

Crypto Currencies Visualization Analysis

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Technologies Used:

- Python
- Tableau

GitHub Link:

<https://github.com/jugal1997/Cryptocurrencies-Visualization-Analytics>

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1. Introduction:

This project aims to provide a comprehensive visual analysis of various cryptocurrencies, leveraging the capabilities of Tableau to uncover trends, patterns, and insights within the cryptocurrency market. By visualizing key metrics such as high, low, close, open prices, volume, and market capitalization, this project seeks to offer valuable insights for investors, traders, and analysts.

2. Objectives:

- **Visualize Cryptocurrency Trends:** Develop interactive dashboards and charts to visualize historical price movements, volatility, and market capitalization trends.
- **Identify Correlations:** Explore correlations between different cryptocurrencies and market indicators to identify potential trading opportunities or risks.
- **Compare Performance:** Benchmark the performance of various cryptocurrencies against each other and industry standards.

3. Dataset Description:

The dataset used for this project consists of historical data for a variety of cryptocurrencies.

Key attributes include:

Cryptocurrency Name: The name or symbol of the cryptocurrency.

Open Price: The opening price of the cryptocurrency for a given time period.

High Price: The highest price reached during the time period.

Low Price: The lowest price reached during the time period.

Close Price: The closing price of the cryptocurrency for the time period.

Volume: The trading volume for the cryptocurrency during the time period.

Market Capitalization: The total market value of the cryptocurrency.

4. Analytics:

The analysis primarily included visual analytics. Using Tableau to identify key performance indicators(KPIs) and thus gain business insights to make data-driven business decisions.

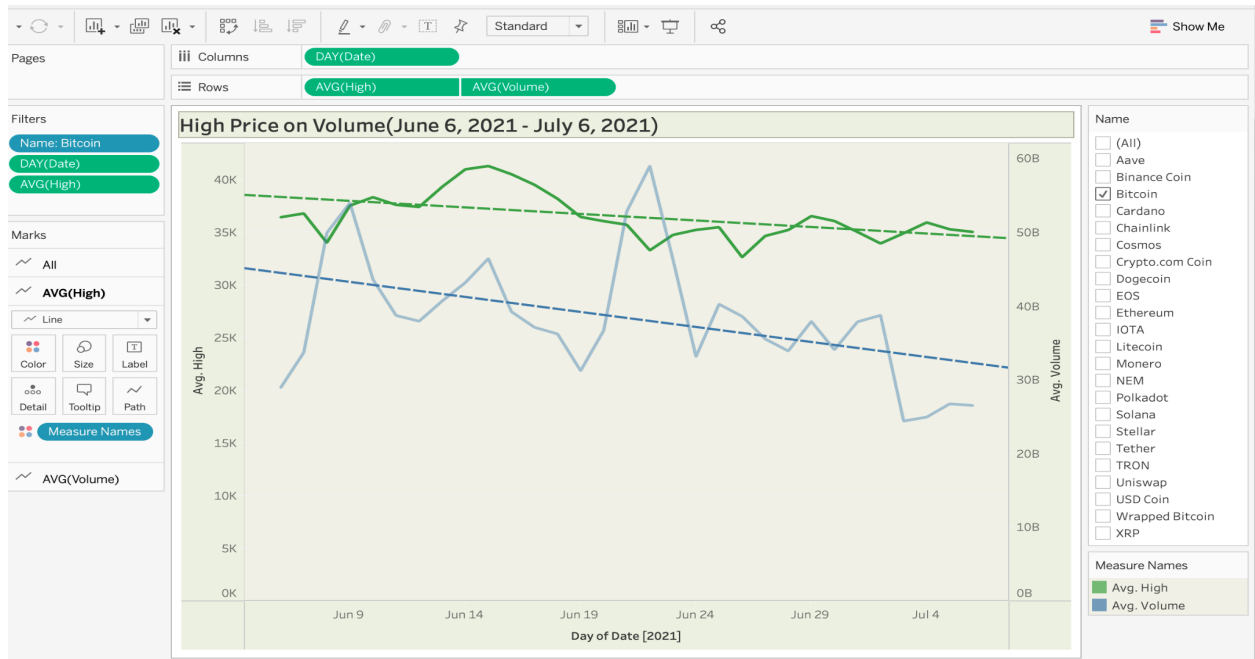
The analysis included several graphs and two dashboards that represent pertinent trends and information and using this data businesses can achieve their target goals.

The graphs are as follows:

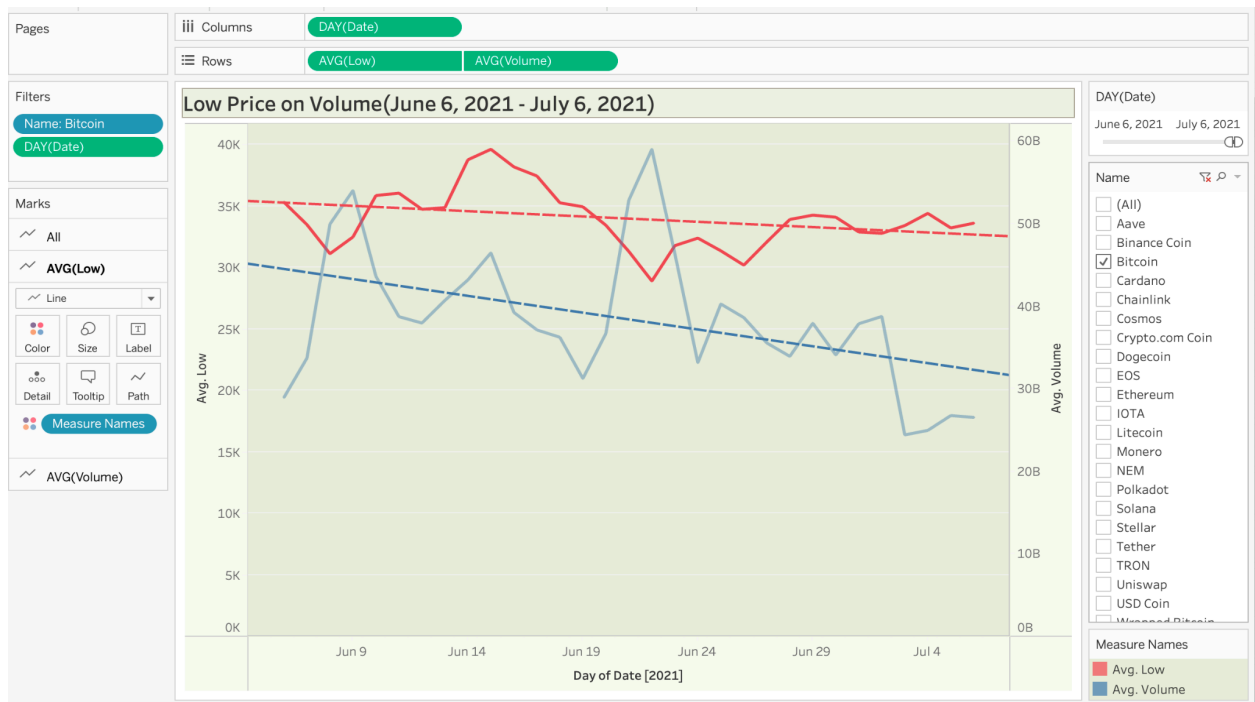
i) Monthly CandleStick Chart: This chart represents the Open, Close, High, and Low prices over a month. Here the chart is colored green if the Close price is greater than the open price and vice-versa.



ii) High Price on Volume: In this chart, the goal is to establish a relationship between high price and volume. Here the important question this chart answers is whether high price of a crypto currency affects the trading volume of that currency.



iii) **Low Price on Volume:** This chart is similar to the “High price on Volume” chart. The only difference is that this chart aims to compare Low price effect on volume trade.



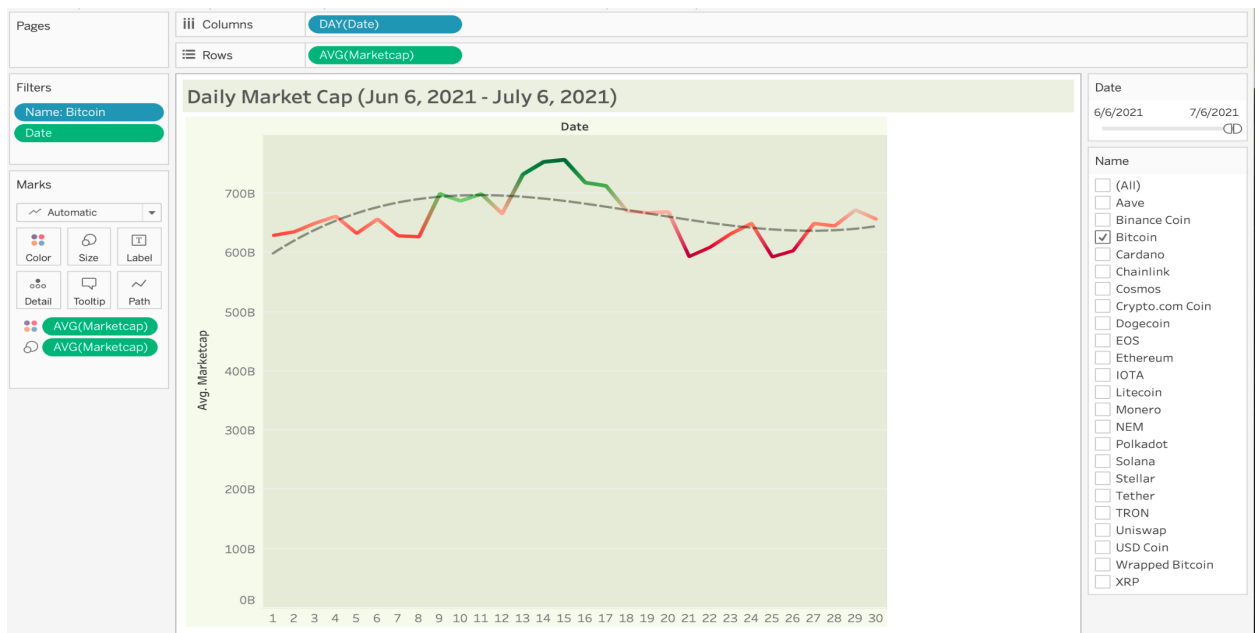
iv) **Historical Closing Price:** The aim of this graph is to showcase the closing price of a cryptocurrency from its inception to the latest month of the year i.e. July 6, 2021. This will help in showing past data of a currency thus making it easier to understand the price fluctuations over several years/months.



v) **Daily Trading Volume:** The purpose of this graph is to show the trading activity of a cryptocurrency over a month. This graph will help traders/investors make informed decisions about the potential upsides or downsides of that particular currency.



vi) **Daily Market Capitalization:** This graph will depict the market cap value of a cryptocurrency over a month. This graph is relevant to evaluate the size of any cryptocurrency. Understanding the size of the currency is important to make informed decisions.














vii) **Daily Trading Prices:** This is a candle stick chart that shows the difference between open and close price as well the difference between high and low prices. Candlestick charts are very helpful in conveying meaningful information to a trader. This chart's use case is particularly for traders who are looking to make short-term investments.



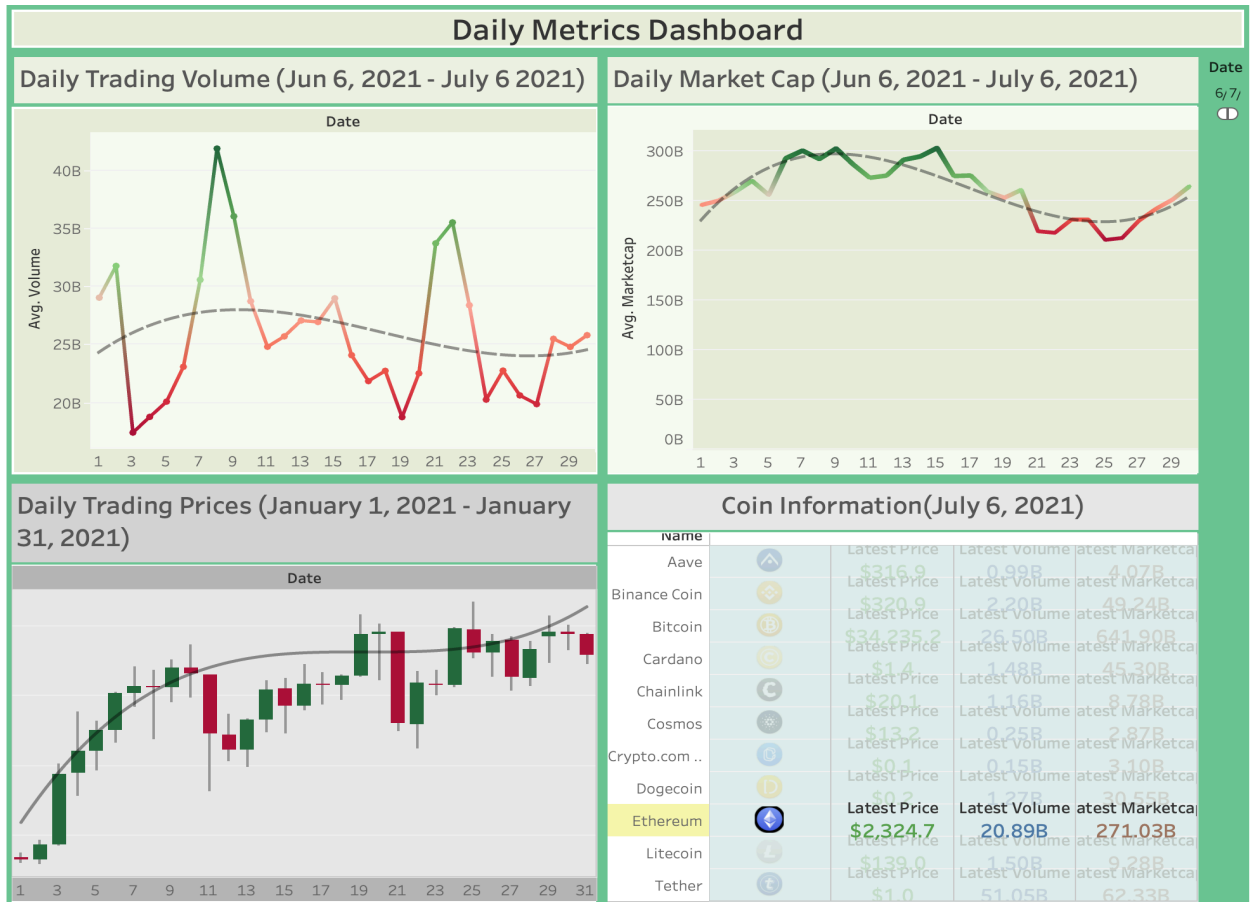
viii) **Coin Information:** This chart shows the name of the cryptocurrency, its latest price, latest volume, and latest market cap. This serves as an information graph.

Pages	Columns	AVG(Zero)	AVG(Zero)	AVG(Zero)	AVG(Zero)
	Rows	Name			
Filters	Coin Information(July 6, 2021)				
Name					
Marks					
All					
AVG(Zero)					
Shape					
Color					
Size					
Label					
Detail					
Tooltip					
Shape					
Name					
AVG(Zero) (2)					
AVG(Zero) (3)					
AVG(Zero) (4)					

name		Latest Price	Latest Volume	Latest Marketcap
Aave		\$316.9	0.99B	4.07B
Binance Coin		\$320.9	2.20B	49.24B
Bitcoin		\$34,235.2	26.50B	641.90B
Cardano		\$1.4	1.48B	45.30B
Chainlink		\$20.1	1.16B	8.78B
Cosmos		\$13.2	0.25B	2.87B
Crypto.com Coin		\$0.1	0.15B	3.10B
Dogecoin		\$0.2	1.27B	30.55B
Ethereum		\$2,324.7	20.89B	271.03B
Litecoin		\$139.0	1.50B	9.28B
Tether		\$1.0	51.05B	62.33B

Dashboards:

i) **Daily Metrics Dashboard:** The purpose of this dashboard is to club several graphs together to show graphs as a whole. Where filtering on a cryptocurrency changes the visuals in the other graphs. The dashboards act as a one-stop shop for information.



ii) Prices Dashboard: The purpose of this dashboard is similar to the other dashboard.



5. Conclusion:

After a thorough visualization analysis of the cryptocurrency data, it is sufficient to say that the graphs and dashboards will aid interested stakeholders in making informed data-driven business decisions.

6. References:

- i) Medium.com
- ii) Analyticsvidhya.com
- iii) Tableau.com/resources