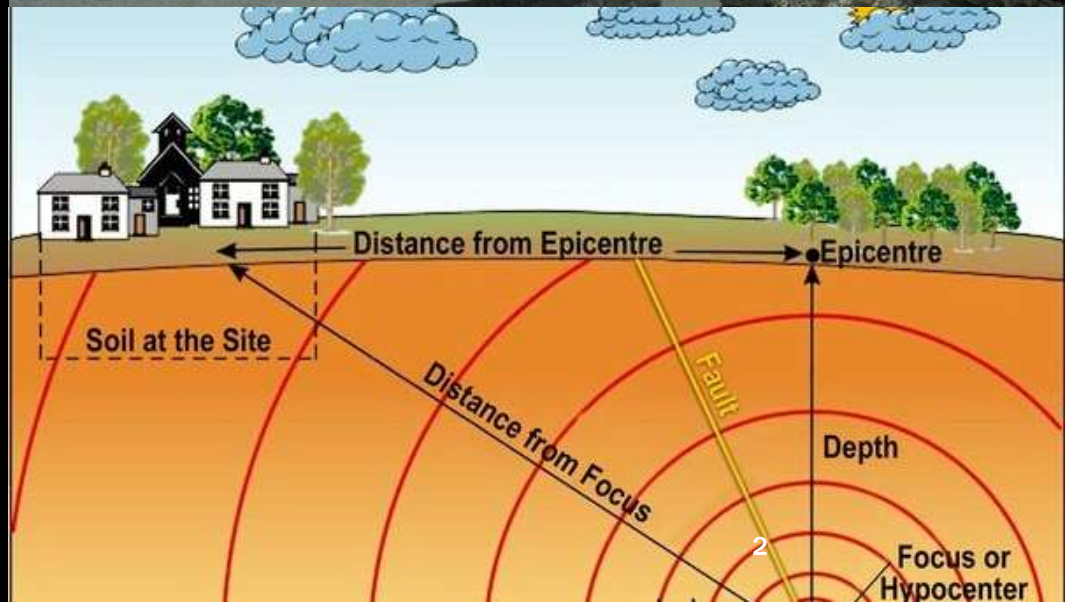
SEISMIC SENSE

Group 5

INTRODUCTION

Seismic Sense is focused on developing advanced machine learning models to predict earthquakes. By leveraging historical seismic data, the company aims to provide accurate predictions of earthquake magnitude and depth, which can be crucial for disaster preparedness and mitigation.



TACTICAL DECISIONS

- **Feature Selection:** Identifying which features (e.g., timestamp, latitude, longitude, previous seismic activity) are most predictive of earthquake magnitude and depth.
- **Model Optimization:** Experimenting with different machine learning algorithms (e.g., Random Forest, Neural Networks) to improve prediction accuracy.
- **Data Preprocessing:** Cleaning and normalizing data to ensure high-quality inputs for the model, handling missing values, and transforming categorical data.

STRATEGIC DECISIONS

• Partnerships and Collaborations: Collaborating with government agencies, research institutions, and other tech companies to gain access to more comprehensive datasets and enhance prediction capabilities.

•Technology Integration: Integrating the prediction model with early warning systems and mobile applications to provide real-time alerts to the public.

•Data Improvement: Continuously collecting and incorporating new seismic data to improve the model's accuracy and reliability over time.

WHY THIS TOPIC IS IMPORTANT?

- This topic is crucial as it addresses the significant challenge of earthquake prediction, which can save lives and reduce economic losses by providing early warnings.
- Understanding how to leverage machine learning for predicting natural disasters can lead to more effective preparedness strategies and resource allocation. By improving the accuracy and timeliness of earthquake predictions, Seismic Sense can play a pivotal role in enhancing public safety and resilience against seismic events.

Brief Description	Task	Assignee	Story Points
Data collection from various seismic data sources	Find and compile historical earthquake data	Harsh	2
Data formatting and cleaning	Clean and format the collected data	Vishv	3
Exploratory data analysis	Perform EDA to understand data characteristics	Riddhi	3
Feature engineering	Create relevant features for the model	Vishv	3
Statistical analysis to evaluate feature importance	Analyze which features are most predictive	Harsh	3
Model selection and initial implementation	Choose algorithms and implement initial models	Riddhi	4
Model evaluation and tuning	Evaluate model performance and tune parameters	Harsh	3
Documentation of findings and model	Document the process and results	Vishv	2

THANK YOU