TITLE : FIT3179 Assignment 2

AUTHOR: MALIHA TARIQ

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SHEET : 1

① IDEAS
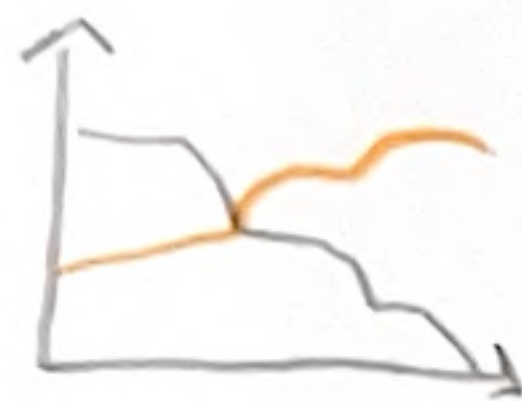
1 - Chloropleth map

2 - BAR CHART

3 - LINE CHART

4 - Heatmap

5 - Donut

6 - PIE CHART

7 - STACKED AREA

8 - Network Graph

9 - SCATTER PLOT

② FILTER

- will remove the network graph as too many node connections make the figure unreadable & very cluttered

③ CATEGORISE

① chloropleth map: To show location of earthquakes with magnitude

② & ③ - To show the damage caused by earthquakes

⑥ & ⑤ - To show Top 5 countries with highest magnitude quakes.

④ COMBINE & REFINE

using bar chart to show the no. of quakes in countries over 25 years
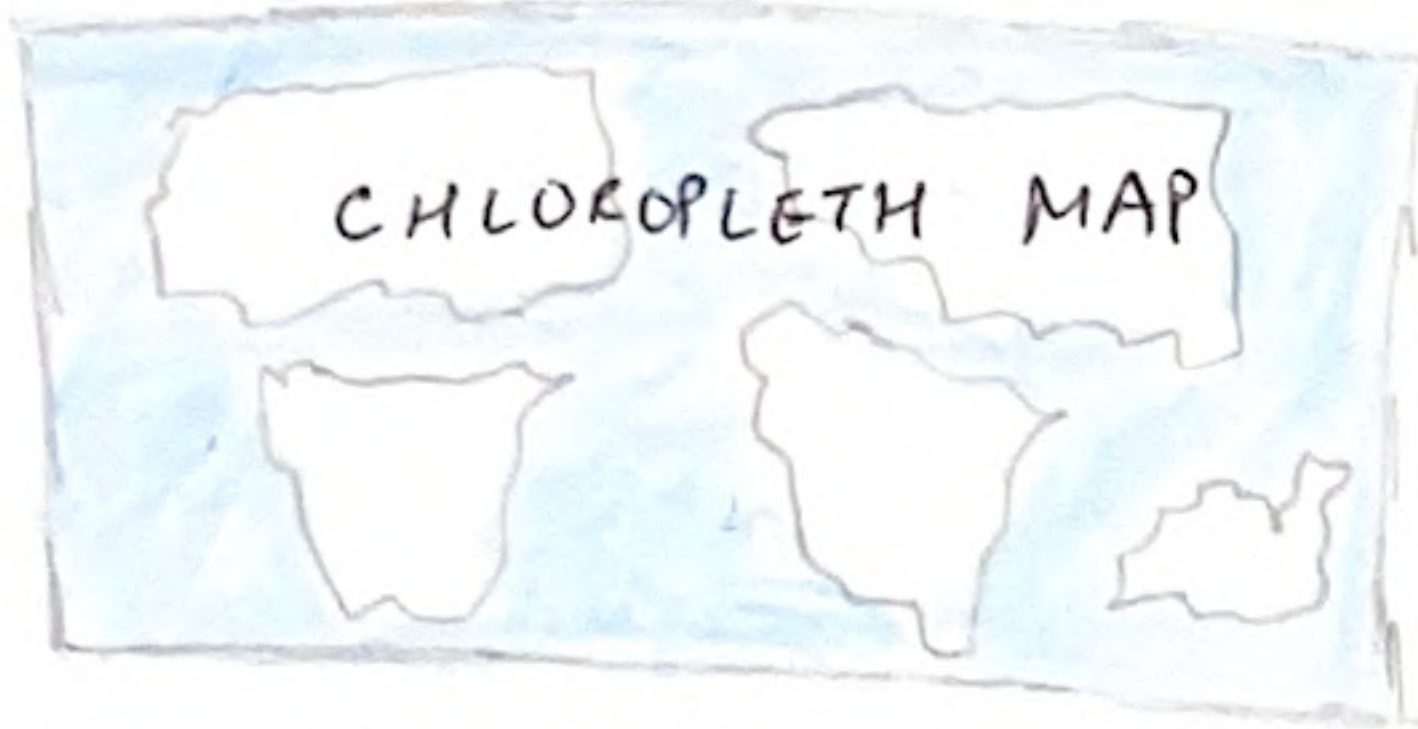
- use line to show the pattern

⑤ QUESTIONS

- where do the highest quakes occur?
- how deadly are they?
- how costly are they?
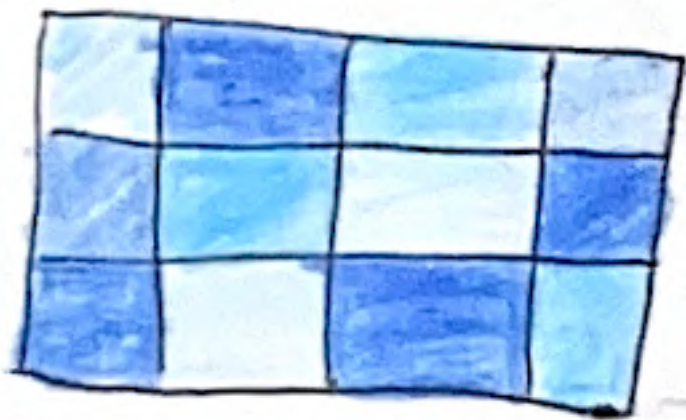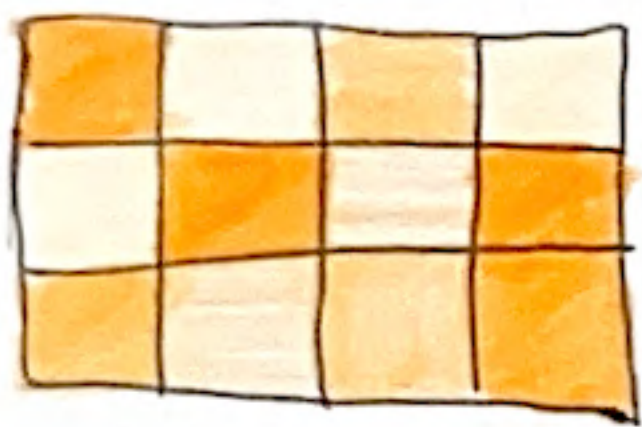- how have the earthquake locations changed over time?

LAYOUT

TITLE

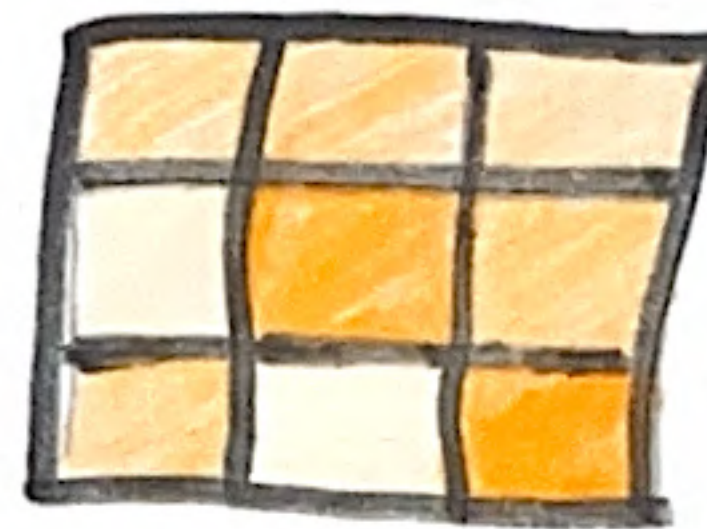CHLOROPLETH MAP

FILTERS : YEAR

↑ ↗ heatmaps

DONUT

PIECHART

FOCUS

→ shows the years and the no. of earthquake aswell as the magnitude.

To show damage caused to countries during a whole year ↖

- To show TOP 10 countries with the highest deaths due To earthquakes over 25 years

OPERATIONS

• Year filter for map & the heat maps   YEAR ——●—— 2011

• Year filter for donut chart
YEAR
☐ 2000
☑ 2001
☑ 2002
☐ 2003
⋮

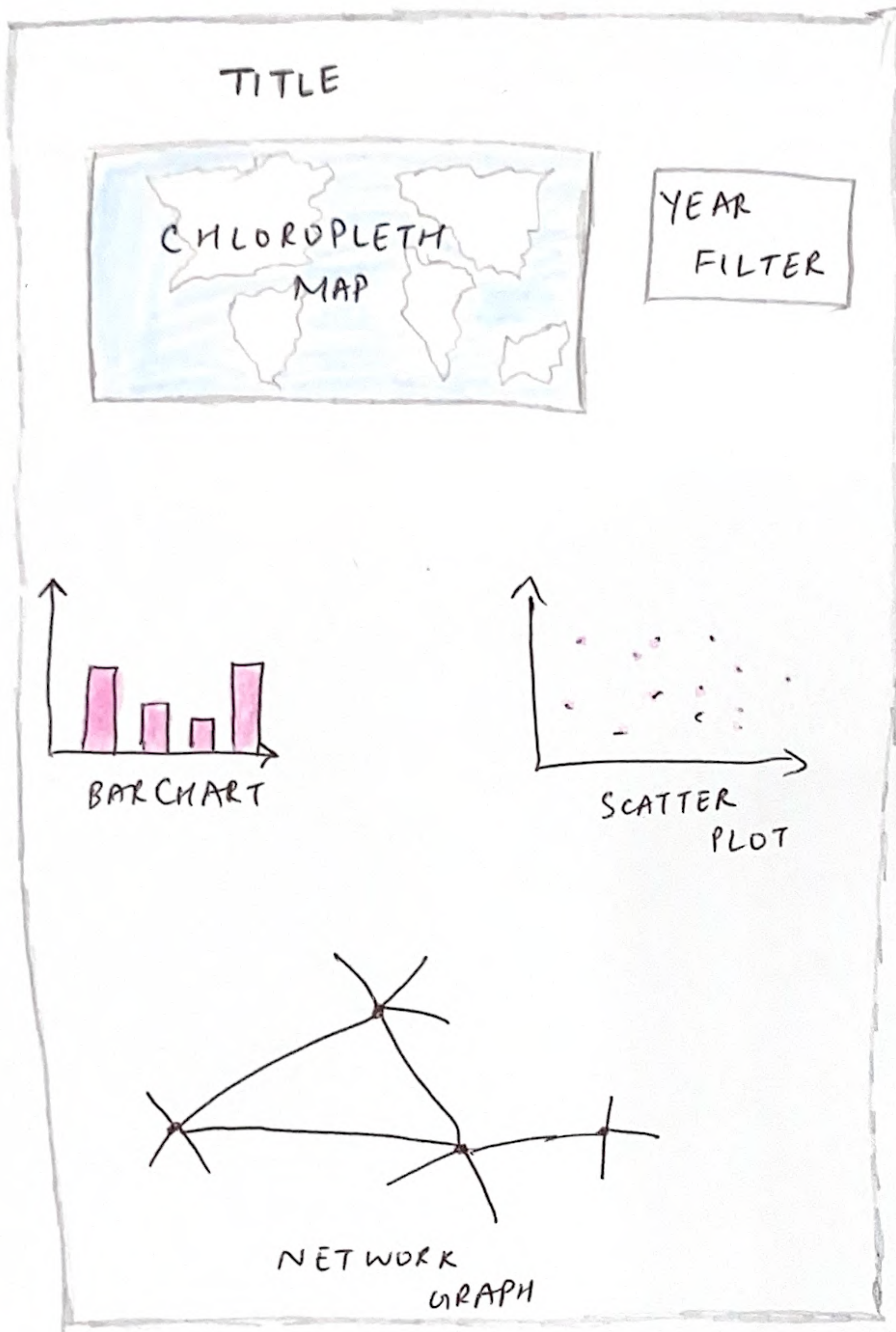• Add legends for chloropleth map

DISCUSSIONS

advantages:
- each section is well defined & easy to understand

- portrays a clear story

disadvantages
- ~~too plain~~

size of graphs are fixed & might be hard to understand

- heatmap might be hard to read.

LAYOUT
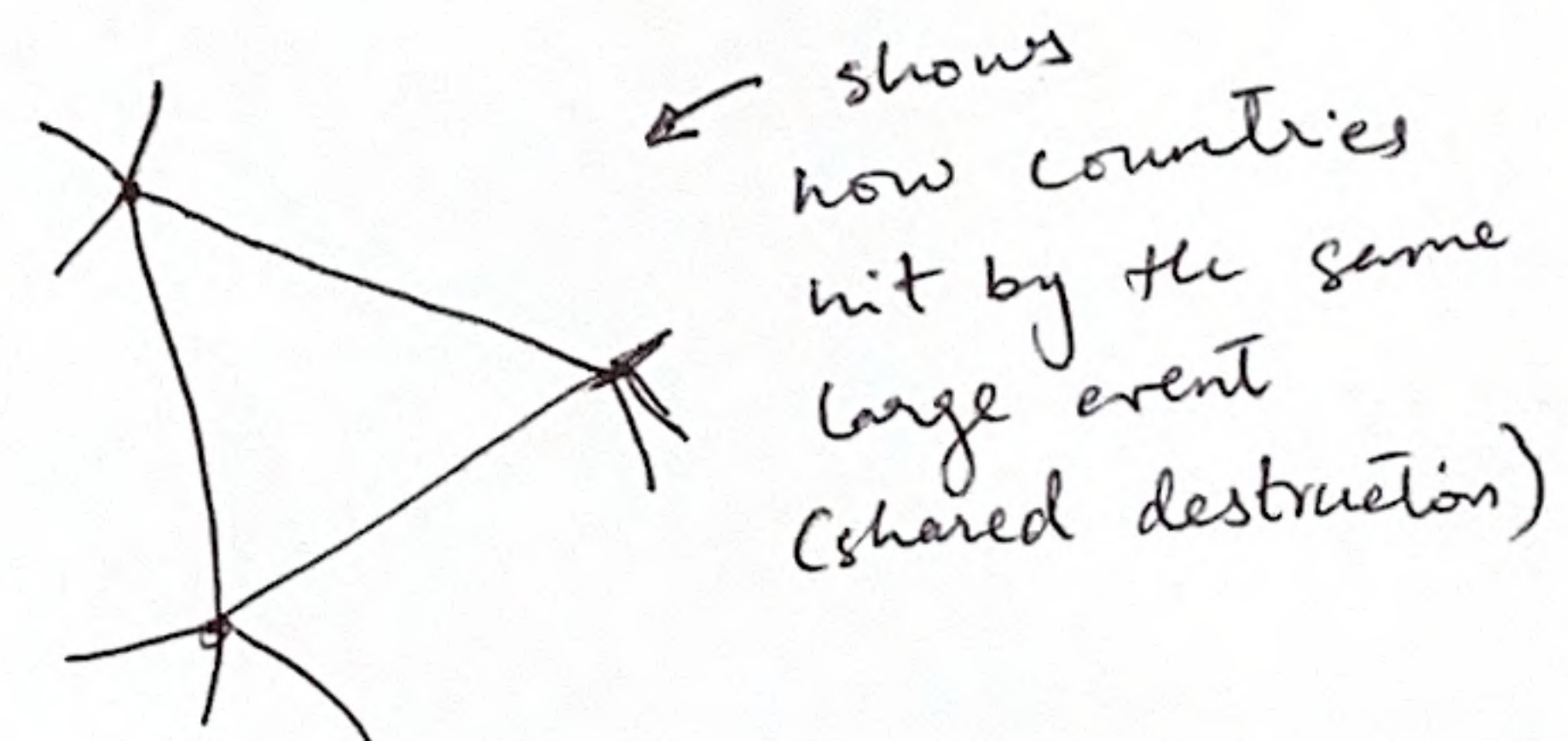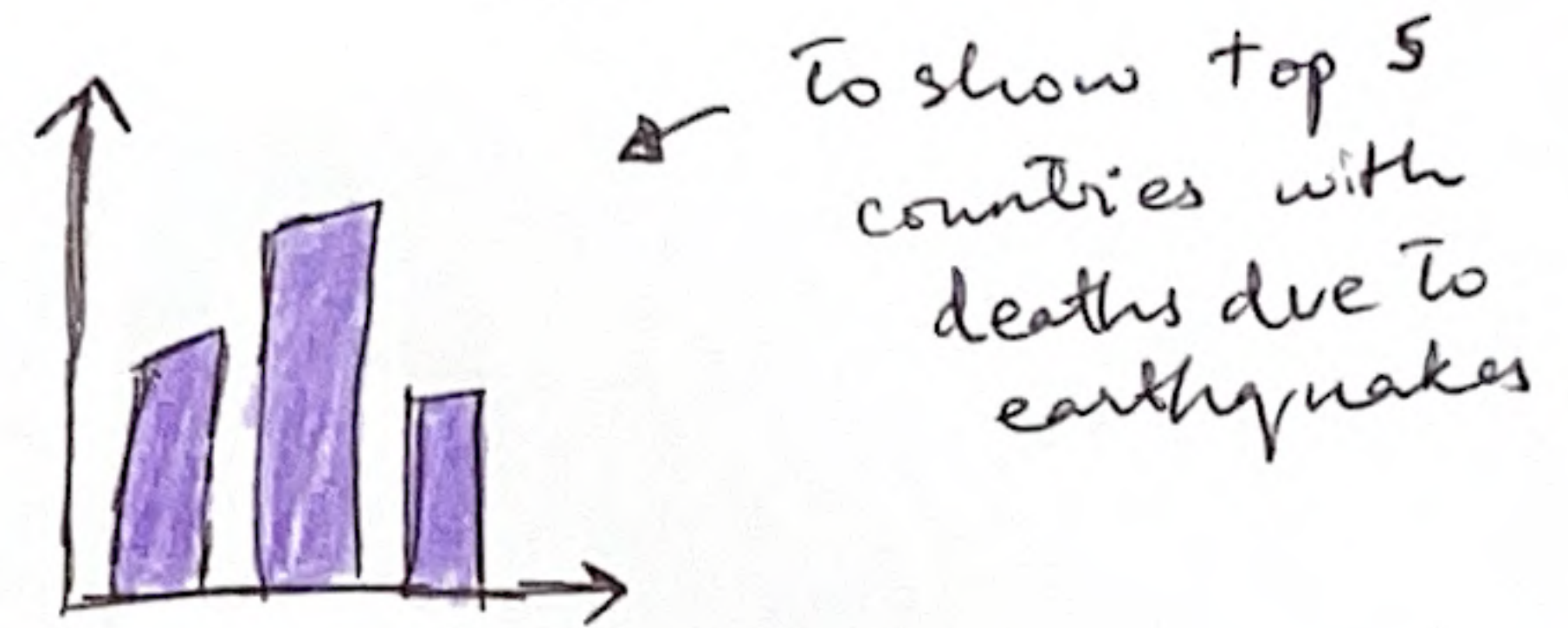
TITLE

CHLOROPLETH MAP

YEAR FILTER

BAR CHART

SCATTER PLOT

NETWORK GRAPH

FOCUS

→ To show top 5 countries with deaths due to earthquakes

To show magnitude vs depth

← shows how countries hit by the same large event (shared destruction)

DISCUSSIONS

PROS
- Network graph is visually appealing

CONS
- Scatter plot might not be suitable for presenting country earthquakes data

PROS
- Year filter makes it easier for users to view specific year & compare.

OPERATIONS

- Year filter for map & barchart
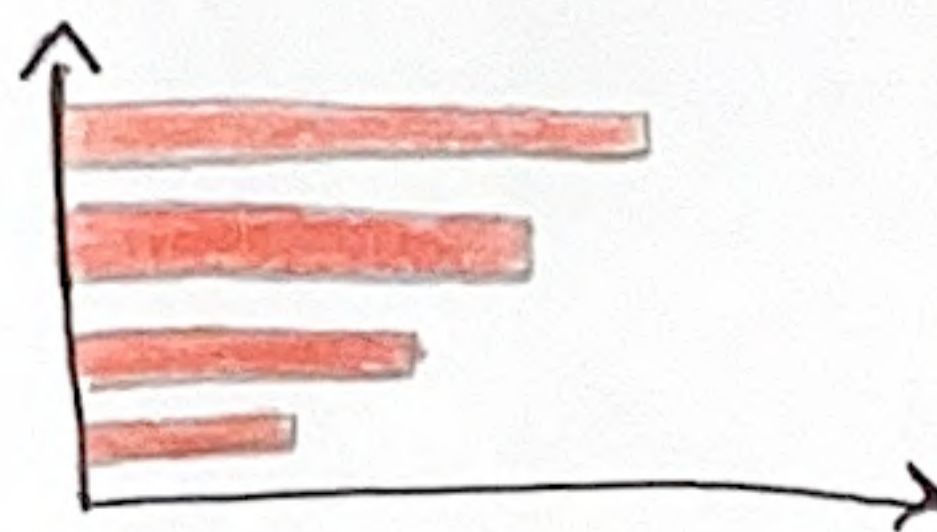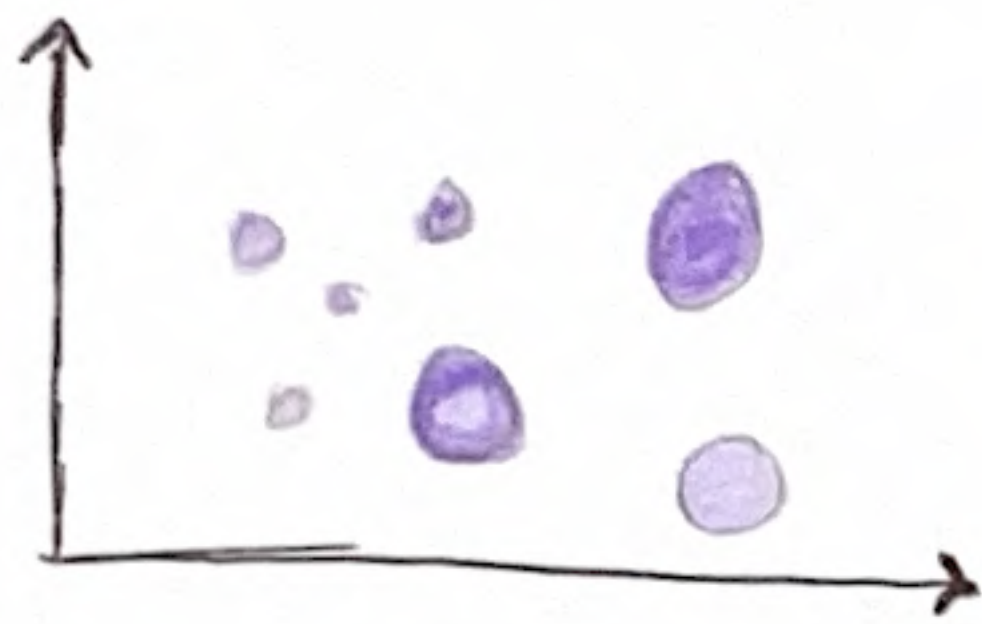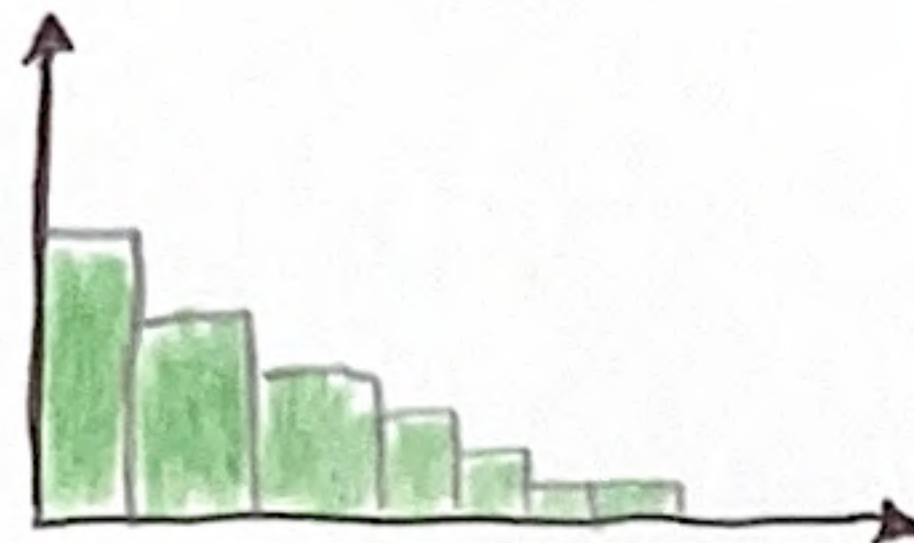
- Tooltip will be shown when any idiom is hovered over.

LAYOUT

TITLE

CHLOROPLETH MAP

Year
●——— 2012

OPERATIONS

- Year filter for chloropeth map, and for line chart.

- Tooltip - will be shown when hovering over any chart.

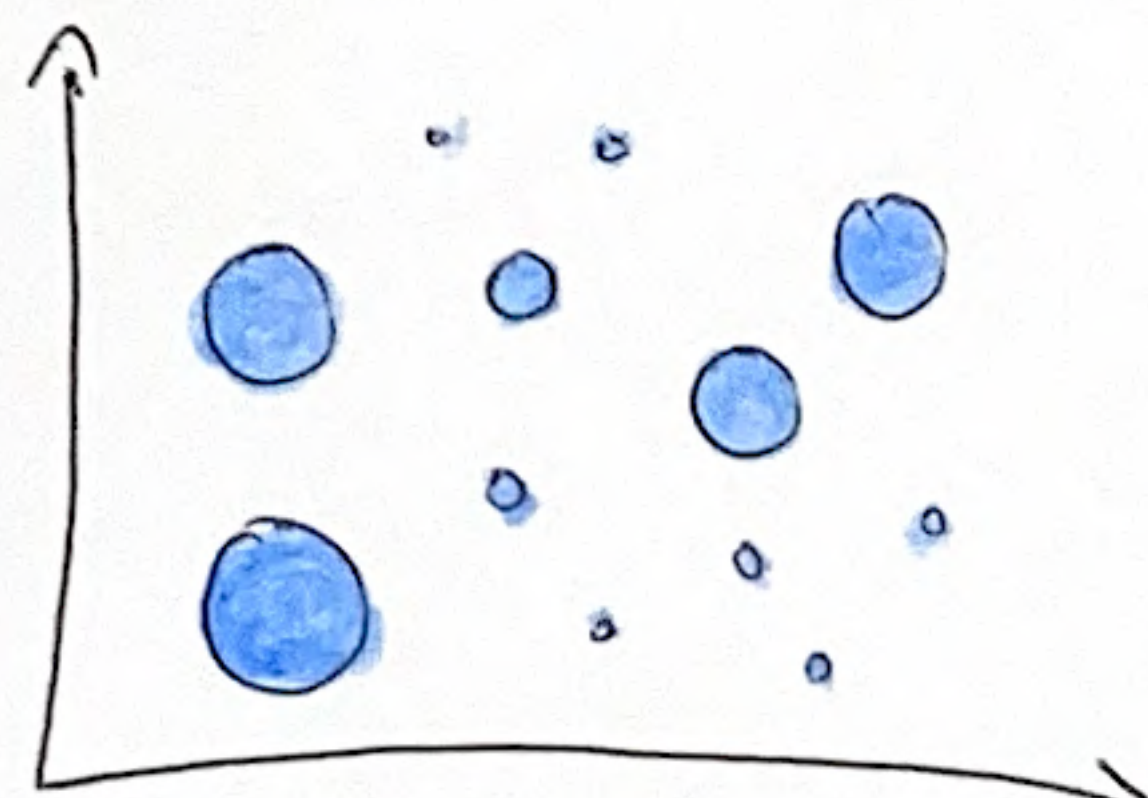- add annotations

- Min magnitude for the chloropleth graph
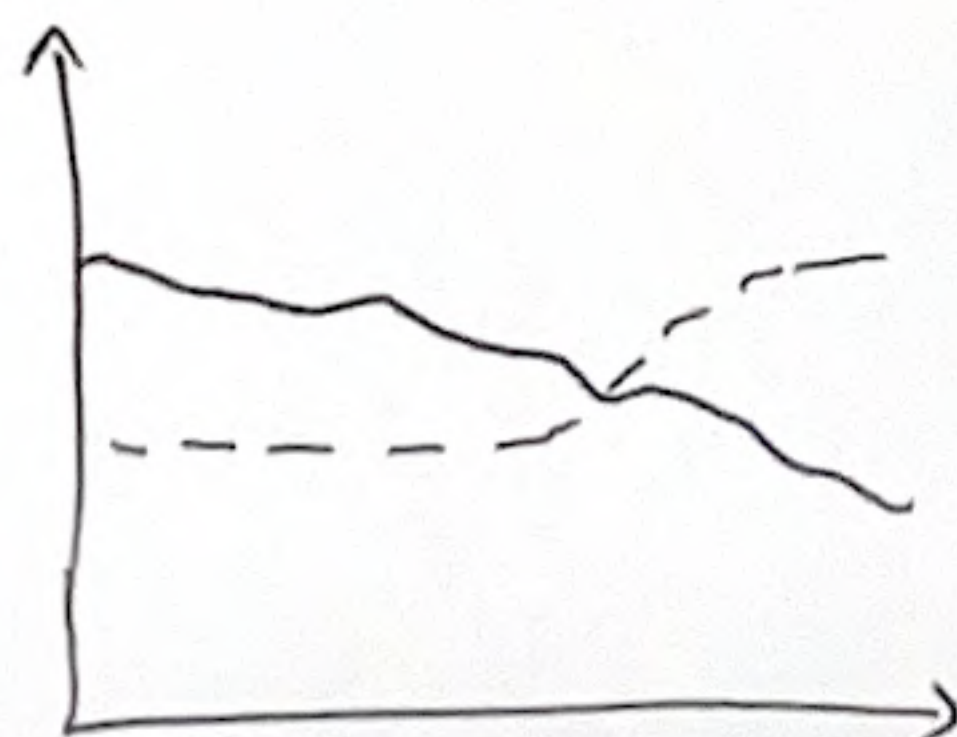
6 ———●——— 9
7

FOCUS

Top countries by impact shows both by
- deaths
- damage accumulated over the years.

Magnitude vs Fatalities on a log scale

economic damage per year in USD

DISCUSSIONS

PROS:
- clear layout of visualization
- interactive features

CONS:
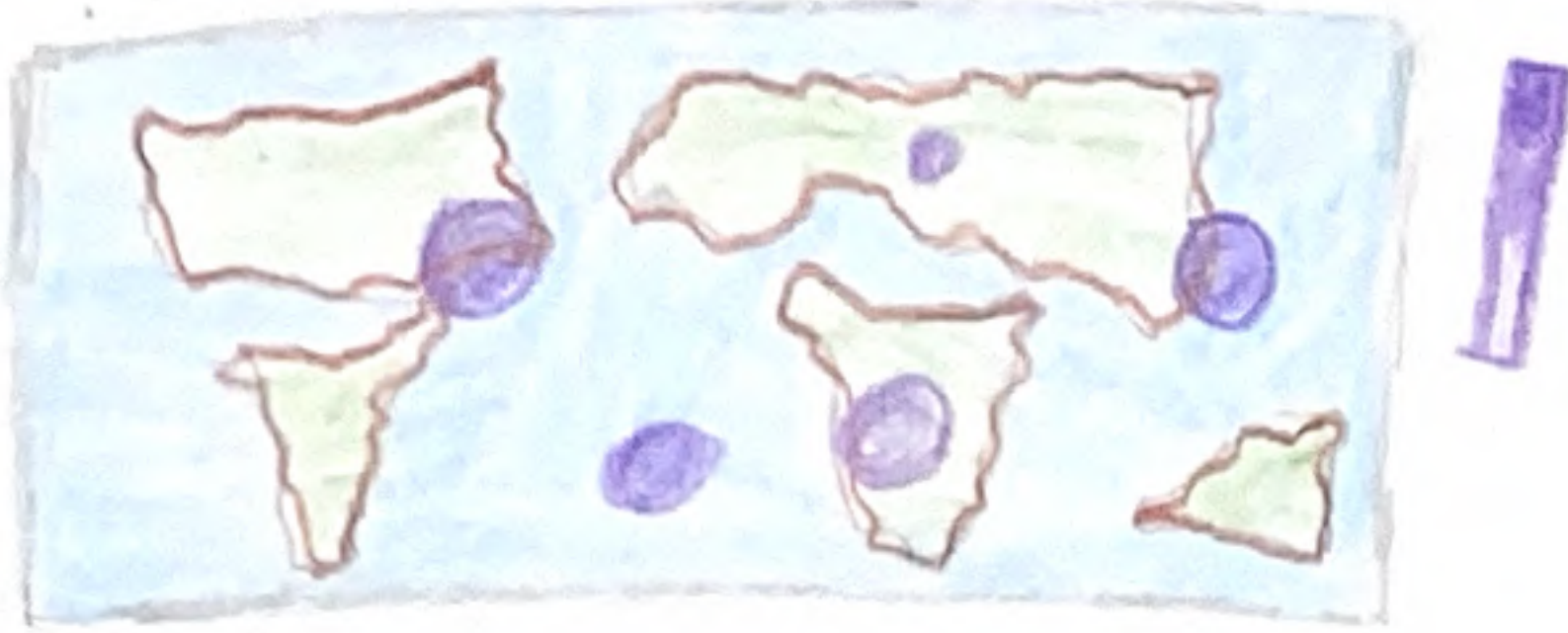- No text description provided so will be hard for users to interpret.

LAYOUT

GLOBAL EARTHQUAKES

subtitle text

LOCATION OF EARTHQUAKE

Year filter ———●——— 2011
Min Magnitude ●——————— 6
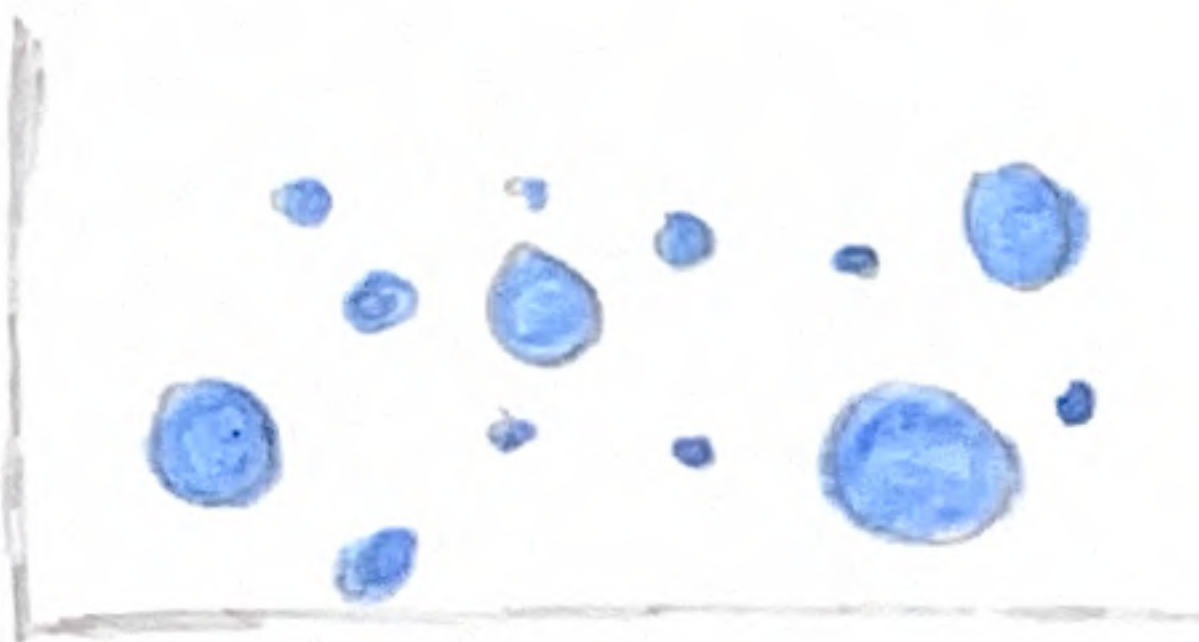
QUAKES PER YEAR

MAGNITUDE DISTRIBUTION

MAGNITUDE &/S FATALITIES

TOP COUNTRIES BY IMPACT

META DATA

YEARLY IMPACT TRENDS

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FOCUS

- each chart is separated into different subsection for better clarity.

- equal focus to every graph, but map will be main.

OPERATIONS

- Year & Min. magnitude filter for chloropleth map

- deaths/damage dropdown for "TOP COUNTRIES BY IMPACT" chart

- Tooltip for every chart shown when hovering over it.

DETAILS

DATASET:

- USGS earthquake catalog
- NOAA significant earthquake database
- TOPOJSON File for map

DEPENDENCIES:

- JS, CSS for styles, HTML

- Github

EXTRAS:

Dataset cleaning required ≈ 1 day

TIME TO BUILD: 1 week / 10 days