



Group 3 - Volcanoes

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Proposal Requirements:

1. Data Source: Kaggle –
<https://www.kaggle.com/datasets/deepcontractor/the-volcanoes-of-earth>
2. Motivation
 - Volcanoes are globally mapped and tracked so there is much information and data about them.
3. Inspiration

Group 3 wants to do our visualization project on volcanoes and their eruptions due to a group bonding session over the song “Ring of Fire” by Johnny Cash. Once we had determined all of our favorite artist was Johnny Cash, we sat in our breakout room listening to his greatest hits as a group. The lyrics “Love is a burning thing, and it makes a fiery ring, bound by wild desire, I fell into a ring of fire”, connected us due to our group all tragically and recently experiencing relationship woes. We felt that with our combined sentiments, we would be able to most accurately create visualizations on volcanoes across the world to present to the public. Thank you, Johnny Cash for inspiring our souls and broken hearts.
4. Possible research questions that your dashboard can answer.
 - Does location or type affect the size of a volcano?
 - What type of volcanoes can be found within each region?
 - Most common locations where volcanoes reside?
 - Which region and subregions have the highest population?
 - Is there any correlation with population size and last eruption date?

5. Potential dashboard layout.

- Dashboard: Filters the information by either region or epoch period.
- Sunburst Chart
- Bar chart
- Violin plots
- Map Will be on second page

6. Roles/Responsibilities

- Proposal – Group
- CSV Cleaning – Shaunghnessy, Bekhem
- Visualizations-Group
- Drop down menu with names/ locations –

7. Potential visualizations

- Stacked Bar Chart.js: Volcano Types Filtered by region or epoch period
- Plotly Violin Chart: By region, two colors to filter the epoch region, where Y is the summit
- Plotly Violin Chart: By region, two colors to filter the epoch region, where Y is the elevation
- Plotly Sunburst Chart: Region, sub-region,
- Map: Filter by Region and Epoch period with a radius of population, color of elevation. Tool tip is last eruption

- *Donut chart: Percent of volcanoes per Country*
- *Donut Chart: Types of Volcanoes percentages*
- *Line chart: Last eruptions vs Time*
- *Top 10 largest Volcanoes and their Summit*
- *Bubble Chart: Populations and Summit*

8. Possible color schemes

- Volcano colors: Red, Orange, Yellow, Black, Grey, Blue
- Text black, borders of charts alternating red/orange/yellow