EARTHQUAKE PREDICTION MODEL USING PYTHON

TEAM MEMBER

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PROJECT: EARTHQUAKE PREDICTION MODEL USING PYTHON

1. Data Collection: Gather seismic data

from reliable sources. This could

include earthquake event data,

ground motion data, fault line

information, and any other relevant

geospatial or geological data.

2.Data Preprocessing: Prepare and

preprocess your data. This might

involve cleaning, normalizing, and

feature engineering. Feature

engineering could be critical in

extracting relevant information from

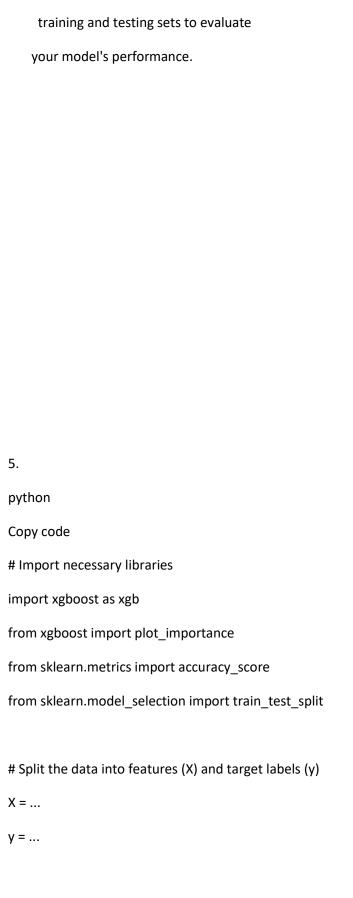
seismic data.

3. Feature Selection: Use techniques to

select the most relevant features for

your prediction task.

4. Data Splitting: Split your data into



```
X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.2, random_state=42)
# Create an XGBoost classifier
model = xgb.XGBClassifier(objective='binary:logistic')
# Fit the model on the training data
model.fit(X_train, y_train)
# Make predictions
y_pred = model.predict(X_test)
# Evaluate the model
accuracy = accuracy_score(y_test, y_pred)
print(f"Accuracy: {accuracy}")
# Plot feature importances
plot_importance(model)
6. Hyperparameter Tuning: You can
fine-tune the model's
hyperparameters to improve its
performance. Tools like
GridSearchCV or RandomizedSearchCV can be useful.
```

Split data into training and testing sets

7.Evaluation: Evaluate your model's performance using appropriate metrics, such as accuracy, precision, recall, or F1-score. Additionally, consider using domain-specific metrics for earthquake-related tasks.

8. Visualization: Visualize the results and relevant features using libraries like Matplotlib and Seaborn.