Machine Learning Methods for Earthquake Risk Prediction

Abstract: Earthquakes, occurring as a result of sudden energy releases in the lithosphere, pose a significant risk, especially for countries situated on active tectonic belts. This project aims to investigate earthquake data using machine learning techniques in order to better understand seismic activities and improve earthquake risk analysis. Historical earthquake datasets, including parameters such as magnitude, depth, location, occurrence time, and fault characteristics, will be analyzed systematically. Some machine learning methods will be searched in detail and applied to identify hidden patterns, determine high-risk regions, and develop predictive models for future seismic behavior.