

IOT BASED EARTHQUAKE PREDICTION

Problem statement understanding-

The aim of this project is to use an IoT setup to effectively predict earthquakes. We will be simulating a real world IoT system on Proteus, which will include collection of data from various sensors and their reading on Arduinos. That data will also subsequently be uploaded to the Firebase and be presented to the user on a end display interface.

Software and Hardware Requirement- Proteus software, Arduino IDE, Accelerometer, gyroscope.

Additions and Updates- Seismic waves, which cause earthquakes have been found to be of four types, P-waves(Primary waves), S-waves(secondary waves), L-waves(surface waves) and Rayleigh waves. P-waves travel the fastest through the earth and travel through all mediums (solids, liquids and gas) and hence are the ones detected first. [1]

Application, Advantages, Challenges- The application and advantages would be that earthquakes could be predicted, and a potential loss of human life could be avoided. The challenge would be to train the model to a degree of certainty that no false alarms are issued.

Conclusion- An IoT system for earthquake prediction could help us identify a potential earthquake in advance and minimize the losses and save lives.

References-

1. [Four types of seismic waves | Specifications of all types of seismic waves. \(inventionsky.com\)](https://www.inventionsky.com/four-types-of-seismic-waves-specifications-of-all-types-of-seismic-waves/)