**BITCOIN HISTORY ANALYSIS**

**A PROJECT REPORT**

***Submitted by***

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***in partial fulfillment for the award of the degree***

***of***

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**IN**

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**Declaration**

We, **Rohit Ranjan Kumar, Manuj Gupta, Nipun Mangla, Haadin Azeez & Taranjeet Singh** hereby declare that the work presented in Capstone Project are our own effort and has not been copied from any other source. All sources used for references, quotes, and data have been duly acknowledged. This project represents my own understanding and analysis of the subject matter. I understand the consequences of academic dishonesty and affirm that this work is original and has not been submitted for project in any other course or institution.

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**Technology Used**

**Jupyter Notebook**

**Python**

**Numpy**

**Pandas**

**Matplotlib**

**Seaborn**

**Working of the Project**

This project was designed to analyze Bitcoin's historical data using Python's data analysis libraries, primarily focusing on the following key aspects:

**Data Collection:**

The project began with the collection of historical Bitcoin price data from a CSV file from a website investing.com .This dataset included essential columns such as Date, Price, Open, High, Low, Volume, and Change Percentage.

**Data Cleaning and Preprocessing:**

The dataset was examined for missing values and inconsistencies. It was confirmed that there were no missing values. The 'Date' column was converted to a datetime format for easier manipulation and analysis. Price columns were converted from string representations into numeric formats, facilitating mathematical operations and visualizations.

**Exploratory Data Analysis (EDA):**

Various statistical measures, including mean, median, standard deviation, maximum, and minimum prices, were calculated to summarize the dataset. Visualizations played a significant role in EDA, with line plots, scatter plots, and histograms employed to illustrate trends, relationships, and distributions within the data. This visual representation helped identify key patterns and anomalies in Bitcoin's price behavior.

**Statistical Analysis:**

This analysis provided insights into how opening prices relate to closing prices and how volatility is manifested in the market.

The project also included calculations of monthly percentage changes to assess Bitcoin's volatility over time.

**Visualization Techniques:**

The project utilized libraries such as Matplotlib and Seaborn for creating informative visualizations. These visualizations included line plots for price trends, scatter plots for volume versus price, and histograms for the distribution of price changes.

**Conclusion**

This project provided a comprehensive analysis of Bitcoin's historical price movements, volatility, and market behavior over time. By utilizing various data visualization techniques and statistical methods, we were able to uncover significant insights into the dynamics of Bitcoin trading. Overall, this project has illustrated the complex nature of Bitcoin trading and the importance of utilizing statistical analysis and visualization tools to better understand market trends. As the cryptocurrency landscape continues to evolve, ongoing analysis and monitoring will be crucial for investors and stakeholders looking to navigate this dynamic market effectively. Future work could involve more advanced predictive modeling techniques to forecast Bitcoin prices based on historical data and market indicators.

**References**

**For Dataset:**

**www.investing.com**