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# VOLCANIC EVENTS ANALYSIS REPORT

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# Volcano Analysis Project Report

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## Introduction

This project focuses on the analysis of volcanic eruptions, their frequency, intensity, and impact. Volcanoes are natural phenomena that have significant effects on the environment and human life. In this project, we analyzed global volcanic activity using data from various sources, focusing on eruption statistics, the Volcanic Explosivity Index (VEI), and other relevant information.

## Methodology

The data for this project was collected from various sources that track volcanic eruptions and related metrics. In Excel, the data was organized in multiple sheets that represent different aspects of volcanic activity. We utilized formulas and data visualization tools (such as tables and charts) to analyze the data. The primary analysis was conducted on sheets such as p1, p2, and p3, which address key questions regarding eruption frequency, VEI distribution, and volcano elevation.

## Problems Faced

During the project, I faced a few challenges. The main difficulty was handling large datasets and ensuring data consistency. Some volcano data was missing or incomplete, which required extra effort to either find missing values or handle them appropriately in the analysis. Additionally, some of the data formatting needed to be corrected to ensure accurate calculations and charts.

## Questions Solved

The key questions addressed in this project were as follows:

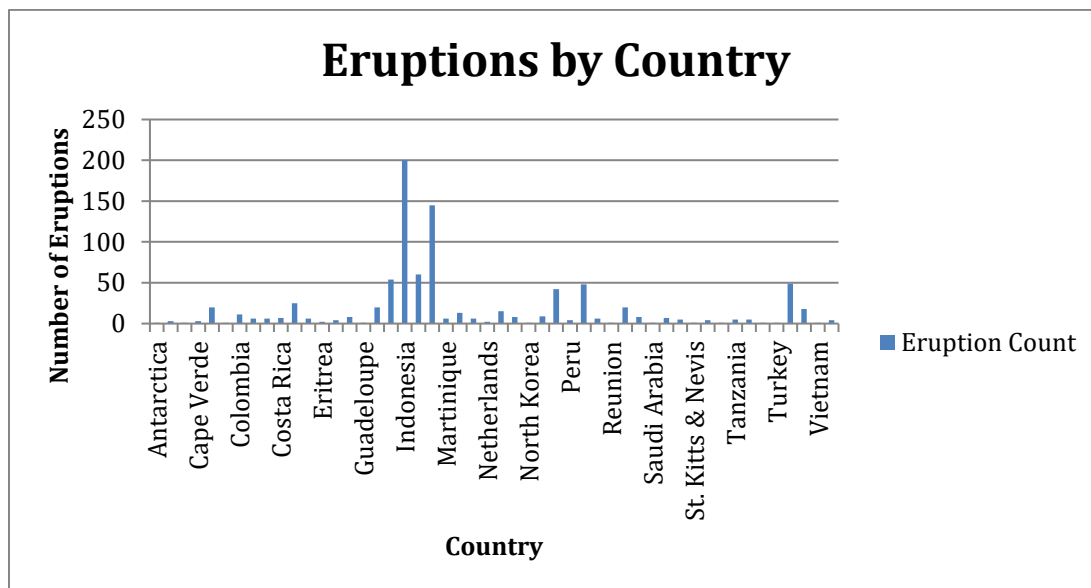
1. How many eruptions occurred in each country?
2. What is the distribution of VEI (Volcanic Explosivity Index) levels?
3. Which volcanoes had the highest elevation, and what type were they?
4. How many deaths were recorded for each eruption?
5. How many volcanoes had descriptions for deaths, missing, or injuries?
6. Which types of volcanoes caused the most damage (in \$)?
7. How many volcanoes are located in the Northern vs. Southern Hemisphere?

8. What is the average VEI of eruptions by location?
9. Identify the volcano with the highest total number of injuries.
10. What percentage of eruptions had missing people?

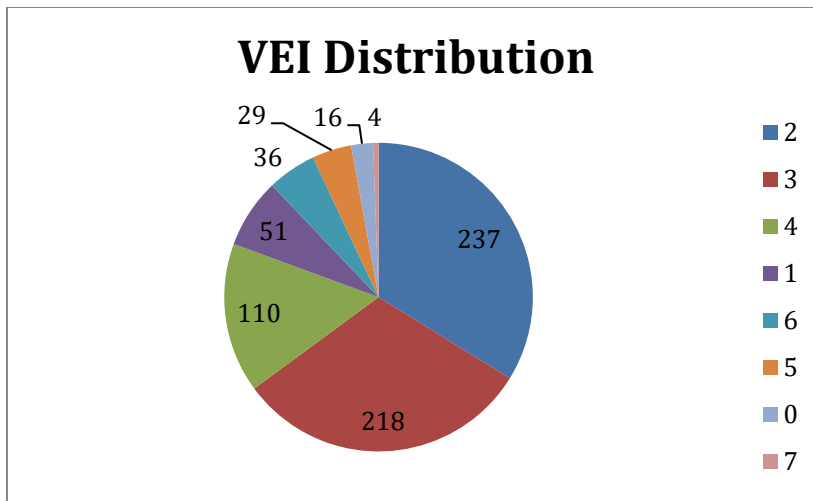
## Results

The results of the analysis reveal several interesting findings:

1. The eruption frequency varies significantly by country, with certain countries experiencing more eruptions than others.



2. The distribution of VEI levels shows that most eruptions are of moderate intensity (VEI-2 to VEI-4), with fewer cataclysmic eruptions (VEI-7 or higher).



3. The highest volcanoes are typically stratovolcanoes, such as Coropuna, which stands at 6,377 meters.

More details can be found in the excel workbook with charts and visualizations.

## Discussion

The findings from this project provide valuable insights into global volcanic activity. By understanding the frequency and intensity of eruptions, we can better assess the potential risks posed by volcanoes. Additionally, knowing which volcanoes are the highest and their types helps in understanding their geological significance and potential hazards. The distribution of VEI levels highlights the range of volcanic activity, emphasizing the importance of monitoring volcanoes for both low and high-level eruptions.

## References:

1. <https://www.kaggle.com/datasets>.

The data used for this project was collected from Kaggle, a platform that provides various datasets, including those related to volcanoes. The dataset can be found at: