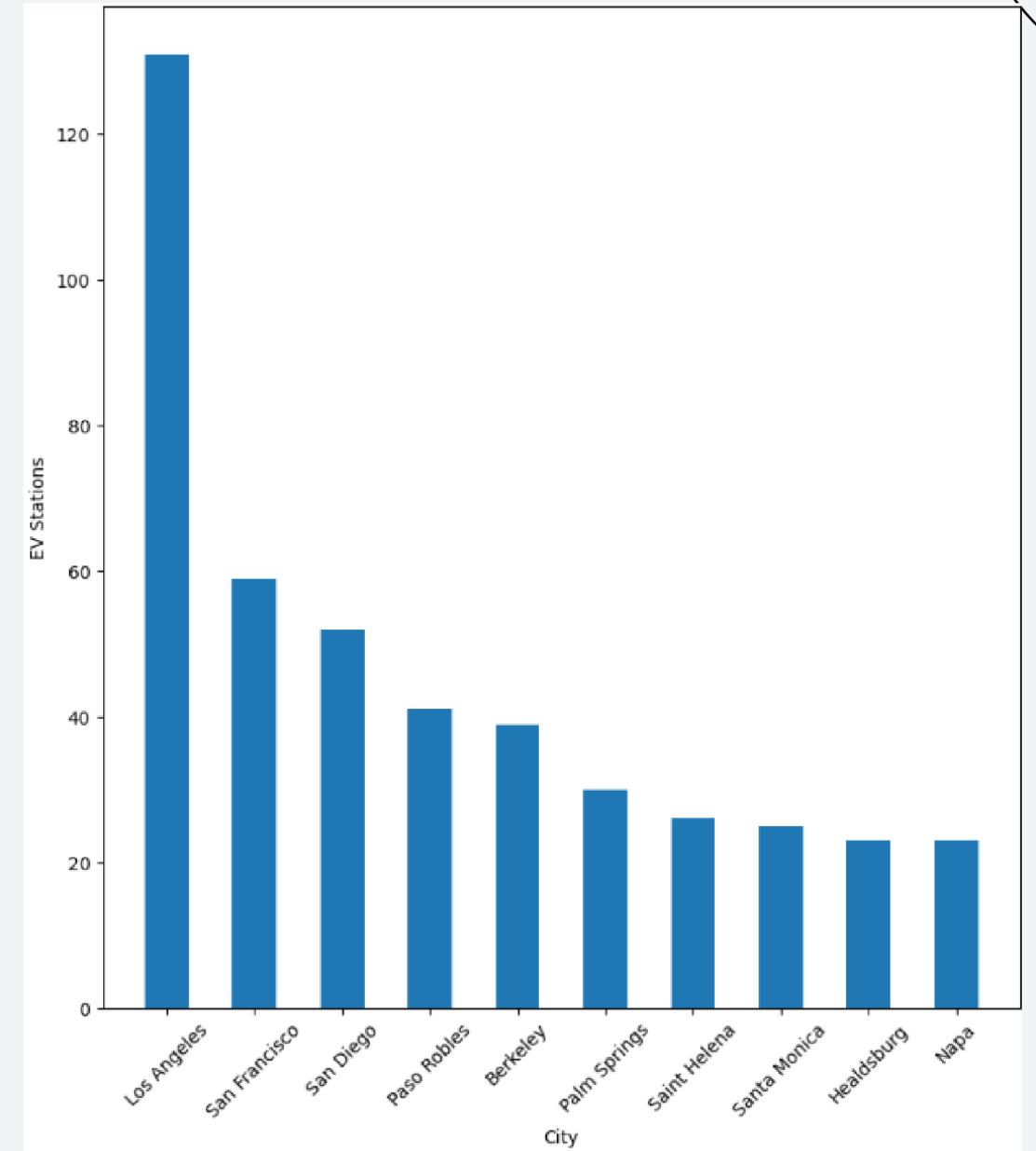


Location of EV Stations



Top 10 Cities by Counts

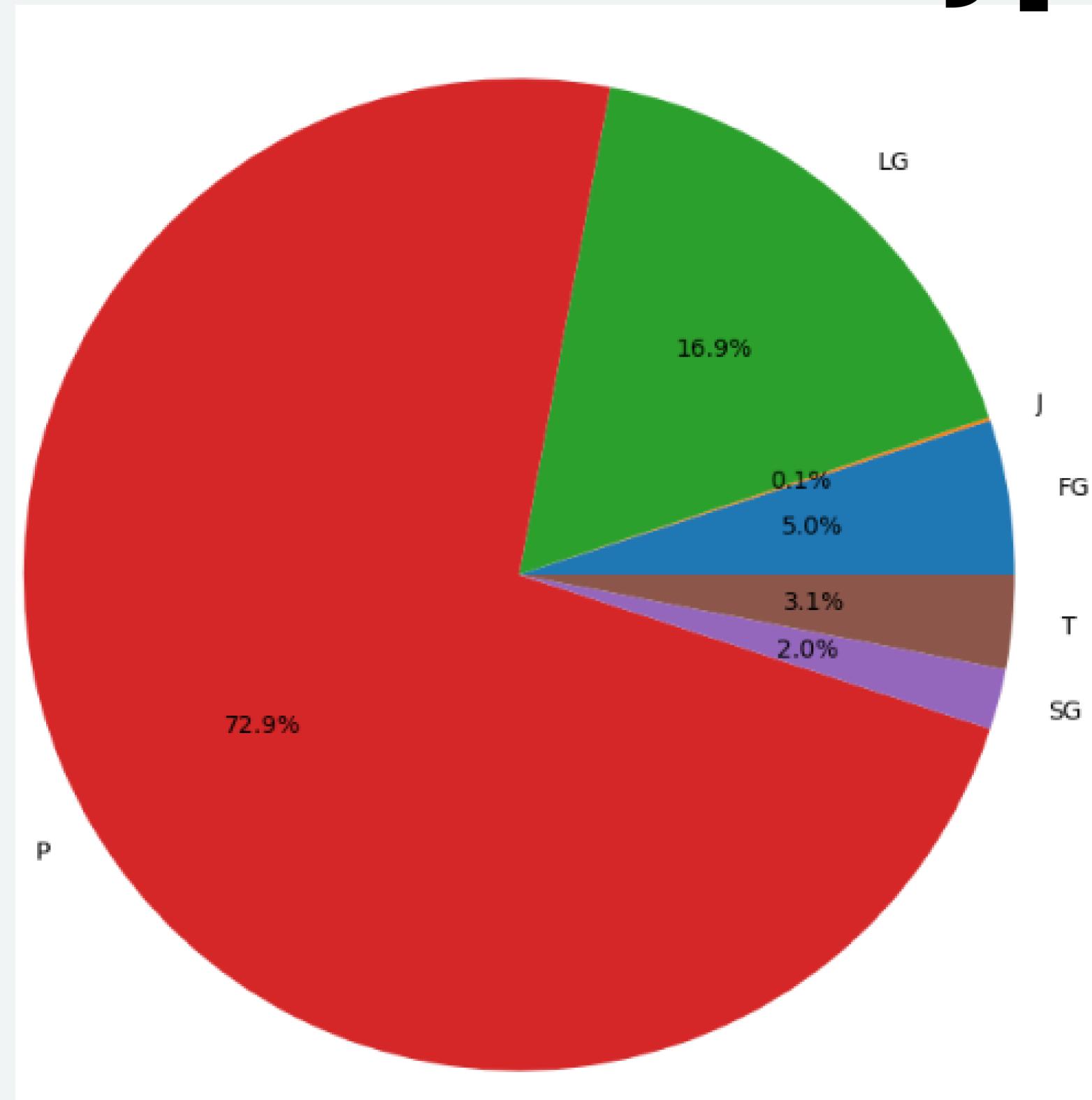
City	EV Stations
Los Angeles	131
San Francisco	59
San Diego	52
Paso Robles	41
Berkeley	39
Palm Springs	30
Saint Helena	26
Santa Monica	25
Healdsburg	23
Napa	23



Distribution of EV Station Types

owner_type_code	Description	counts
FG	Federal Government Owned	89
J	Jointly Owned	2
LG	Local/Municipal Government Owned	299
P	State/Provincial Government Owned	1289
SG	Utility Owned	35
T	Privately Owned	54

Distribution of EV Types



In conclusion

- Nearly 80,000 EV Stations across the United States
- California's share of EV Stations is over 4 times that of the nearest state
- EV Station attributes differ in a myriad of ways such as owner types, access codes, how they priced, connector types, etc
- Packages and Libraries
- Python
- Pandas
- Requests
- SQLAlchemy
- Flask
- Matplotlib
- JavaScript
- D3.js
- Plotly
- SQLite