# Weather to Go There?

### Summary

A dashboard page with multiple charts that update from the same data source focused on answering common questions about weather of an area: hottest, coldest, snow amount, rain amount.

### **Date Source:**

NOAA Global Surface Summary of the Day (GSOD)

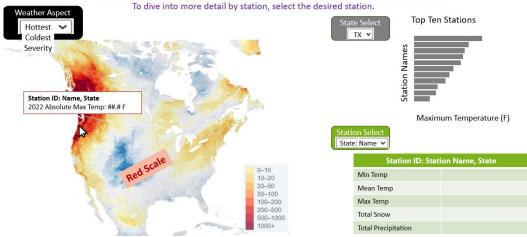
- Database with over 9000 weather stations' data
- Subset of GSOD#### table elements: Mean temperature (.1 F), Maximum temperature (.1 F), Minimum temperature (.1), Precipitation amount (.01 in), Snow depth (.1 in), year, month, day
- Subset of Station table elements: name, country, state, lat, lon

## **Visuals: Technology**

### Weather to Go There? A brief look at 2022 weather in the U.S.

Select the weather aspect you want to review. Hover over the map to see specific values by weather station.

The Top Ten Stations chart will adapt based on the chosen weather select and the state you choose.



- 1. Heatmap map of the U.S.: Leaflet, D3
- 2. Horizontal bar chart with State drop down: Plotly, D3
- 3. Station Details & Dropdown: HTML, JavaScript, D3

### **Data Flow:**

NOAA GSOD

- Measurement data tables for each year
- Station tables to identify where stations are and name

Python query script(s)

- BiqQuery Python API to run SQL queries for desired data (prototyped in jupyter notebook file)
- create data.js file with json/dictionary format

Logic.js pulls in data

• logic.js references data.js file

Logic.js creates visuals

- Measurement data pulled into maps (leaflet) heat, cold, severe
- Top 10 measurement pulled into horizontal bar chart (plotly)
- All data for single station selected by user via dropdown (html modifications)

HTML wrapped in Flask

- index.html calls the various libraries (leaflet, etc.) and js files as well as defines where visuals go
- Flask wrapper: https://www.youtube.com/watch?v=d5LGL8k43H4

GitHub link: https://github.com/TechMax14/Project-3.git