AI

Earthquake prediction model using python

```
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sb
import plotly.express as px
from google.colab import drive
drive.mount('/content/drive')
df = pd.read_csv('/content/drive/MyDrive/Csvfiles/earth.csv')
df.head()
df.shape
df.describe()
splitted = df['Origin Time'].str.split(' ', n=1,expand=True)
df['Date'] = splitted[0]
df['Time'] = splitted[1].str[:-4]
df.drop('Origin Time',axis=1,inplace=True)
splitted = df['Date'].str.split('-', expand=True)
df['day'] = splitted[2].astype('int')
df['month'] = splitted[1].astype('int')
df['year'] = splitted[0].astype('int')
df.drop('Date', axis=1,inplace=True)
df.head()
df.shape
df.info()
df.describe()
splitted = df['Origin Time'].str.split(' ', n=1,expand=True)
df['Date'] = splitted[0]
df['Time'] = splitted[1].str[:-4]
df.drop('Origin Time',axis=1,inplace=True)
df.head()
splitted = df['Date'].str.split('-', expand=True)
df['day'] = splitted[2].astype('int')
df['month'] = splitted[1].astype('int')
df['year'] = splitted[0].astype('int')
df.drop('Date', axis=1,inplace=True)
df.head()
plt.figure(figsize=(10, 5))
x = df.groupby('year').mean()['Depth']
x.plot.bar()
plt.show()
plt.figure(figsize=(10, 5))
```

```
sb.lineplot(data=df,x='month',y='Magnitude')
plt.show()
plt.subplots(figsize=(15, 5))
plt.subplot(1, 2, 1)
sb.distplot(df['Depth'])
plt.subplot(1, 2, 2)
sb.boxplot(df['Depth'])
plt.show()
plt.subplots(figsize=(15, 5))
plt.subplot(1, 2, 1)
sb.distplot(df['Magnitude'])
plt.subplot(1, 2, 2)
sb.boxplot(df['Magnitude'])
plt.show()
plt.figure(figsize=(10, 8))
sb.scatterplot(data=df,x='Latitude,y='Longitude',hue='Magnitude')
plt.show()
import plotly.express as px
import pandas as pd
fig = px.scatter_geo(df,
lat='Latitude',lon='Longitude',color='Magnitude',fitbounds='locations',scope='asia')
fig.show()
```

Output: