Project no :1

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Course: COMP5313 Artificial Intelligence
Topic: Stock Prices Prediction Using AI and Machine Learning

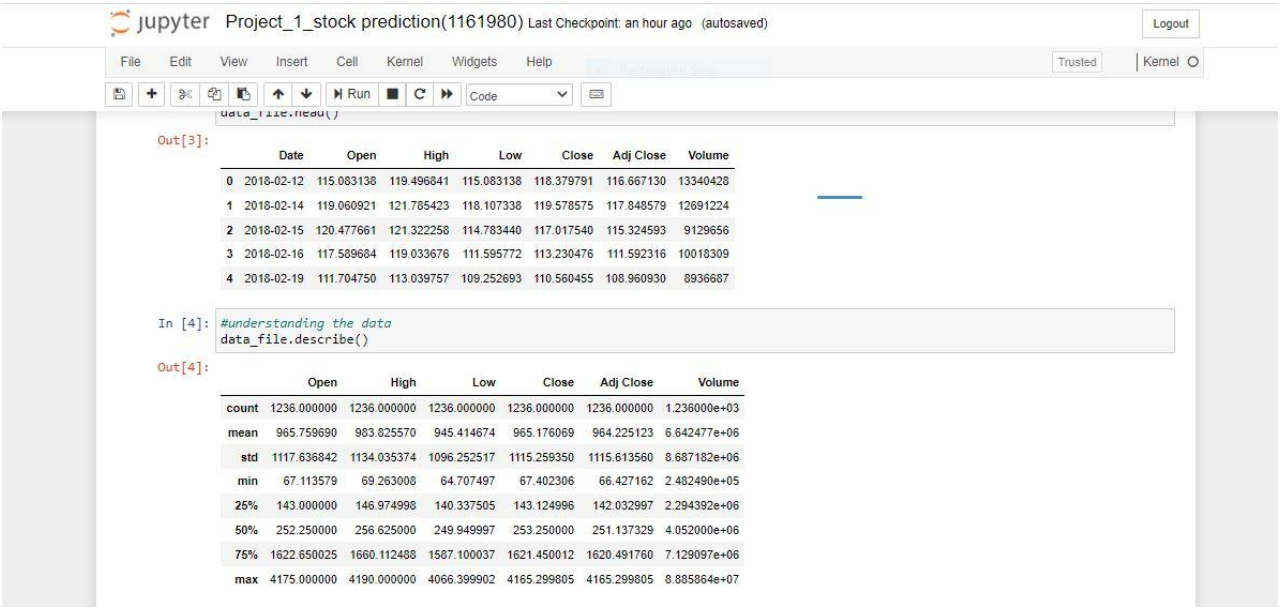
Stock Prices Prediction:

In order to forecast the prices of stock,i have gathered all the data from financial websites such as yahoo finance in which “Adani Enterprises Limited”ticker is selected and downloaded five years historical data.After obtaining all the necessary information ,according to develop the model's required features,we sorting the Date column by Year, Month, and Day, as well as computing the daily returns and moving average.

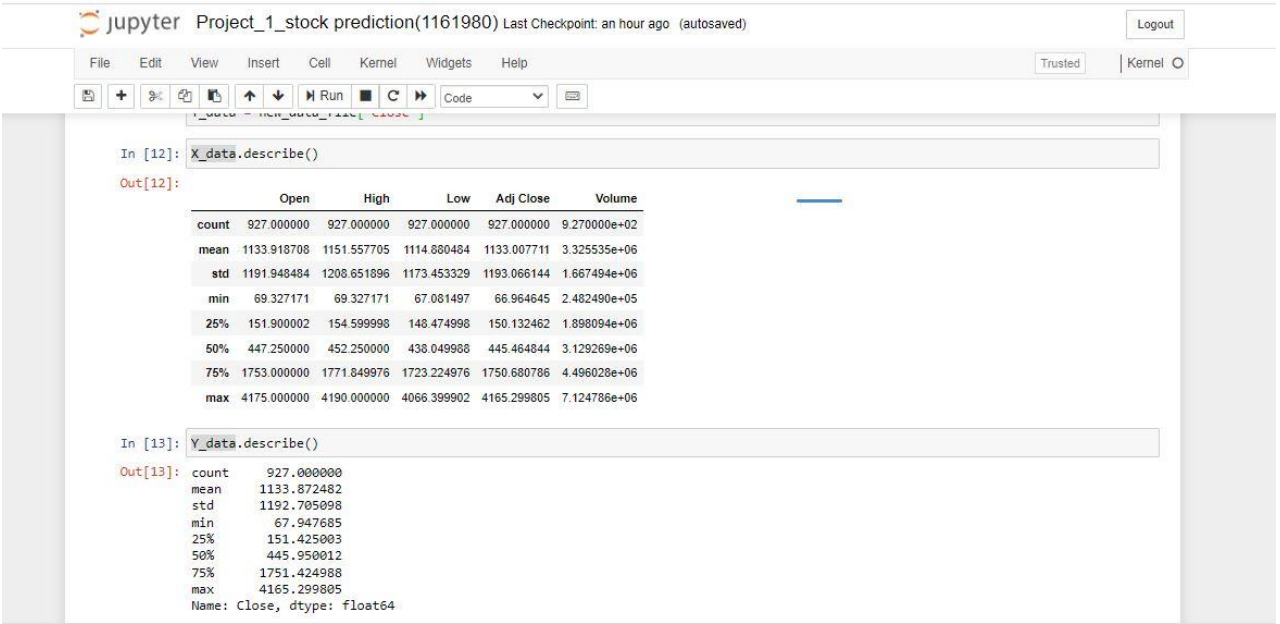
In the following stage.the data is separated into training and testing sets when the features are designed as well as the model may then be trained on the training set and tested on the testing set.Once the model is build up then we are going to use neural network because it is capable of recording complicated nonlinear interactions. Moreover,I have also define the model's architecture and construct the model,which includes the number of layers,neurons in each layers as well as include deciding on the loss function, optimizer, and assessment criteria respectively.

Last but not least,data may be used to train it which needs running the training data set through the model and modifying the weights in order to minimize loss.To elaborate,the model is then verified by running it over the testing set and comparing predicted to actual values.it gives an indication of how good the model is performing.

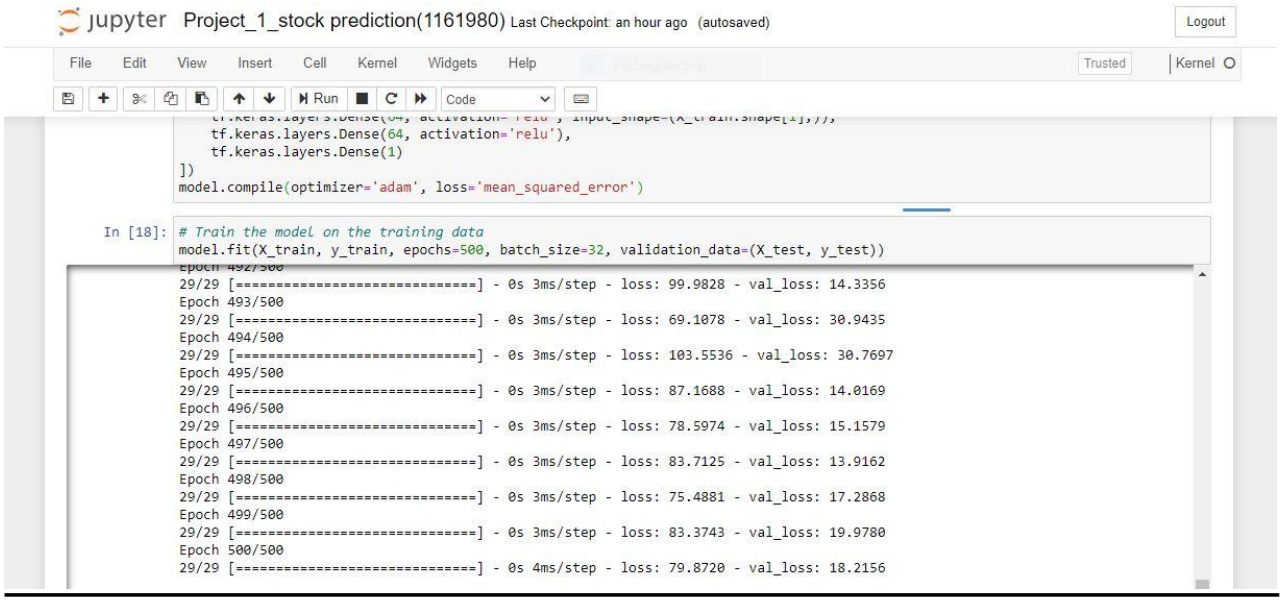
Outputs :1. Describe the adani shares stock data according to the date.



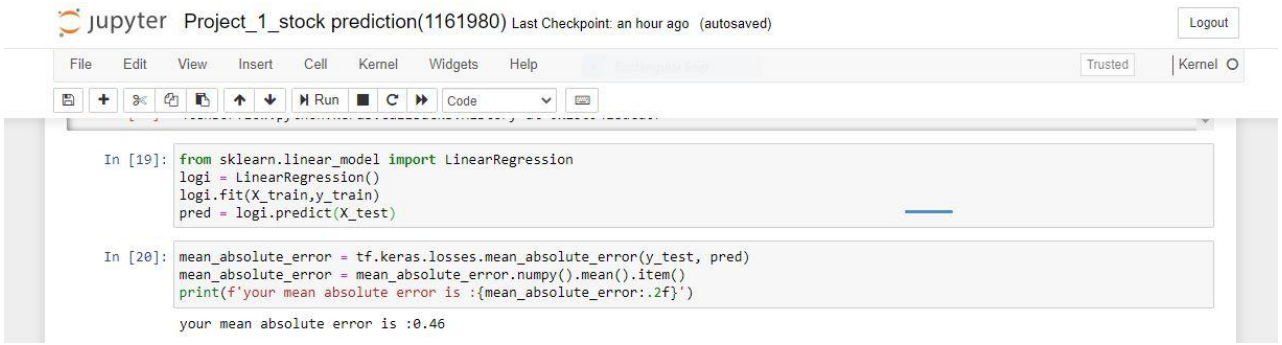
Outputs 2: By using describe function i showed all the values which is given in below image.



Outputs 3:



Outputs 4:



Outputs 5: According to the trained model, the predicated and actual output is shown in the below graph.