

EDA Report: Earthquake Dataset

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Introduction

This report presents an exploratory data analysis of the earthquake dataset (train (3).csv). It contains details about various earthquakes and their characteristics.

Missing Value Handling

Missing entries were handled carefully: numerical columns were filled with median values, while categorical fields were filled using their most frequent value (mode).

Dataset Overview

The dataset includes multiple numeric and categorical features. Dataset structure and distributions were checked using `.info()` and `.describe()` methods.

Visual Analysis

- Histograms revealed overall distribution trends.
- Boxplots helped in detecting outliers in numerical columns.
- Pairplots visualized relationships across important variables.

Correlation Study

The heatmap of correlations highlighted significant relationships among the numeric features. Strong correlations were identified and noted for further analysis.

Conclusion

The data was successfully cleaned without row removal. Outliers were clearly observed. Relationships between key variables were visualized, providing

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useful insights for deeper studies.