Project 2 Proposal

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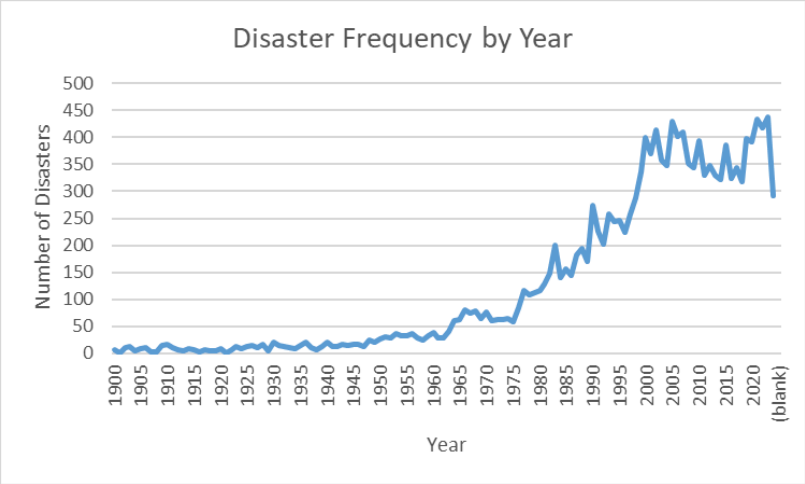
Github Repo:

https://github.com/UC-Berkeley-I-School/Project2_Naresh_Shanbhag_Tummalapalli

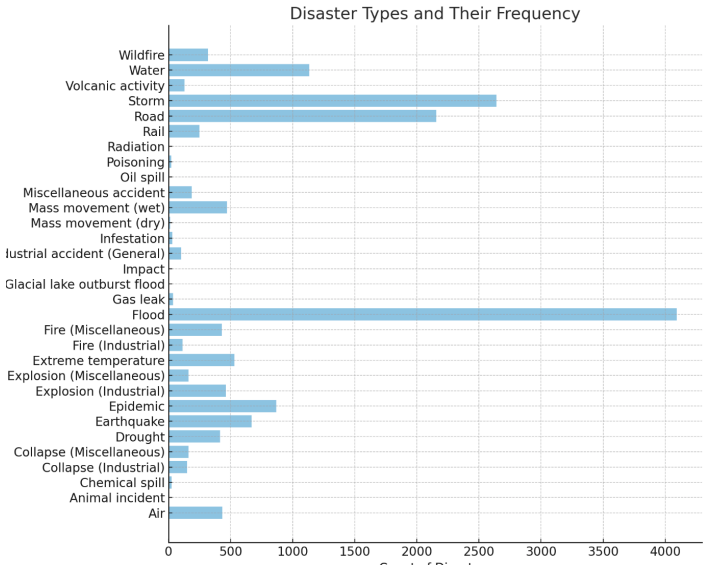
Primary Dataset: https://www.emdat.be/

Initial Plots and Tables:

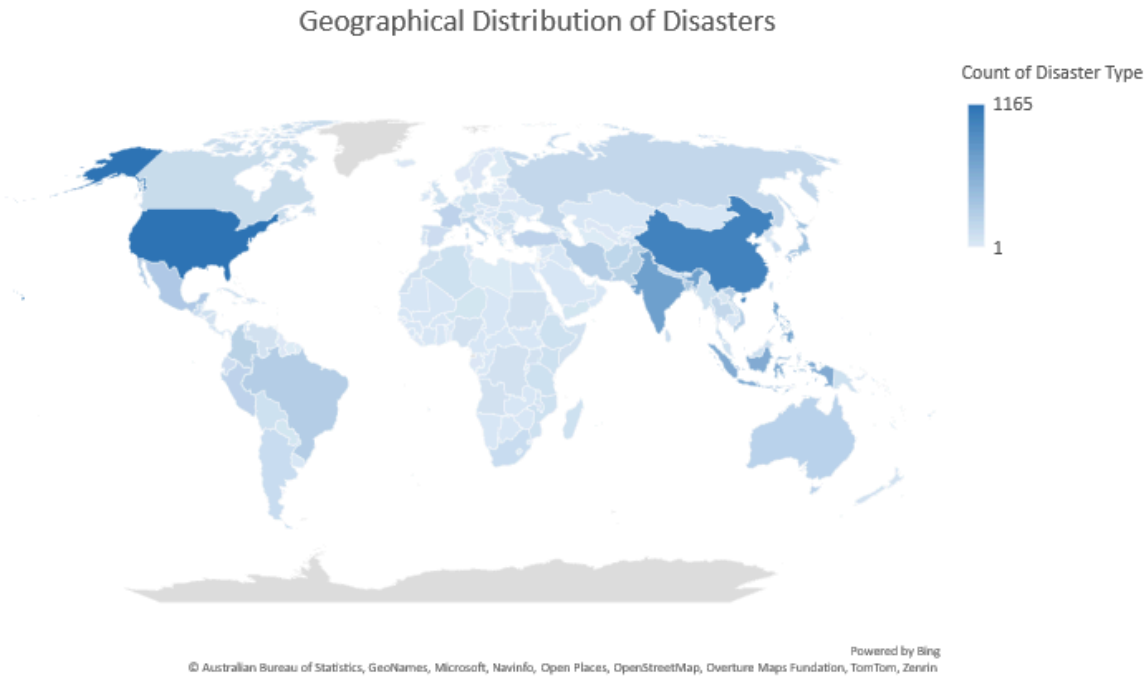
1. Disaster Frequency over Time



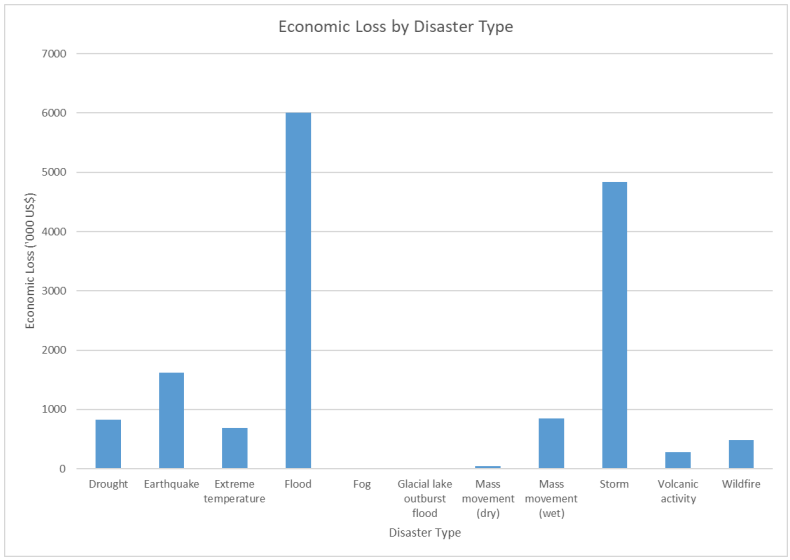
2. Distribution of Disaster Types



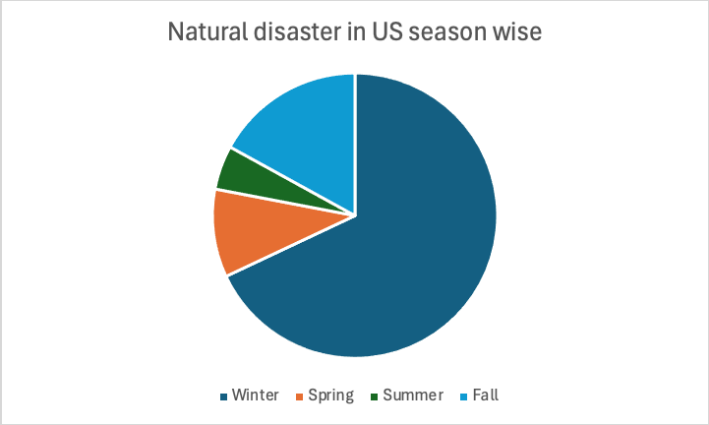
3. Geographical Distribution of Disasters



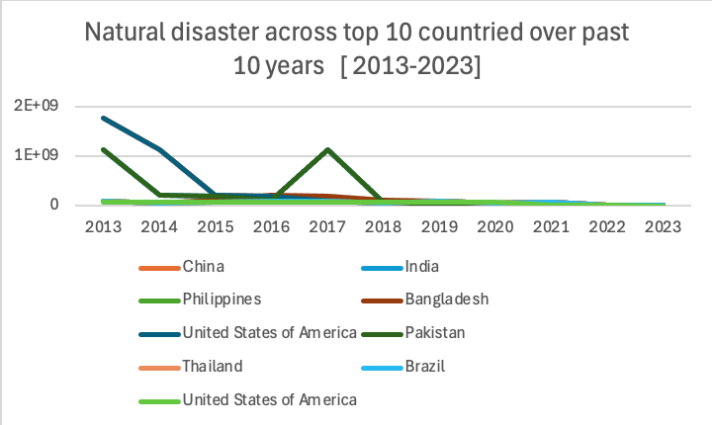
4. Economic Loss by Disaster Type



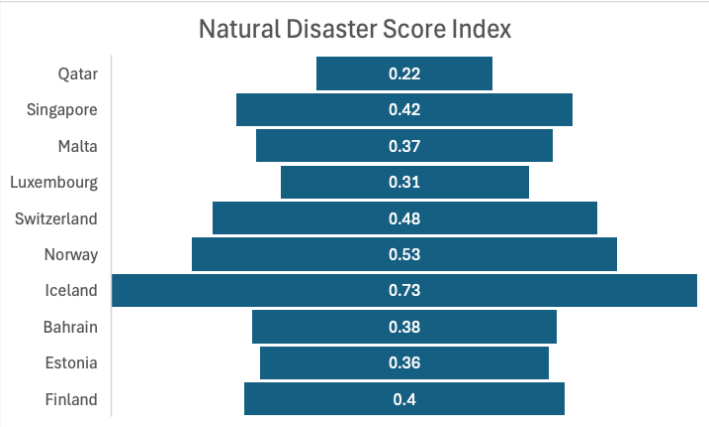
5. Natural Disaster per season



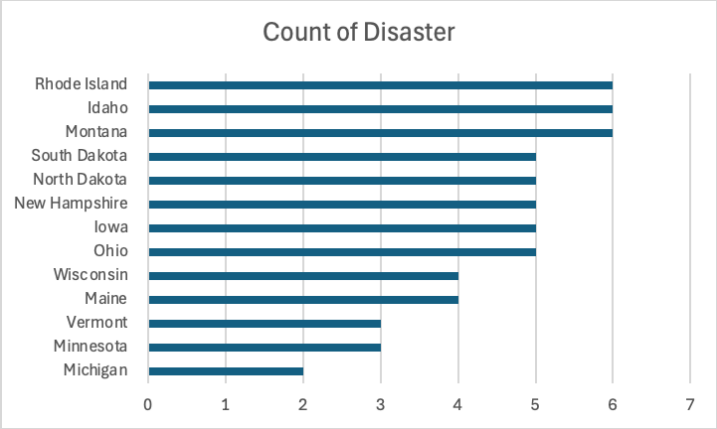
6. Natural Disaster across top 10 countries over past 10 years



7. Top 10 countries with Low risk to Natural disaster(Score Index)



8. States that was least affected by natural disaster



Relevant variables:

- Disaster Type
- Date of disaster
- Location
- Number of Homeless
- Total Damages(in '000$)
- Start Year
- Start Month
- End Year
- End Month
- Total Effected
- Reconstruction Costs ('000 US$)
- Total Damage ('000 US$)
- Magnitude
- Magnitude Scale

Supplemental Datasets:

NOAA Global Surface Temperature Dataset will be used to identify years of significant temperature rises and use that as milestones in our preliminary dataset:

https://www.ncei.noaa.gov/access/metadata/landing-page/bin/iso?id=gov.noaa.ncdc:C01704

Using Emissions data from NASA, we can correlate significant air pollution to disaster trends
https://earthdata.nasa.gov/topics/atmosphere
Use a few parameters from this dataset to understand how disaster readiness influences displacement after disaster strikes

https://weltrisikobericht.de/worldriskreport/

Key questions:

- Do climate change milestones, such as rising temperatures and increased carbon emissions, influence the frequency of disasters?
- Does disaster readiness have any effect on the number of people displaced during a natural disaster?
- Do certain types of disasters lead to greater economic losses and higher numbers of refugees than others?
- Which regions, both in the U.S. and globally, emerge as the most resilient and desirable places to live in the context of natural disaster risks?
    a. What are the global patterns in natural and technological disasters, comparing across countries, continents, and U.S. states?
    b. What types of disasters have been recorded worldwide to date?
    c. How do storm patterns and trends compare globally, within the U.S., and specifically in Florida?
    d. During which time of year do storms most frequently impact Florida and the southeastern U.S. coast?
        Assumption :
        i. Season Definition : Winter is considered December, January and February; spring is March through May; summer is June through August; and fall or autumn is September through November
        ii. Southeastern States: Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina and Tennessee, as well as Puerto Rico and the U.S. Virgin Islands)
    e. What are the trends in storm frequency and severity across the U.S.?
    f. What are the trends in all types of disasters across the U.S.?
    g. Which Countries and U.S. states are the least affected by natural disasters?