Earthquake Data Analysis

Your Name

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1 Overview

This project analyzes earthquake data from December 1948 in the California-Nevada region.

1.1 Research Questions

1. What is the magnitude distribution of earthquakes?
2. How does distance affect intensity?
3. Are there geographic patterns in the data?
4. What correlations exist between variables?

1.2 Dataset

The dataset contains earthquake observations including:

- Temporal data (date and time)
- Magnitude measurements
- Geographic coordinates (epicenter and stations)
- Distance from epicenter
- Intensity at recording stations
- Location information (states and cities)

1.3 Analysis Steps

1. Exploratory Analysis - Visualize patterns
2. Correlation Analysis - Find relationships
3. Statistical Tests - Test hypotheses
4. Advanced Visualizations - Create detailed plots
5. Conclusions - Summary and findings

1.4 Key Findings Preview

- Epicenter located near Lake Tahoe (CA/NV border)
- Magnitude 8 earthquake recorded at multiple stations
- Intensity decreases with distance (as expected)
- Activity concentrated over December 28-29, 1948

1.5 About

Author: Your Name
Course: Statistical Analysis with R
Tools: R, Quarto, tidyverse

Click any link above to view the analysis!