

PROJECT TITLE : EARTHQUAKE PREDICTION

PROBLEM STATEMENT : Explore the key features of Earthquake data and design an Object for those features, such as date, time, latitude, longitude, depth, and magnitude. Before developing the prediction model, visualize the data on a world map to display a complete overview of where the earthquake frequency will be higher. Split the data into a training set and a test set for validation. Lastly, build a neural network to fit the data from the training set.

DESIGN THINKING:

1.DATA SOURCE :choose a suitable Kaggle dataset containing earthquake

Data with features like date, time, longitude, latitude, Width and magnitude.characteristics of the recorded Earthquake,such as its maximum amplitude or signal Duration, are measured. These measurements are used In a mathematical formula that corrects for differences In the local geology beneath the station and the distance Between the earthquake source and the station.

2.FEATURE EXPLORATION: Analyze and understand the distribution,

Correlations, and characteristics of the key features. Earthquakes often cause dramatic geomorphological Changes, including ground movements either vertical or Horizontal along geologic fault traces; rising, dropping, And tilting of the ground surface; changes in the flow of Groundwater; liquefaction of sandy ground; landslides; And mudflows.

3.VISUALIZATION: create a world map visualization to display earthquake

Frequency distribution.an earthquake may have a high Magnitude but if a city or landscape experiences little Damage, it can be said that the intensity is low. For Example the magnitude between 5.5 to 6.0 makes slight Damage to buildings and other structures.

4.DATA SPLITTING: split the dataset into a training set and a test set for model validation.earthquake prediction using data mining is a process, which uses only three factors: (a)ground water level, (b) chemical changes and (c)random gas in ground water.seismographs are Instruments used to record the motion of the ground During an earthquake.

5.MODEL DEVELOPMENT:build a neural network model for Earthquake magnitude prediction.several types of Seismic waves radiate out from the quake's Epicenter.algorithms quickly estimate the Earthquake's location, magnitude, and intensity.

6.TRAINING AND EVALUATION: train the model on the training set And evaluate its performance on the test set. Earthquake's can be evaluated by seismograph. The seismograph produces a digital graphic Recording of the ground motion caused by the Seismic waves. Finally concluded that earthquake's Plays an vital role.but they can be detected and Avoided by using the measures, algorithms and Formulas.