Splitting all the dataset into Training and testing sets

Y contains the UCS value of all the instances

Separating the prediction column from the data

Calculate the Mean and the Standard Variance of the data

Plotting a Distribution graph of the Uniaxial comprassive strength

Import the Rock Data as a CSV file

Start

X contains all the instance which will predict the UCS value need to be

70% Training data

30% Testing test

Importing the ML model and GridSearchCV

Train the Ml model with best parameters

Predict the UCS for training and testing data

Defining the hyperparameter for the ML model

Initiating the grid search for the ML model

Calculate RMSE,MAE and R² for training data

Calculate RMSE,MAE and R² for testing data

Getting the Best score

Plot the scatter plot and regressor line

Plot the scatter plot and- regressor line

Getting the best parameters for the ML model

End

Plot the bar graph for feature importance

Calculate the feature importance of the model