

Datasets:

- Global Ocean and Land Temperatures - from 1743 to 2013

Source:

- <https://www.kaggle.com/berkeleyearth/climate-change-earth-surface-temperature-data>

The raw dataset comes from the Berkeley Earth data page and includes Global Land and Ocean-and-Land Temperatures from 1743 until 2013. Berkeley Earth is an independent non-for-profit organization in the USA focused on environmentalism data. Berkeley Earth supplies comprehensive open-source world global temperature data that is timely, impartial, and verified. The datasets included are only a csv file and include global land temperature by city, state, country, major city, and general.

Rows/Items and what they represent:

- A total of 3193 rows
- Date: starts in 1750 for average land temperature and 1850 for max and min land temperatures and global ocean and land temperatures
- Land Average Temperature: the global average land temperature in Celsius
- Land Average Temperature Uncertainty: the 95% confidence interval around the average
- Land Max Temperature: global average maximum land temperature in Celsius
- Land Max Temperature Uncertainty: the 95% confidence interval around the maximum land temperature
- Land Min Temperature: global average minimum land temperature in Celsius
- Land Min Temperature Uncertainty: global average minimum land temperature in Celsius
- Land and Ocean Average Temperature: global average land and ocean temperature in Celsius
- Land and Ocean Average Temperature Uncertainty: the 95% confidence interval around the global average land and ocean temperature

Variables:

- Numerical: Temperature
 - Categorical: Date
 - Ordinal: Temperature Uncertainty
 - All variables included are timeseries
-
- International Disaster Database
- Source:
- <https://www.emdat.be/>
- In 1988, the Centre for Research on the Epidemiology of Disasters (CRED) launched the Emergency Events Database (EM-DAT). EM-DAT was created with the initial support of the World Health Organization (WHO) and the Belgian Government.

Rows/Items and what they represent:

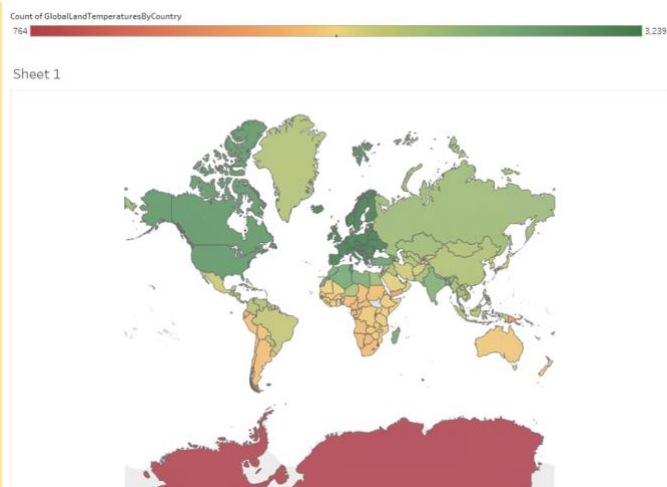
- A total of 948 rows | 48 columns in total
- Object ID: Unique Identifier of disaster row entry
- Country: Country Name
- ISO2/ISO3: N/A
- Indicator: Type of Disaster – Flood, Drought, Landslide etc.
- Code: Single Code used across the dataset for all entries
- Unit: Definition of metric count
- Year: 40 years spread across 40 columns, one column for each year from 1980 - 2020

c. Cursory analysis/Direction

I want to merge/join two or more datasets to produce a richer dataset, however for the milestone, I've included a few basic visualizations and research.

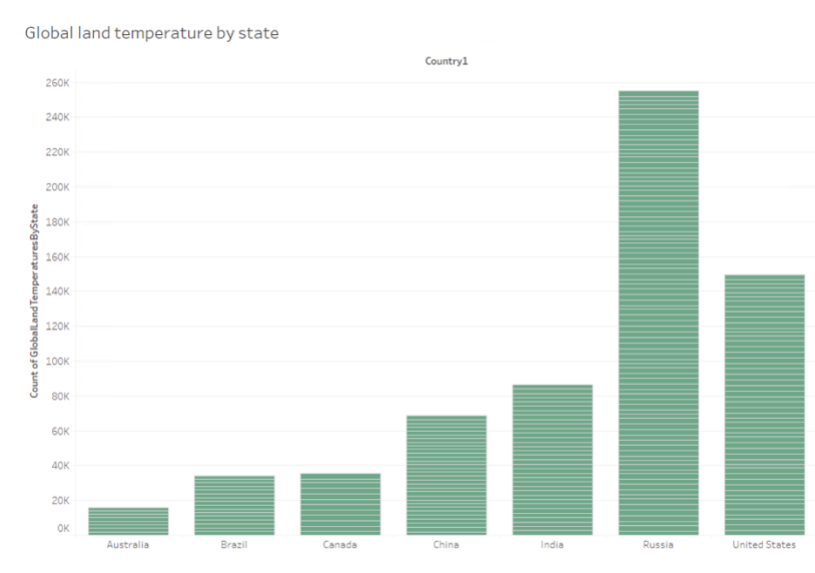
Seeing the trend of Natural/Climate related disasters across the world Decade over Decade –

For example, I can see that South America, Africa India had moderate land temperature as compared to other countries in the globe.



DSC 465 - Project Milestone 2

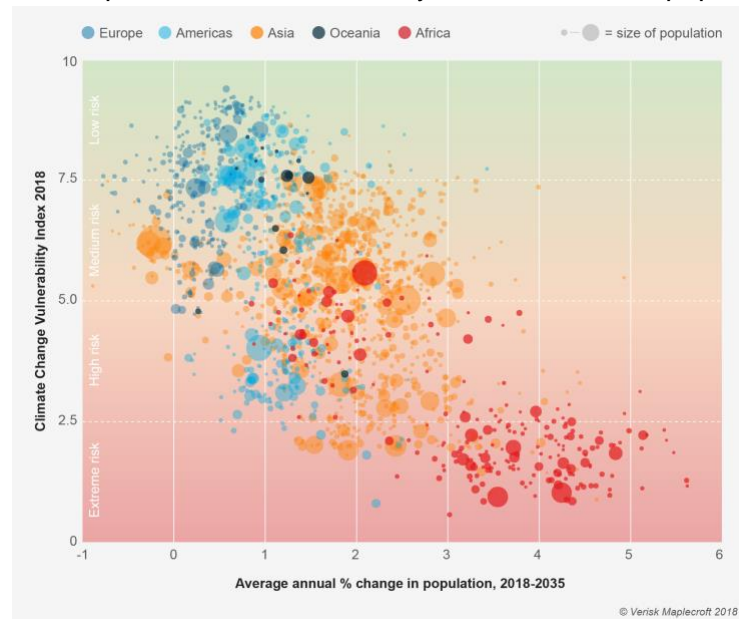
10/31/2021



Another way to visualize this data is to do a deep dive within states.

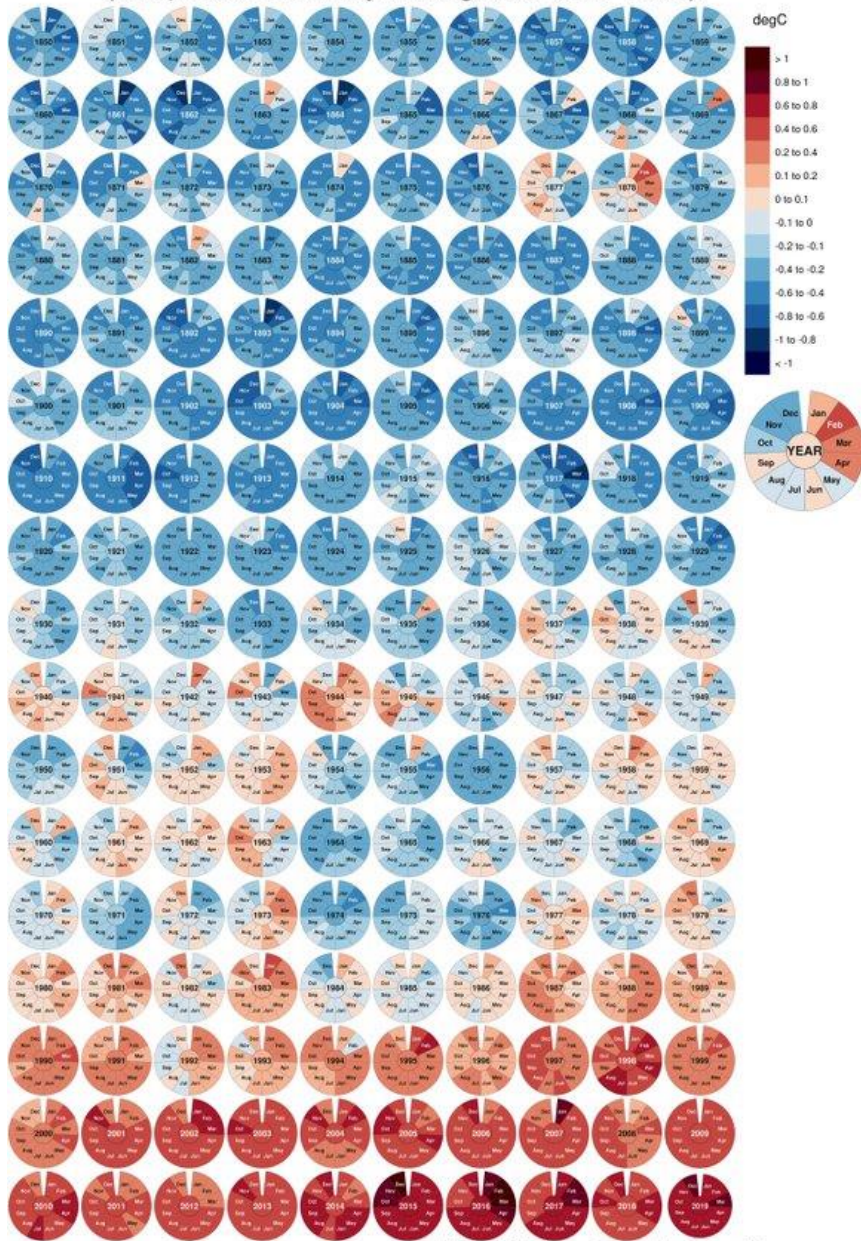
d. Research/Examples:

Scatterplot with color for country and size/area for population size



(Source <https://visme.co/blog/climate-change-facts/>)

*Monthly global mean temperature between 1850 and 2019
(compared to monthly averages for 1961-1990)*

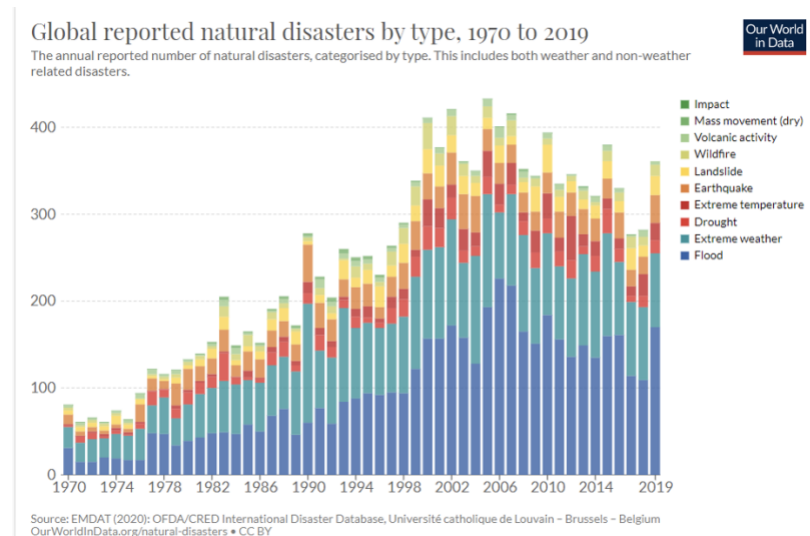


Data: HADCRUT4 - Created by: @neilrkaye

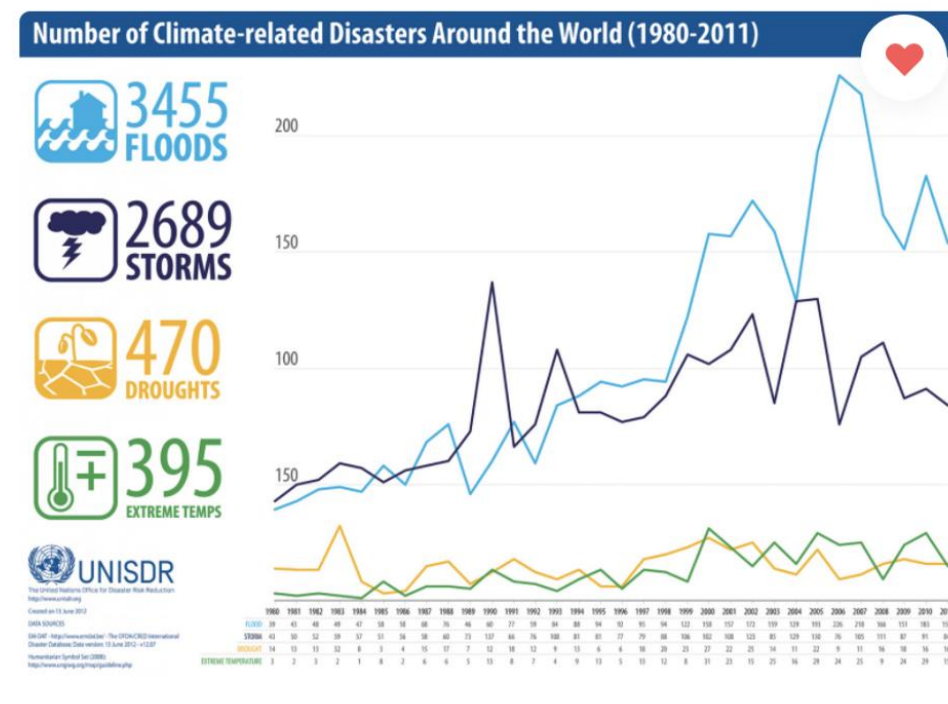
(Source <https://pstblog.com/2016/10/26/climate-change>)

10/31/2021

I saw multiple ways in which similar data was being visualized on the internet, for example, I saw stacked bars for the same data from 1970 – 2019. (Source <https://ourworldindata.org/grapher/natural-disasters-by-type>)



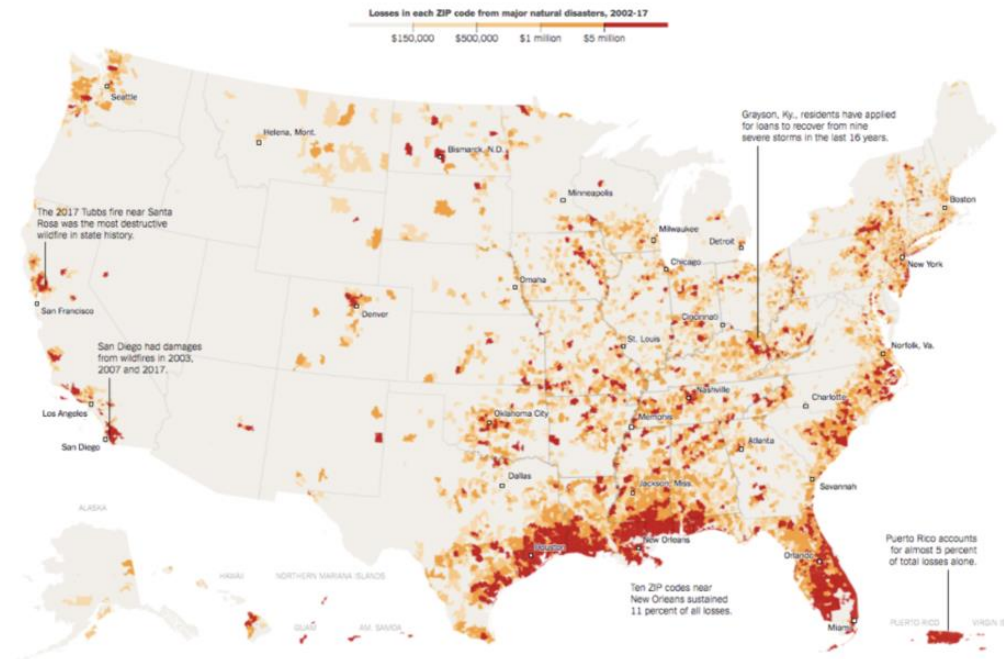
I also saw people using text/placeholders for better numerical observations and representation. As seen below- (Source <https://visual.ly/community/Infographics/environment/number-climate-related-disasters-1980-2011>)



Lastly, I also saw heatmaps being built for same/similar datasets – (Source <https://datainnovation.org/2018/05/visualizing-the-patterns-of-natural-disasters-in-the-united-states/>)

Visualizing the Patterns of Natural Disasters in the United States

by Michael McLaughlin | May 25, 2018



I think I will have to use a mix of various types of visualizations depending on what I end up telling in terms of our story.