

Shaking Things Up: Earthquakes in 2023

Pacific Ring of Fire Edition

2023: Unprecedented Surge in Global Earthquakes Marks Seismic Milestone.

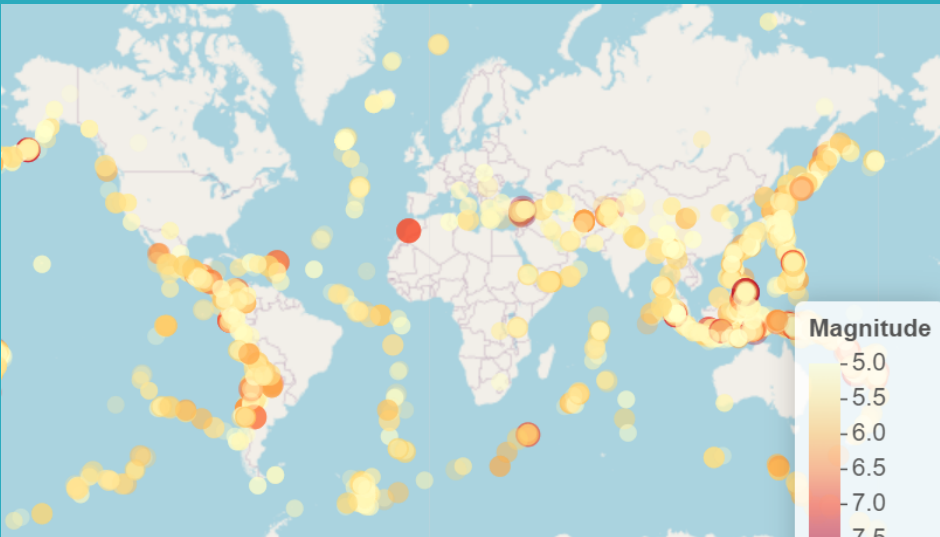
Filtered earthquake dataset "Significant Earthquakes, 1900-Present." from 1950s-2024 to solely focus on 2023's seismic activity.

The Pacific Ring of Fire, also known as the Rim of Fire, results from the sinking of tectonic plates along convergent borders encircling the Pacific Ocean. Accounting for about 90% of global earthquakes, including most major ones "Ring of Fire.", it is hypothesized that the majority of earthquakes in 2023 occurred within this region.

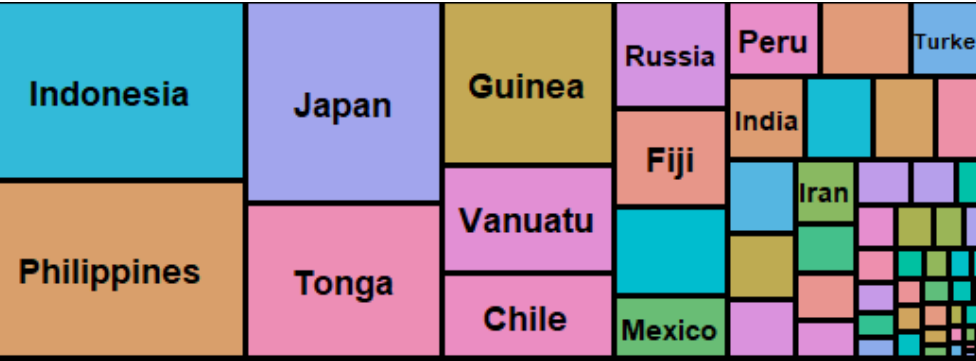
Utilized R Gallery for visualization."The R Graph Gallery."

Earthquake Hotspots Unveiled

To view the intensity and magnitude of earthquakes at various locations, utilized a bubble map, which represents earthquake locations with marker size indicating magnitude. Larger bubbles represent higher-magnitude earthquakes.



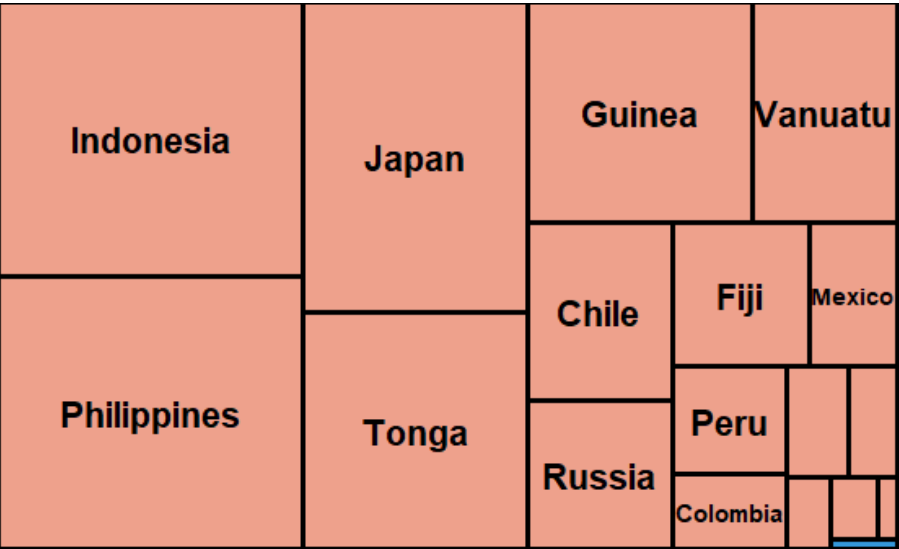
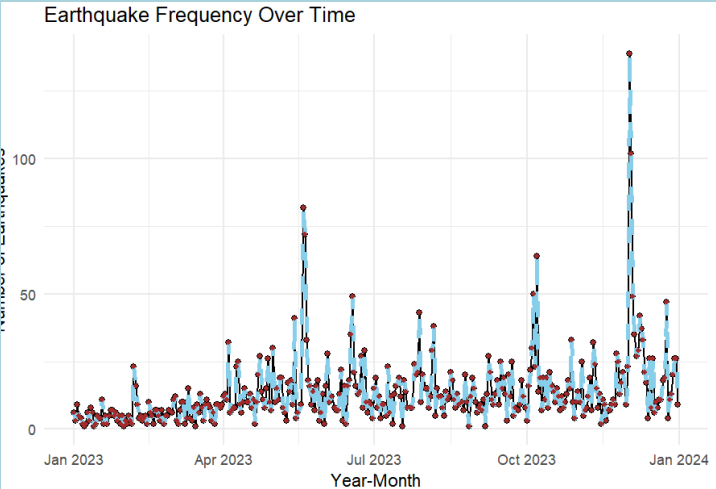
Earthquake Extravaganza



Additionally, investigated the distribution of earthquakes among different countries by creating a treemap. This visualization provides insights into the distribution of earthquake occurrences among different countries, with larger rectangles representing countries with more earthquakes.

Unveiling the Surge in Seismic Activity

Furthermore, constructed a time-series graph to analyze the temporal patterns of earthquake occurrences. This analysis suggests that certain periods experienced higher seismic activity compared to others, indicating potential seasonal or periodic patterns.



Unveiling the Pacific Ring of Fire

To confirm the hypothesis regarding the Pacific Ring of Fire, created a treemap. The treemap illustrates that the majority of earthquakes occur within this region, with only a small fraction affecting other regions. This visual underscores the dominance of seismic activity within the volcanic belt.



The analysis supports the hypothesis that the majority of earthquakes occur within the Pacific Ring of Fire region. It provides insightful information on the temporal and geographical dynamics of seismic activity in 2023, highlighting certain seismic hotspots and possible trends in their recurrence over time. Recognizing these trends can help with disaster preparedness and lessen the effect of earthquakes on populations that are already at risk.

References

"Ring of Fire." [Wikipedia](#)
"Significant Earthquakes, 1900-Present." [Kaggle](#)
"The R Graph Gallery." [RGallery](#)