Data Visualization - Project Introduction

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1 About Project

The "Anything" team has elected to analyze and visualize the impact of natural disasters. Such events have caused severe devastation worldwide and inflicted significant harm to life on earth. Our aim is to examine the geographic distribution and economic ramifications of natural disasters. Studying these phenomena is vital for multiple reasons, including future incident mitigation, preparedness, and response.

We believe that data visualization for natural disasters could yield substantial benefits. By providing a comprehensive solution, people can make informed decisions during emergencies. Visualization aids in identifying trends and patterns within the data, ultimately aiding in the development of sound disaster management and prevention strategies.

2 About Dataset

2.1 About columns

- Year: The year in which the disaster event occurred.

- Disaster Subgroup: A detailed classification of the disaster type like Climatological,Geophysical etc.

- Disaster Type: The specific type of disaster event (e.g., earthquake, flood, etc.).

- Disaster Subtype: A more detailed classification of the disaster subtype.

- Disaster Subsubtype: The most specific classification of the disaster subtype.

- Event Name: The name assigned to the disaster event (if any).

- Country: The country in which the disaster event occurred.

- Region: The region of the world in which the disaster event occurred.

- Continent: The continent on which the disaster event occurred.

- Location: The location of the disaster event (if known).

- Origin: The cause or origin of the disaster event (if known).

- Associated Dis: Any other disasters that are associated with this event.

- Associated Dis2: Any other disasters that are associated with this event.

- OFDA Response: The response of the US Office of Foreign Disaster Assistance to the disaster event (if any).

- Appeal: The UN's appeal for aid to respond to the disaster event (if any).

- Declaration: The type of declaration made by the government of the affected country (if any).

- Year: the year when disaster occured and how long it occured

- Human Impact: Human impacts involves the Total Deaths,Number of Injured,Number of Affected,Number of Homeless ,Number of Missing and Total Affected

- Economic Impact: Effect on GDP , CPI,Reconstruction Costs and Insured Damages,

2.2 Dataset Source

We have extracted the data for natural calamities from EM-DAT (Emergency Events DATabase), which was started by Centre for Research on the Epidemiology of Disasters (CRED) in 1988.

EM-DAT, CRED / UCLouvain, Brussels, Belgium – www.emdat.be

3 About Relations

We plan on deducing the following relations through visualizations:

- The geographical distribution of the various disasters and linking this to the conclusion of regions more susceptible to calamities.

- The aggregate number of specific types of disasters taking place over a given time period - measured by months, years, decades and so on.

- Relation between the adverse affects of disasters such as number of causalities, degree of homelessness and so on, with the magnitude of damage

- Relation between the plea for international aid and the year of the disaster to measure geopolitics

- The temporal changes in number of relevant disasters such as forest fires and relating them to climate change

- The relation between scale of disaster and declaration of national emergency.

- Relation between the total insured costs for damages and the geographical location of the disaster to measure the degree of availability of funds for different regions.

- The difference between reconstruction cost and estimated damages to measure the investment into mitigating further damages.

- The relation between associated disasters to further understand how a calamity can trigger other calamities as well.