EARHQUAKE PREDICTION MODEL USING PYTHON

TEAM MEMBER

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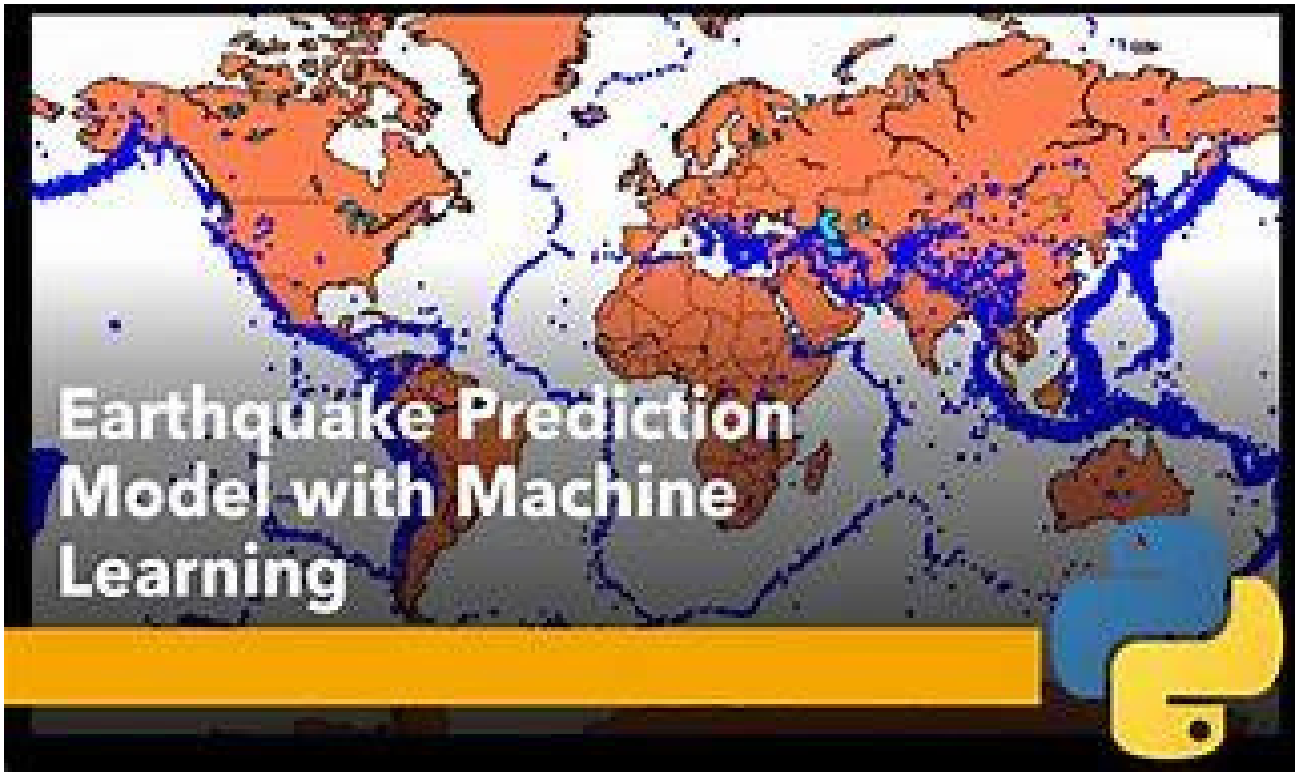
Phase - 3 Submission document

Project Title : Earthquake Prediction Model Using Python

Phase 3 : Development Part 1

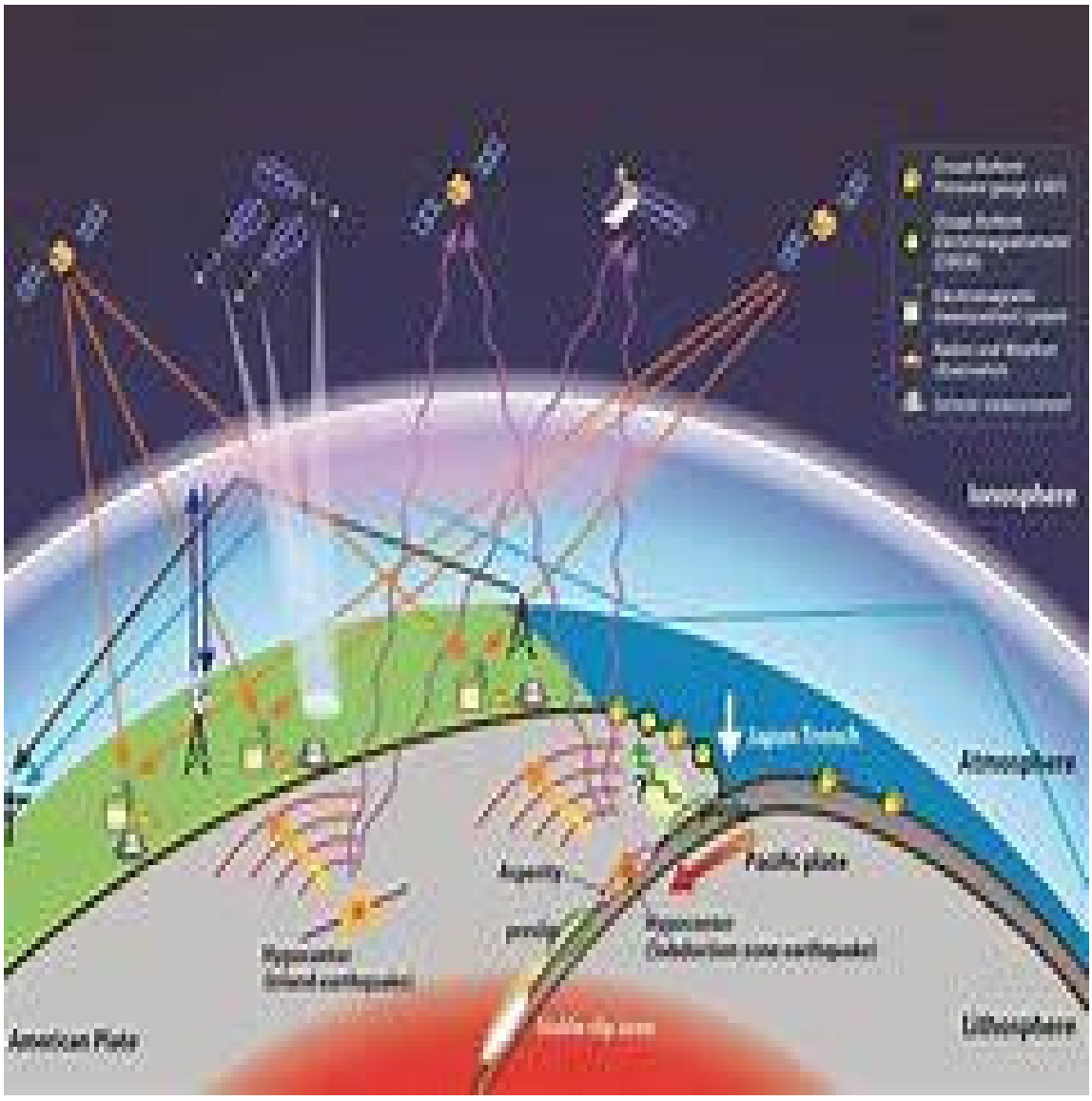
Topic: Start building the earthquake prediction model by using python loading and pre-processing the dataset



INTRODUCTION:

Earthquake Prediction

It is well known that if a disaster has happened in a region, it is likely to happen there again. Some regions really have frequent earthquakes, but this is just a comparative quantity compared to other regions. So, predicting the earthquake with Date and Time, Latitude and Longitude from previous data is not a trend which follows like other things, it is natural occurring.



GIVEN DATASET:

	magnitude	cdi	mmi	tsunami	sig	nst	dmin	gap	depth	latitude	longitude
count	782.000000	782.000000	782.000000	782.000000	782.000000	782.000000	782.000000	782.000000	782.000000	782.000000	782.000000
mean	6.941125	4.333760	5.964194	0.388747	870.108696	230.250639	1.325757	25.038990	75.883199	3.538100	52.609199
std	0.445514	3.169939	1.462724	0.487778	322.465367	250.188177	2.218805	24.225067	137.277078	27.303429	117.898886
min	6.500000	0.000000	1.000000	0.000000	650.000000	0.000000	0.000000	0.000000	2.700000	-61.848400	-179.968000
25%	6.600000	0.000000	5.000000	0.000000	691.000000	0.000000	0.000000	14.625000	14.000000	-14.595600	-71.668050
50%	6.800000	5.000000	6.000000	0.000000	754.000000	140.000000	0.000000	20.000000	26.295000	-2.572500	109.426000
75%	7.100000	7.000000	7.000000	1.000000	909.750000	445.000000	1.863000	30.000000	49.750000	24.654500	148.941000
max	9.100000	9.000000	9.000000	1.000000	2910.000000	934.000000	17.654000	239.000000	670.810000	71.631200	

IMPORT LIBRARIES:

PROGRAM:

Import pandas as pd

Import numpy as np

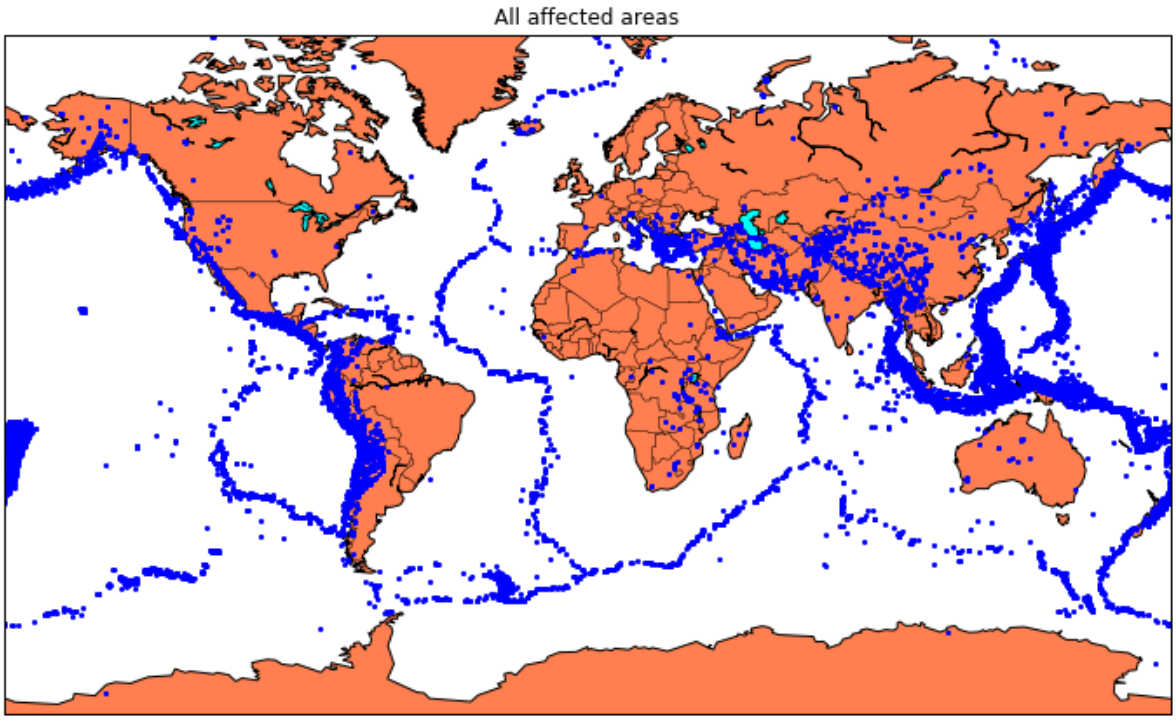
2.LOAD THE DATSET:

Load your dataset into pandas data frame. You can typically find earthquake prediction model using python datasets in CSV format .

PROGRAM:

df=pd.read_csv('E:\USA_Earthquake.csv')

Pd.read()



Splitting the Data:

Firstly, split the data into Xs and ys which are input to the model and output of the model respectively. Here, inputs are Time stamp, Latitude and Longitude and outputs are Magnitude and Depth. Split the X s and y s into train and test with validation. Training dataset contains 80% and Test dataset contains 20%.