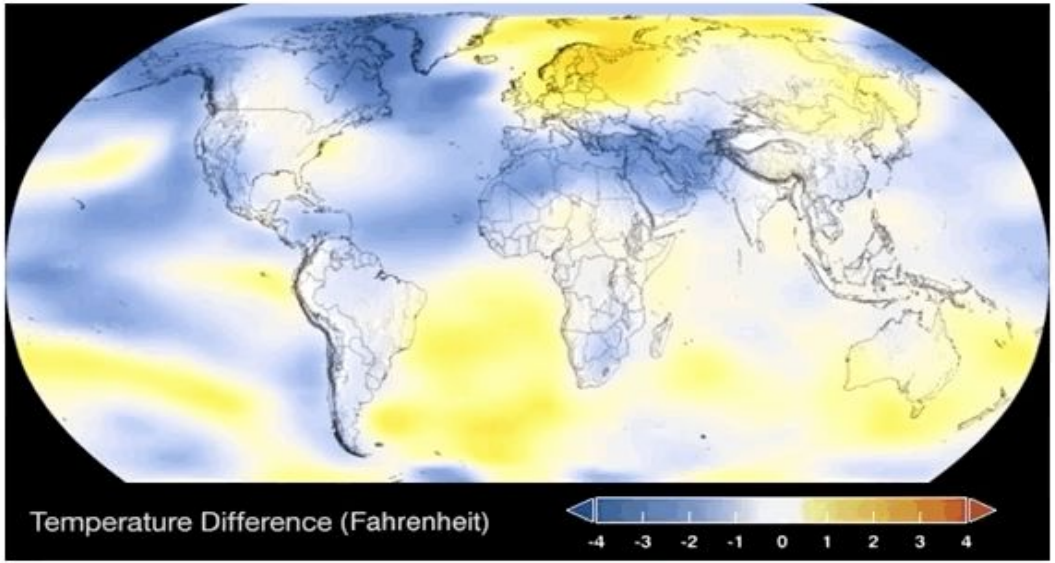
Feelin' Hot Hot Hot!

Visualizing Global Climate

By: Sam, Sarah, Ryan, & Taj

Our Inspiration



Interactive Visuals for Global Climate

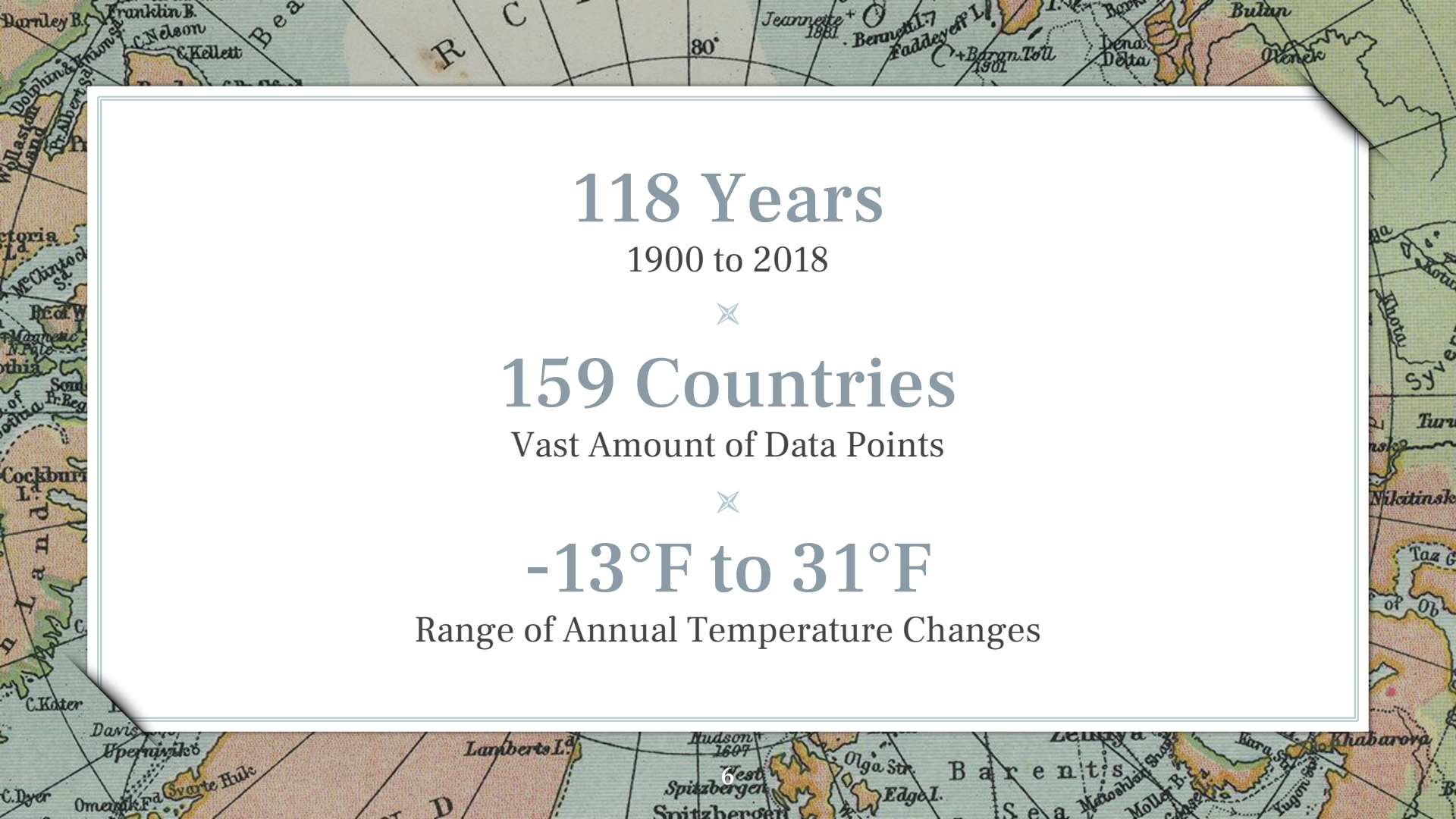
Features:

1. Dynamic Leaflet and D3 visualizations
2. Temperatures across the world
3. Historical data on climate

Datasets and Tools Utilized

Dataset Source

- National Centers for Environmental Information
- Annual Global Land Temperatures for Cities (csv)
- Annual U.S. Land Temperatures for Cities (csv)



118 Years

1900 to 2018

159 Countries

Vast Amount of Data Points

-13°F to 31°F

Range of Annual Temperature Changes

The Tools!

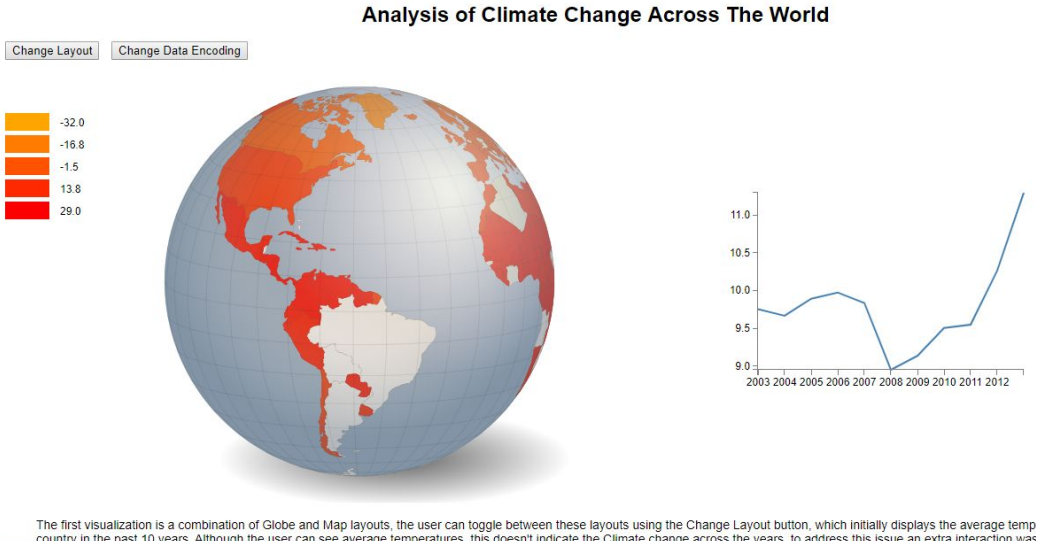
- HTML/CSS
- Javascript
- D3.js
- Leaflet.js
- Python
- Flask
- JSON
- MySQL & MongoDB
- Jupyter Notebook
- Visual Studio Code

Database Building

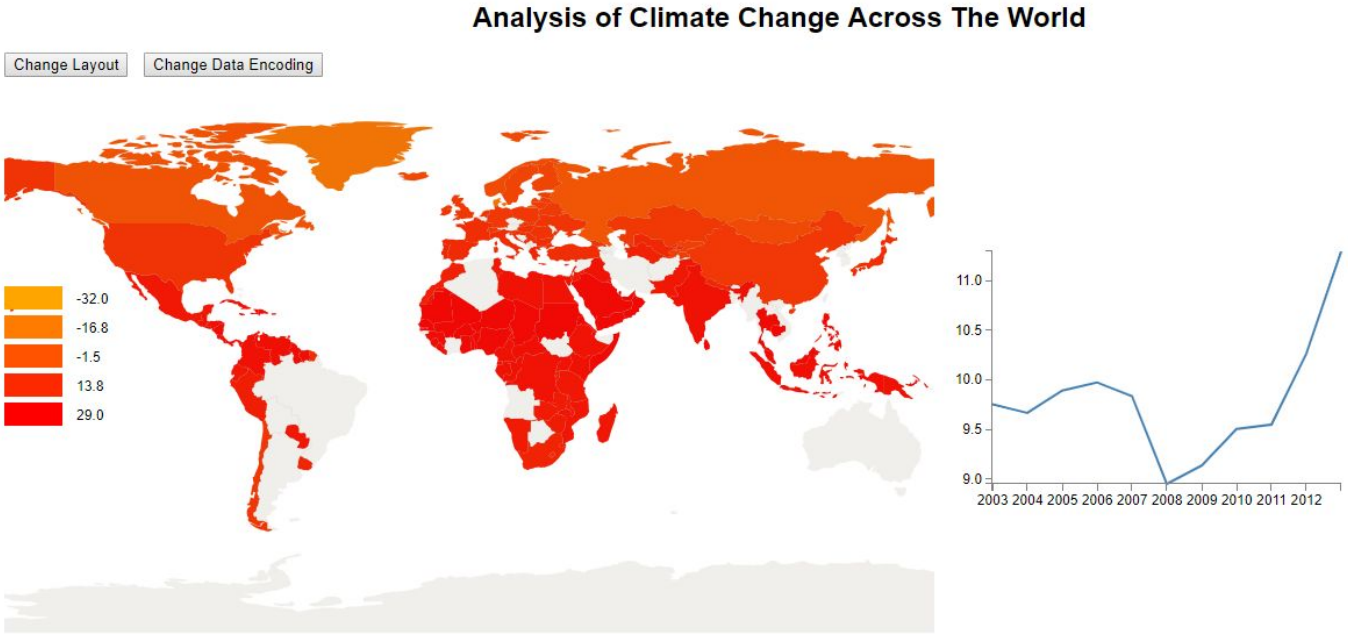
1. Data Cleansing
2. MySQL
3. Building Flask App

D3 Globe Visualization

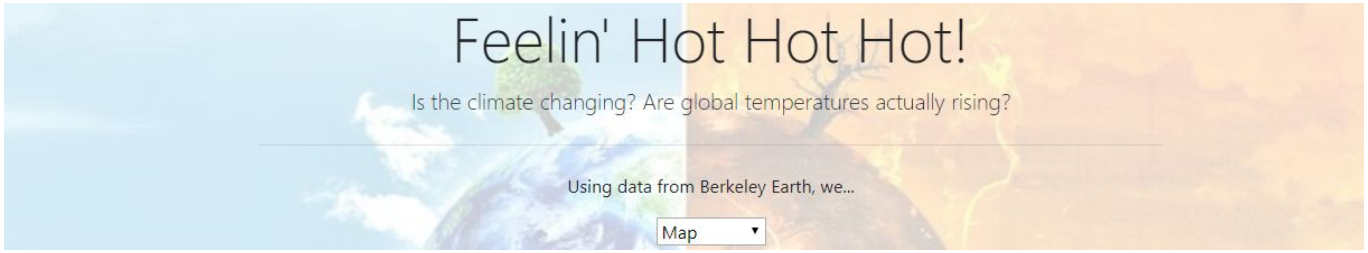
- Utilized D3.js
- Compare average change in temperature over time
- User driven interactive globe
- Chart next to globe for individual countries



D3 Full Map Visualization



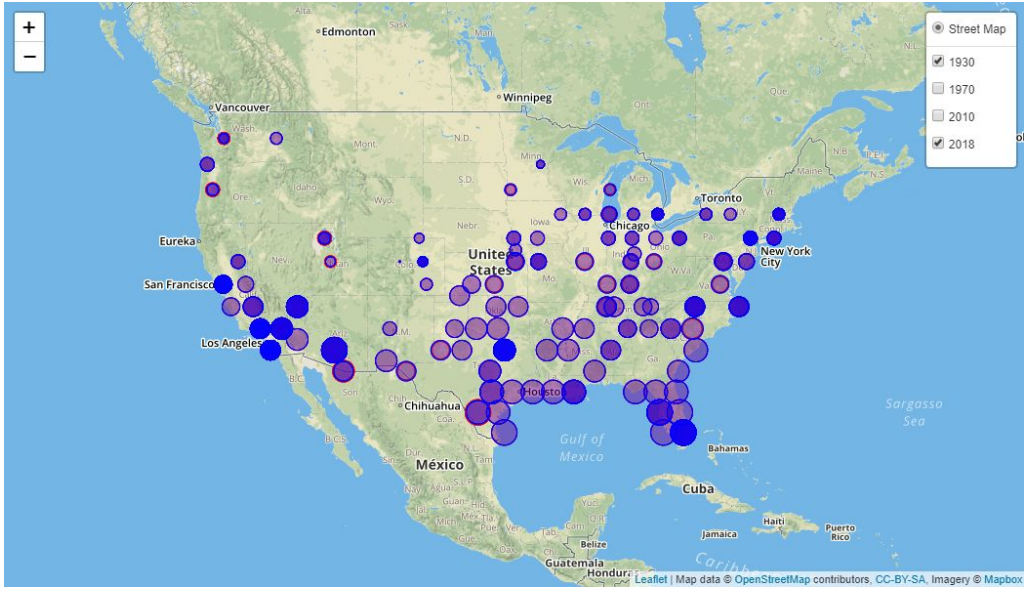
Dashboard



- Main HTML/CSS home page
- Drop down menu to select between visualizations
- D3 clears and updates visualizations on change with event listener
- Flask app pulls from MySQL, uses jsonify to serve up data

Leaflet Map

- Circle marker with radius dependent on temperature
- Layers filtered by specific years (1930, 1970, 2010, and 2018)
- Pop ups show city and temperature data



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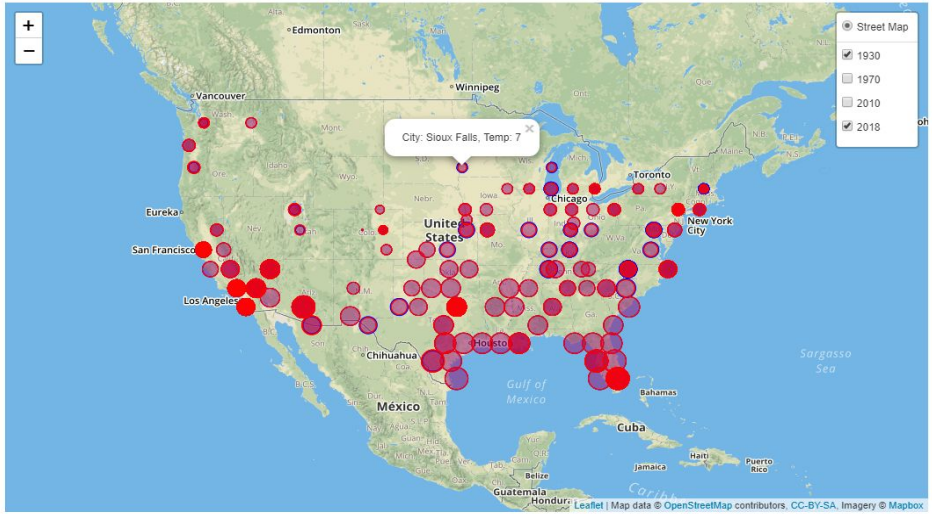
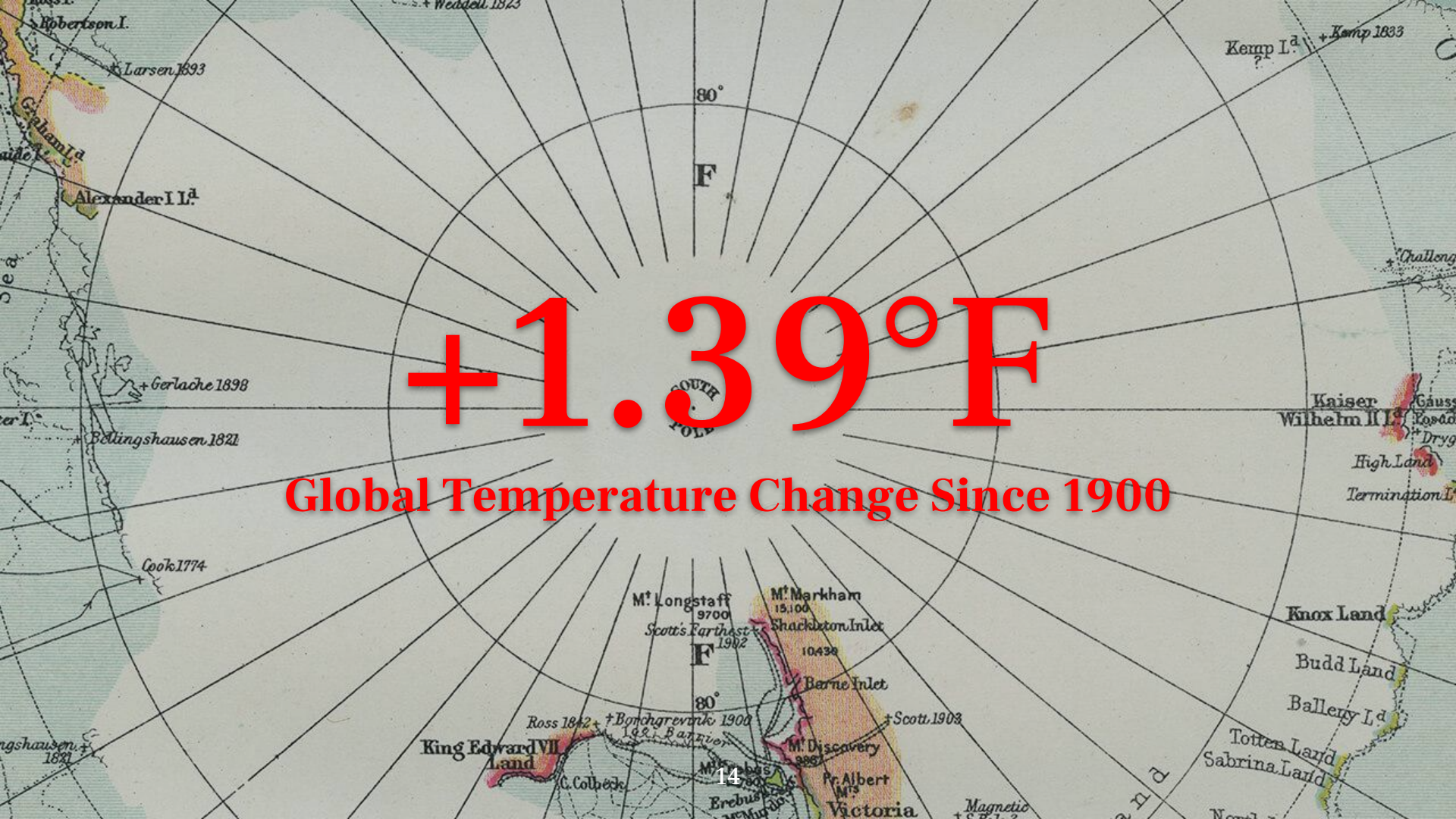
Is the climate changing? Are global temperatures actually rising?

Using data from Berkeley Earth, we...

Map




+1.39°F
Global Temperature Change Since 1900

THANKS!

Any questions?