

Earthquake prediction model using python

METHODOLOGY

A. Importing Libraries

The Python code to import libraries. We have used four libraries

- Python has a library called Numpy that is used for scientific computing. This library is utilized throughout the project and is imported as np.
- Pandas are used for data analysis and manipulation. An open source, BSD-licensed library called pandas offers simple data structures and tools for data analysis. It is imported as Pd.
- Matplotlib is a python library. The command-style utilities in pyplot enable matplotlib to behave similarly to MATLAB. It is imported as plt.
- Seaborn is a matplotlib-based Python data visualization package for aesthetically pleasing and educational statistical visuals. It is imported as sns.

B. Importing data

Figure 2 displays the Python code for importing data from the appropriate directory or file and allocating it to It imports the data that is kept in CSV format.

C. Checking for NaN

Checking for NaN is a critical step in the pre-processing of data. We were only able to identify a few NaNs in this test.

D. Manipulating NaN values

It is essential to remove the NaN values. This can be done by

- Removing the entire column containing many NaN values
- Forward fillna method
- Backward fillna method
- Mean method

E. Plotting a Heat map

A heat map is used to assess the correlation between the fields of the collected data. When developing various AI prediction models, the magnitude of the values along with the sign (which may be negative or positive) is crucial.

F. Train/Test split

Creating train and test sets from the data is our next step towards developing a Machine Learning model. The Python code to divide the data set into train