EARTHQUAKE PREDICTION MODEL USING PYTHON

ANALYZE AND VISLALIZE

- Earthquake is a natural phenomenon whose occurrence predictability is still a hot topic in academia. This is because of the destructive power it holds. In this article, we'll learn how to analyze and visualize earthquake data with Python and Matplotlib.

DATASET

- Origin time of the Earthquake Latitude and the longitude of the location.
- Depth – This means how much depth below the earth's level the earthquake started.
- The magnitude of the earthquake location.

[*]:

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# Import necessary libraries
import pandas as pd
from sklearn.model_selection import train_test_split
from sklearn.tree import DecisionTreeClassifier
from sklearn.metrics import accuracy_score

# Load your earthquake dataset (replace 'your_dataset.csv' with your actual dataset file)
# Your dataset should contain relevant features and a label indicating earthquake occurrence (1 for earthquake, 0 for no earthquake)
data = pd.read_csv('your_dataset.csv')

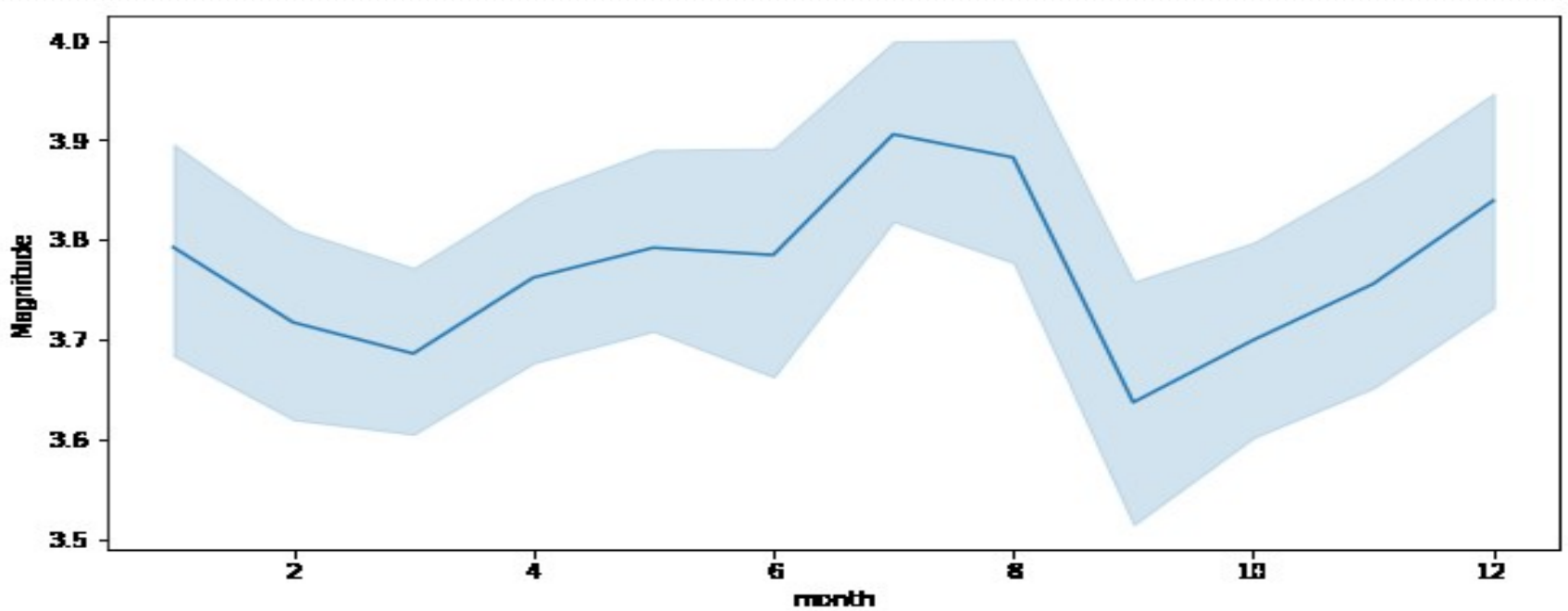
# Define features (X) and labels (y)
X = data.drop('earthquake_label', axis=1) # Assuming 'earthquake_label' is the column indicating earthquake occurrence
y = data['earthquake_label']

# Split the data into training and testing sets
X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.2, random_state=42)

# Initialize and train the Decision Tree classifier
classifier = DecisionTreeClassifier(random_state=42)
classifier.fit(X_train, y_train)

# Make predictions on the test set
predictions = classifier.predict(X_test)

# Calculate accuracy
accuracy = accuracy_score(y_test, predictions)
print(f'Accuracy: {accuracy * 100:.2f}%')
```


4.0
3.9
3.8
3.7
3.6
3.5
Magnitude
2
4
6
8
10
12
month