Earthquake Prediction System Using Historical Seismic Data

Problem Statement

Earthquakes pose a significant threat to human lives and infrastructure and accurately predicting them remains a challenge. While real-time monitoring is ideal, many regions lack the infrastructure for live seismic data collection. To address this, a system leveraging historical seismic data can be used to predict potential earthquake-prone zones and patterns, enabling proactive disaster planning and mitigation.

Use Case

A machine learning-based earthquake prediction system that analyzes historical seismic data to identify patterns and predict potential seismic events.

- Personas
  - Disaster Management Teams
  - Government Authorities
  - Seismologists

Business Values

- Improved Preparedness
- Resource Utilization
- Public Safety
- Scalable Solution

Outcome

A predictive system that uses historical seismic data to identify patterns and forecast earthquake risks, helping stakeholders prepare for potential disasters.

Impact

- Proactive Disaster Management, reducing causalities and damages.
- Strengthened public trust in technology for disaster response
- Enhanced understanding of earthquake patters for long term research and planning

Architecture