TIME SERIES ANALYSIS OF BITCOIN

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- Bitcoin is an unpredictable digital currency in the market. To make buying or selling decisions for such a currency, people are keen to make predictions for it.

ABOUT DATASET:

- Here, the dataset contains – Time stamps, volume, weighted price, alongside Open, High, Low, and Close.
- These quantities serve as a base in our model to predict the possible outcomes of the price action.

EDA (Exploratory Data Analysis)

- BITCOIN CLOSE PRICE OVER TIME -

From this graph, we can clearly analyse that the close price of Bitcoins remained almost stagnant up until 2018. After 2018, the price action took some volatile moves and reached to its all time high price of around 65,000 USD in 2021.

- DIFFERENCE IN THE OPENING AND CLOSING PRICES –

From this graph, it is clearly visible that until 2018, the price action of Bitcoin was negligible, but since than the difference between the opening and closing prices peaked at about 3000 USD per day, in 2021.

Prediction of the prices using our model

- **LINEAR REGRESSION –**

  Here, the Mean Square Error is 37%, with the Mean Absolute Error of 2.

- **DECISION TREE REGRESSION –**

  For this method, the Mean Square Error is 82%, with the Mean Absolute Error of 2.61.

- **XGB REGRESSION –**

  In this method, the Mean Square Error is 37127.2%, with the Mean Absolute Error of 45.64.

CONCLUSION –

- Here, for this TIME SERIES ANALYSIS OF BITCOIN, the Linear Regression model has been used, due to its unmatched accuracy and error, as per the industry standards.

THANK YOU