

# Crypto Currency Data Analysis



A cryptocurrency, or crypto is a binary data designed to work as a medium of exchange wherein individual coin ownership records are stored in a ledger existing in a form of a computerized database using strong cryptography to secure transaction records, to control the creation of additional coins, and to verify the transfer of coin ownership. Some crypto schemes use validators to maintain the cryptocurrency. In a proof-of-stake model, owners put up their tokens as collateral. In return, they get authority over the token in proportion to the amount they stake.

## Description of the dataset

1. **open**: opening price
2. **high**: higher price of the day
3. **low**: lower price of the day
4. **volume**: volume of transaction on the given day
5. **price**: closing price of the day

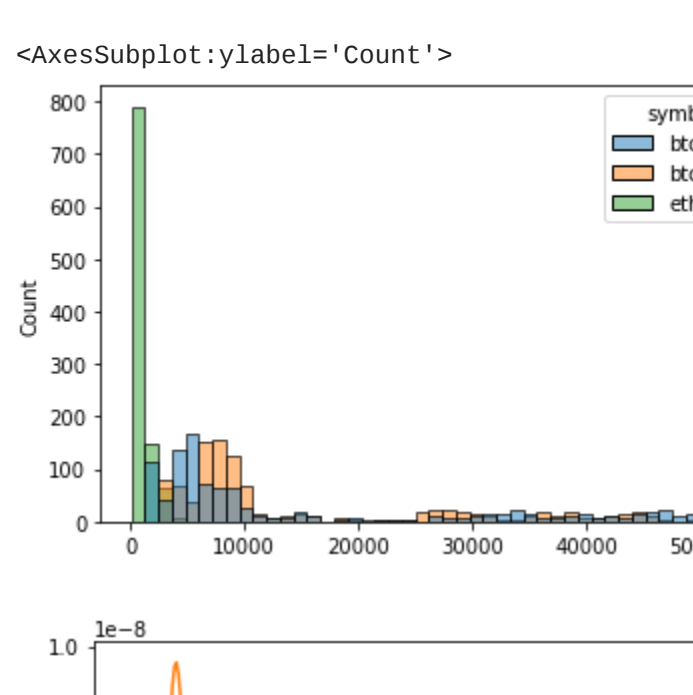
## Few rows of Dataset

	date	open	high	low	volume	price	symbol	exchange
837636	2021-09-12	2.278	2.423	2.22	250774.28	2.302	adaio-USD	ftx
837637	2021-09-12	32967.260	33346.200	32400.00	2571640.50	33122.950	YFI-USD	coinbase
837638	2021-09-12	33002.380	33347.540	32463.85	156480.21	32986.990	YFI-USD	gemini
837639	2021-09-12	32950.000	33325.000	32360.00	327118.65	33070.000	YFI-USD	ftx
837640	2021-09-12	33026.000	33341.000	32484.00	72448.08	32942.000	YFI-USD	kraken

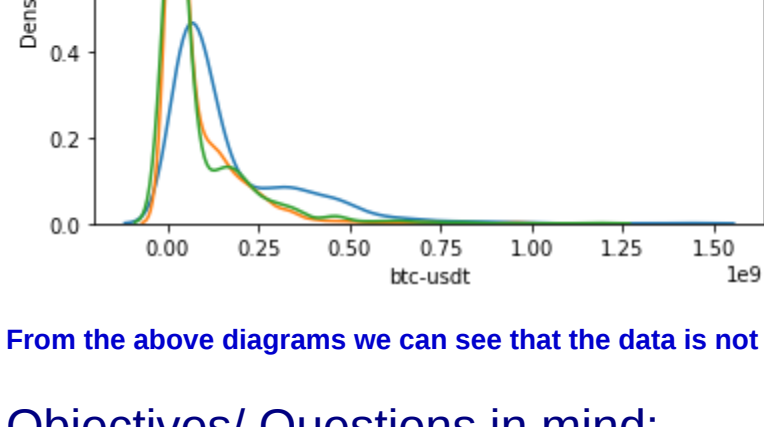
## Missing value analysis

```
date      0
open      0
high      0
low       0
volume    2
price     0
symbol    0
exchange  0
dtype: object
```

## Statistical Analysis of data



Price have high correlation with high, low and open.

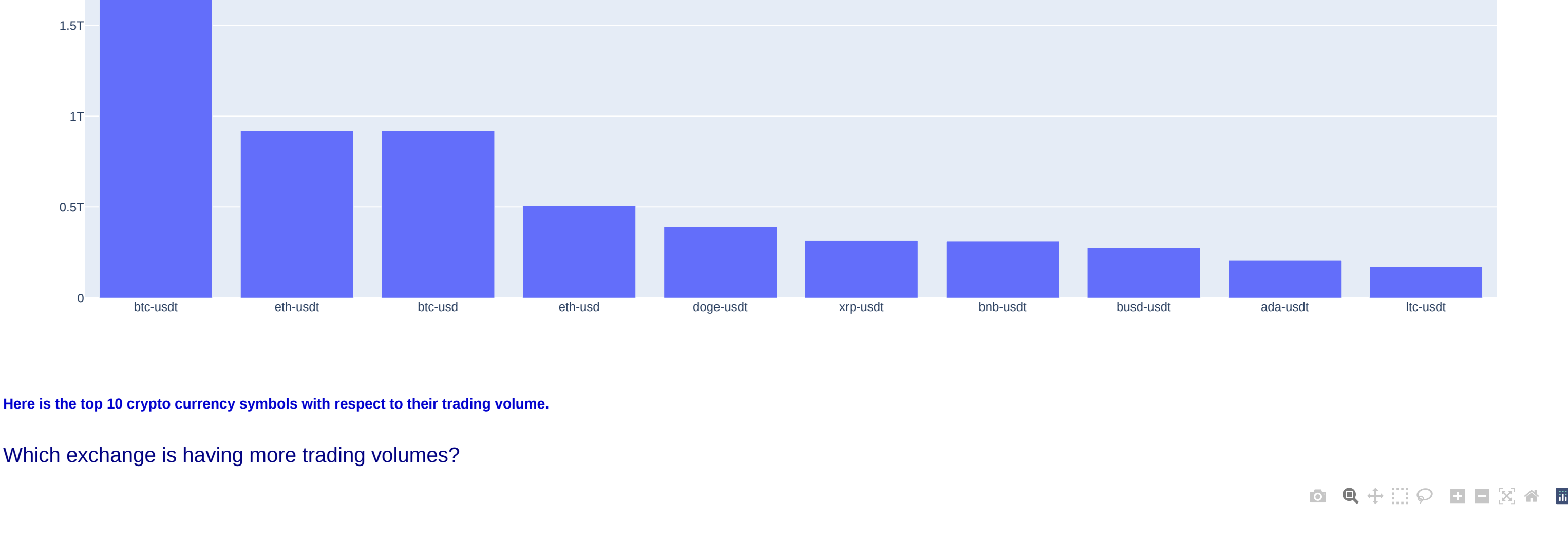


From the above diagrams we can see that the data is not normally distributed.

## Objectives/ Questions in mind:

1. which exchange company does more sales?
2. is there any change in the price of different exchanges for different currencies
3. what are the top10 currencies?
4. is there an increase in the price of currencies over the period of time?
5. weekly, base, monthly and yearly base analysis of price
6. which month and days have more price and transactions

## Top 10 priced symbol analysis



Here is the top 10 crypto currency symbols with respect to their trading volume.

## Which exchange is having more trading volumes?



The most number of trades are made by "Binance" followed by "Okex".

## Does the currencies have same price across multiple trading exchange?



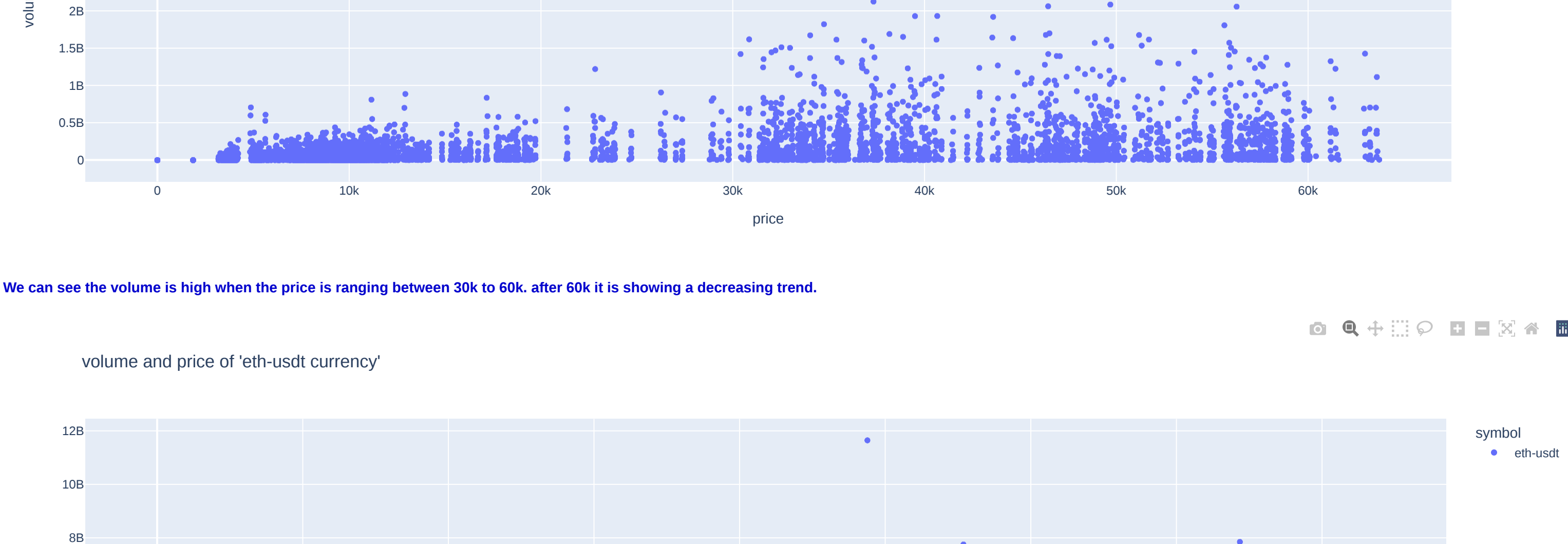
No, they have different prices. For example, the btc\_usdt currency is sold at different price by different exchanges. The above diagram depicts it.

## Price and volume analysis.

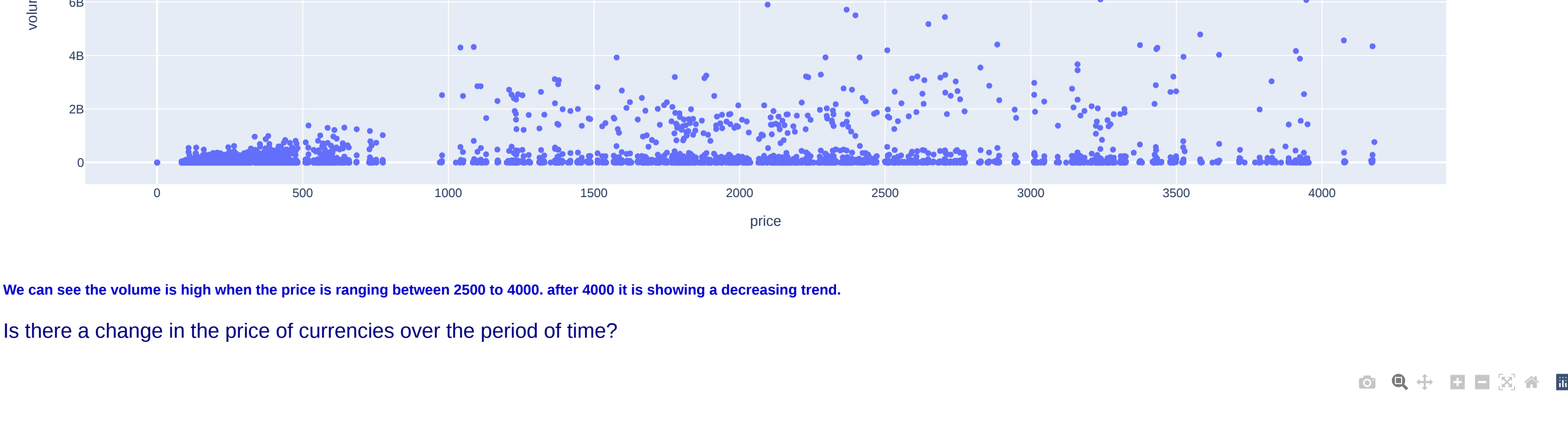
Is there any relation between the price and volume of currencies?



The volume is high when the price is ranging between 30k to 60k. after that it is showing a decreasing trend.

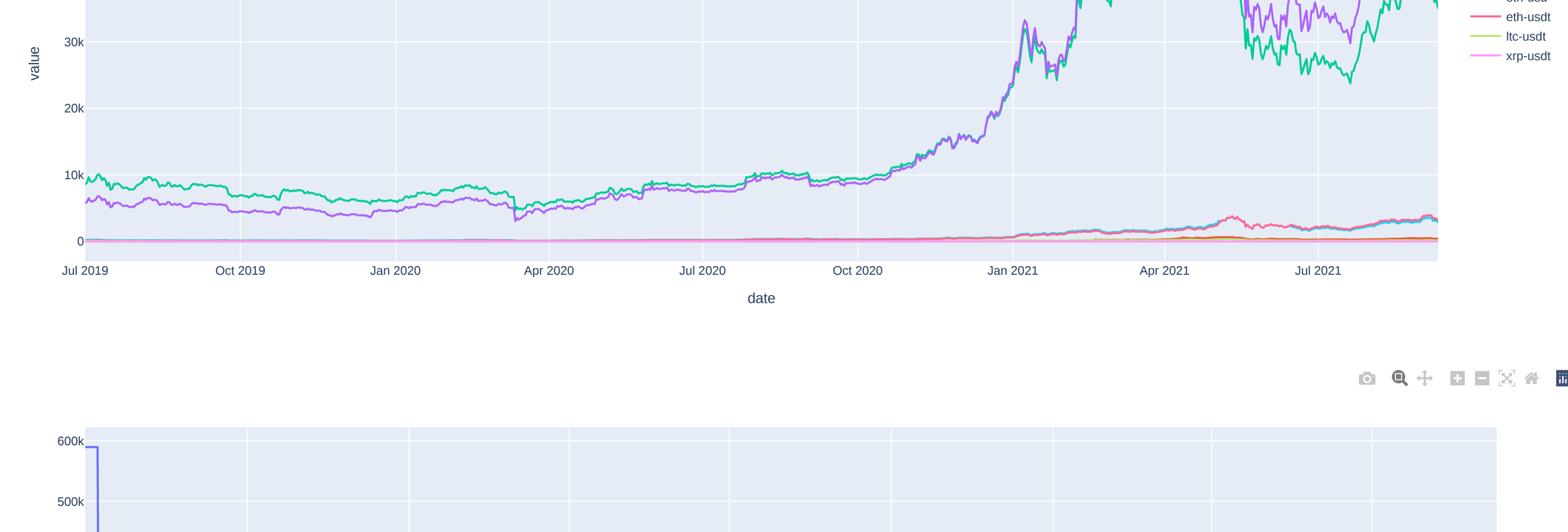


We can see the volume is high when the price is ranging between 30k to 60k. after 60k it is showing a decreasing trend.



We can see the volume is high when the price is ranging between 2500 to 4000. after 4000 it is showing a decreasing trend.

## Is there a change in the price of currencies over the period of time?



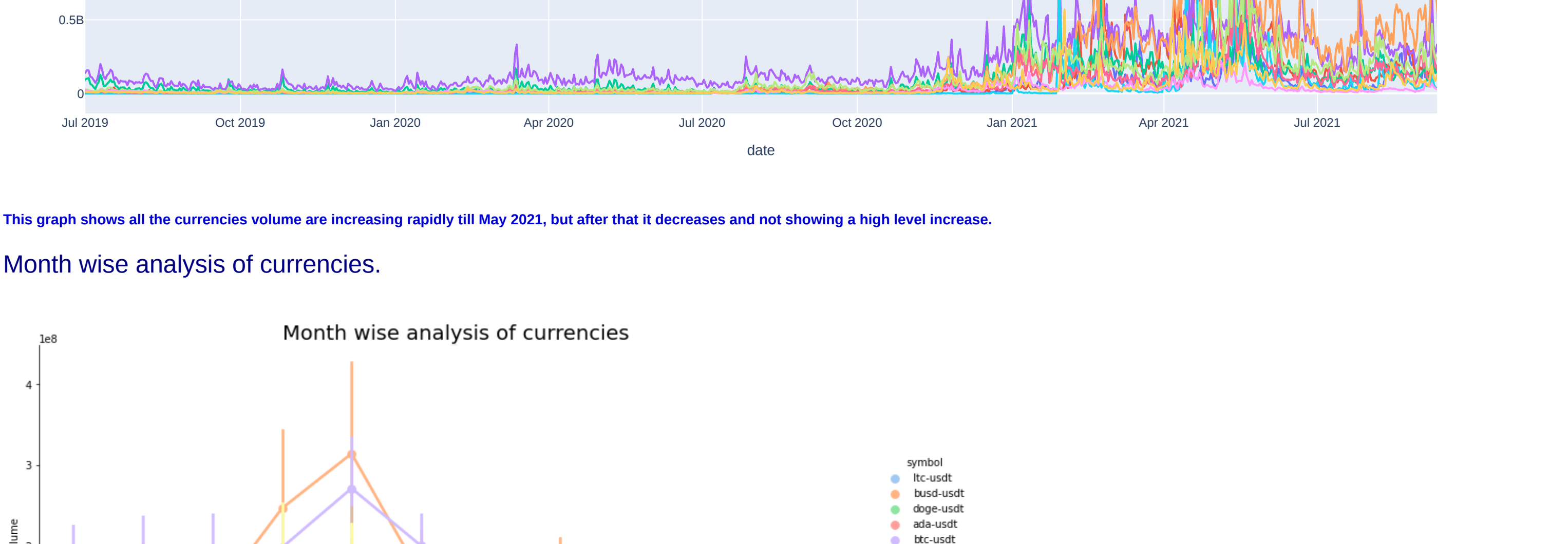
From the above graphs, we can conclude that the price of all the currencies are increasing over the period of time, except doge-usdt

## Is there a change in volume of currencies over the period of time?



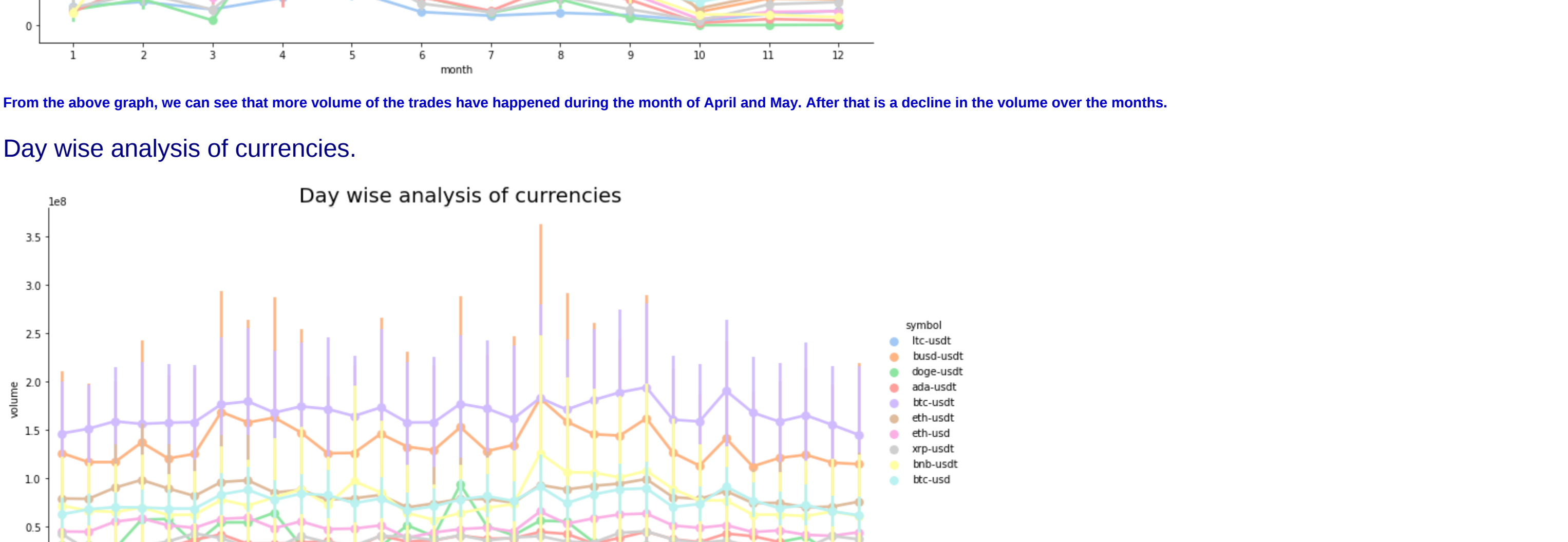
This graph shows all the currencies volume are increasing rapidly till May 2021, but after that it decreases and not showing a high level increase.

## Month wise analysis of currencies.



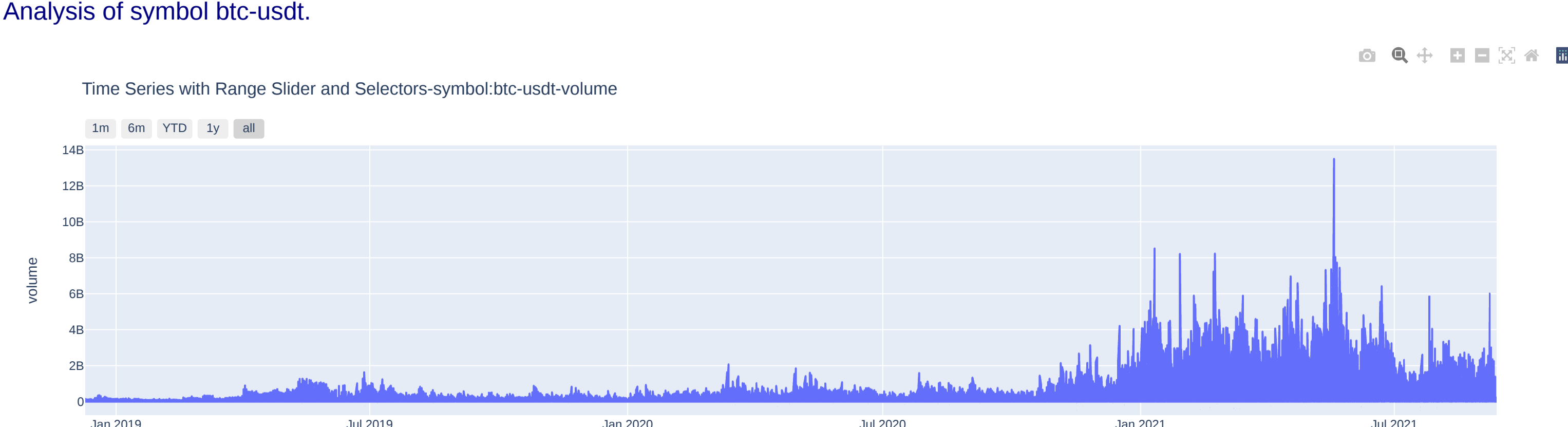
From the above graph, we can see that more volume of the trades have happened during the month of April and May. After that is a decline in volume over the months.

## Day wise analysis of currencies.



This graph shows there was a spike of trading volume during the third week.

## Analysis of symbol btc-usdt.



The volume is increasing steadily over the period of time and reaches the peak during July 2021. But after July it is showing a decreasing volume trend due to high price. In that case we can assume that people tend to buy more when there is a decrease in the price.

## Candle stick chart for open and closing price of btc-usdt.(1 year data)



## Conclusion

The main points of this cryptocurrency data analysis are:

1. The top 10 currencies in the market are btc-usd, btc-usdt, eth-usdt, doge-usdt, xrp-usdt, btc-usdt, ada-usdt, bnb-usdt, busd-usdt etc.
2. Binance is the highest trading exchange in the market.
3. All exchanges are not trading the currencies for the same price.
4. The price and volume of trades was slowly picking up in the market from the year 2018 to 2020. But after that there was a sudden increase on both the price and volume and it continued till May 2021.
5. More trades happen during the month of May and June.
6. The highest trading day is during the third week of the month.