



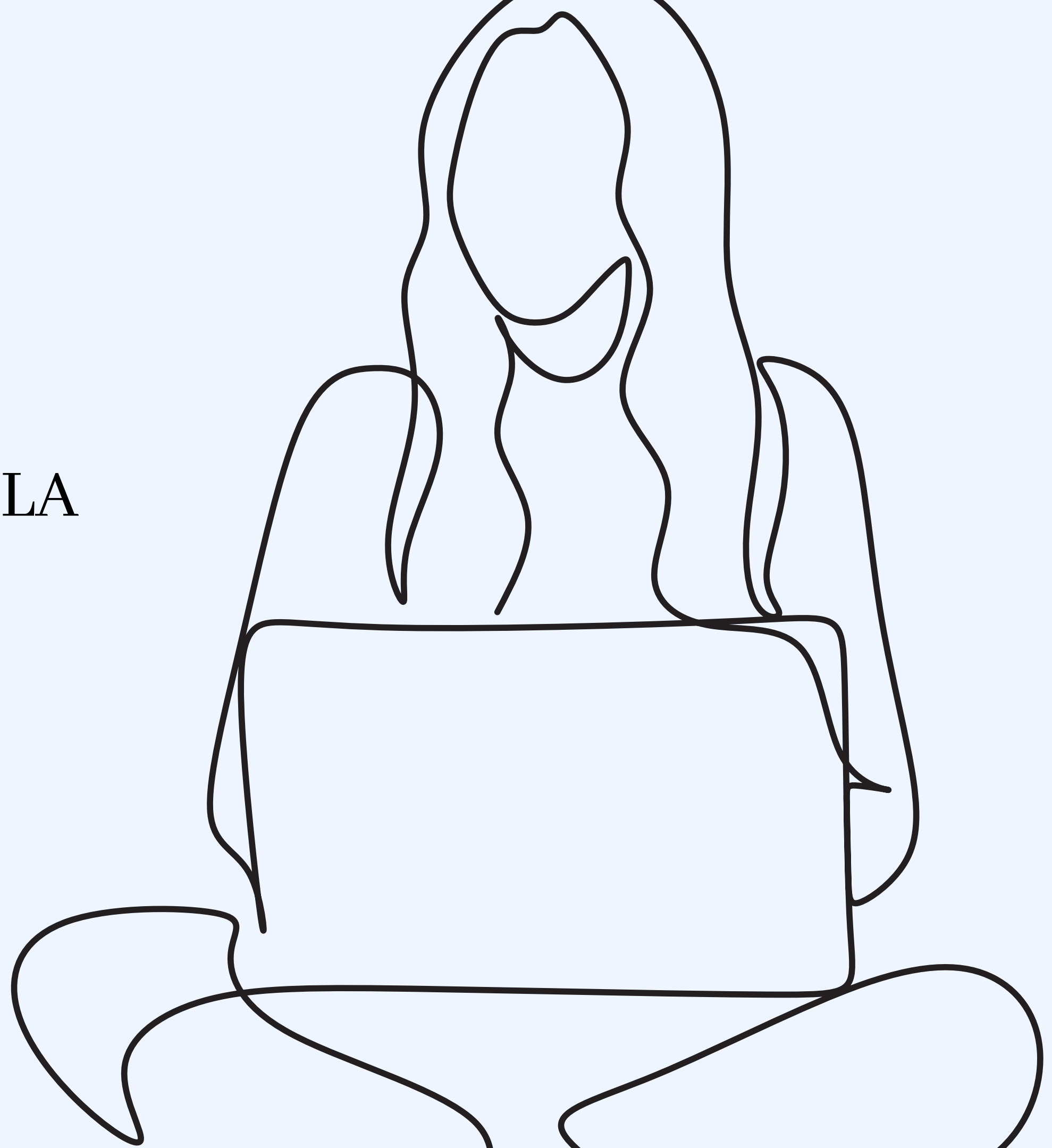
# FINTECH BOOTCAMP – TWITTER PROJECT

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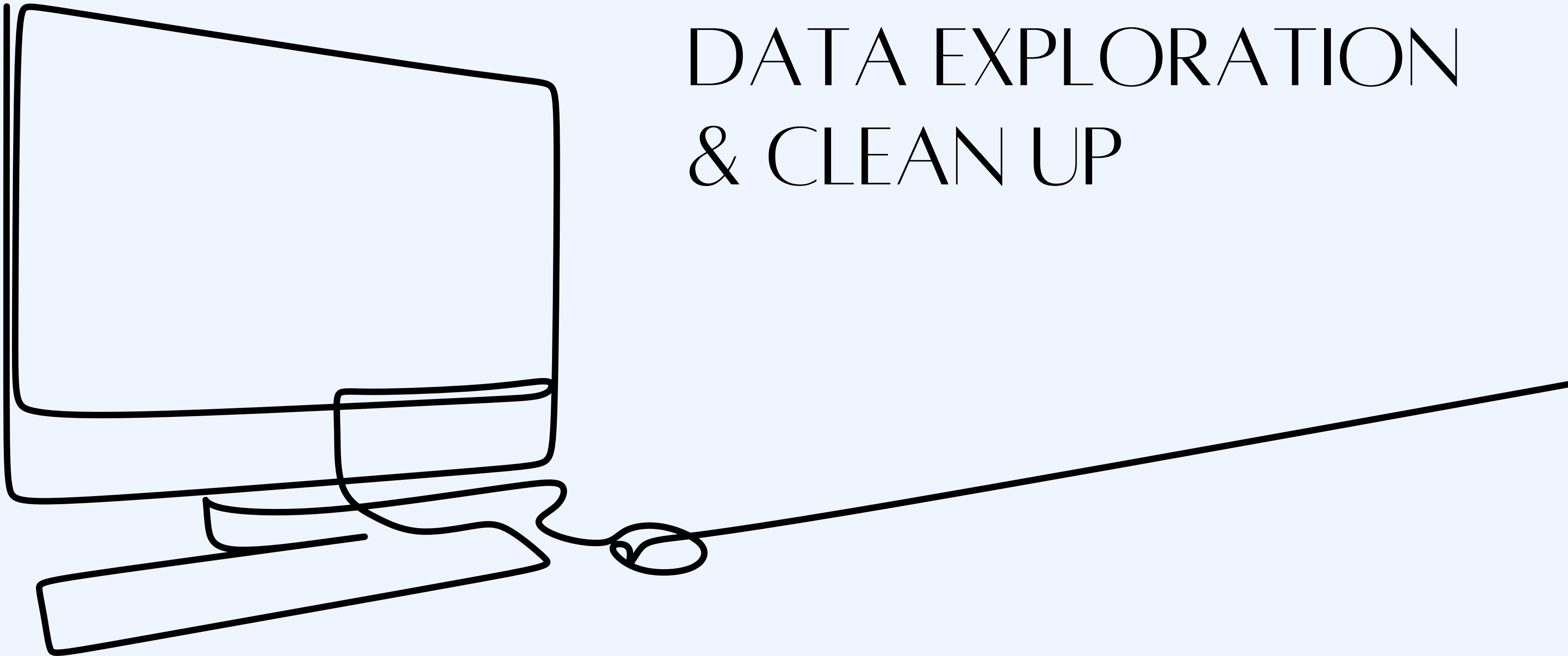
# ELON MUSK

## DOGE COIN, BITCOIN + TESLA

To identify if there is a impact between twitter posts and stock price + cryptocurrency.....



# DATA EXPLORATION & CLEAN UP



```
] : #only the tweets and the date
tweets = tweets[['date','tweet']]
tweets
```

```
] :
```

	date	tweet
0	2020-12-28 19:46:18	Entertainment will be critical when cars drive...
1	2020-12-28 18:07:33	@kimpaquette Just meeting with Larry Ellison t...
2	2020-12-28 17:23:51	@richierichhhh_ Absolutely
3	2020-12-28 17:23:31	What should Tesla do with in-car gaming in an ...
4	2020-12-28 05:39:42	@PPathole @WSJ Absolutely
...	...	...
15855	2022-01-03	https://t.co/LA9hPzVIGx
15856	2022-01-02	Let's make the roaring 20's happen!
15857	2022-01-02	Great work by Tesla team worldwide!
15858	2022-01-01	@BLKMDL3 @Tesla 🚀
15859	2022-01-01	@MiFSDBetaTester @WholeMarsBlog 🐶

15860 rows × 2 columns

Clean the tweet data  
and doge, tesla and  
bitcoin.

```
[285]: #clean the tweets (remove @'s' and urls and)
TEXT_CLEANING_RE = "@\S+|https?:\S+|http?:\S+|[\^A-Za-z0-9]+"
new = []
for t in tweets.tweet:
    words = t.split()
    t = t.split()
    t = ' '.join(word for word in t if not word.startswith('@'))
    t = t.split()
    t = ' '.join(word for word in t if not word.startswith('http'))
    new.append(t)

tweets['tweet'] = new
tweets
```

```
8]: #identify the percentage change from that day and date
def pct_change(df):
    return (df.shift(-1) - df)/ df

9]: #identify the closing price from that day and date
doge_data = doge_data[['Date','Open','Close', "symbol"]]
doge_data["Returns"] = doge_data["Close"].apply(pct_change).shift(1)
doge_data.dropna(inplace = True)

0]: doge_data['Date'] = pd.to_datetime(doge_data['Date'], format='%Y-%m-%d')
doge_data

0]:
```

	Date	Open	Close	symbol	Returns
1	2014-09-18	0.000268	0.000298	DOGE	0.111940
2	2014-09-19	0.000298	0.000277	DOGE	-0.070470
3	2014-09-20	0.000276	0.000292	DOGE	0.054152
4	2014-09-21	0.000293	0.000288	DOGE	-0.013699
5	2014-09-22	0.000288	0.000298	DOGE	0.034722
...	...	...	...	...	...
2634	2021-12-03	0.209463	0.199993	DOGE	-0.046408
2635	2021-12-04	0.200356	0.178853	DOGE	-0.105704
2636	2021-12-05	0.178263	0.171255	DOGE	-0.042482
2637	2021-12-06	0.171383	0.178400	DOGE	0.041721
2638	2021-12-07	0.176849	0.181001	DOGE	0.014580

2631 rows × 5 columns

Set date format for  
both tweet data and

```
ElonTweets_Doge = doge_20to22.merge(doge, how='left', on='Date')

ElonTweets_Doge = ElonTweets_Doge.dropna(axis=0)
ElonTweets_Doge = ElonTweets_Doge.drop_duplicates(subset=['Tweet'])
ElonTweets_Doge
```

	Date	Open	Close	symbol	Returns	Tweet
113	2020-04-25	0.002102	0.002142	DOGE	0.018545	Dogecoin Mode
197	2020-07-18	0.003060	0.003473	DOGE	0.134597	Excuse me, I only sell Doge!
314	2020-11-17	0.002908	0.002936	DOGE	0.017325	Dojo/Doge
347	2020-12-20	0.003926	0.004625	DOGE	0.177744	One word: Doge
393	2021-02-04	0.037226	0.053289	DOGE	0.435587	No highs, no lows, only Doge
394	2021-02-04	0.037226	0.053289	DOGE	0.435587	Dogecoin is the people's crypto
395	2021-02-04	0.037226	0.053289	DOGE	0.435587	Doge
397	2021-02-06	0.046931	0.057595	DOGE	0.227123	Dogecake
399	2021-02-08	0.078352	0.078825	DOGE	0.000546	Doge appears to be inflationary, but is not me...
400	2021-02-08	0.078352	0.078825	DOGE	0.000546	🐶 Who let the Doge out 🐶
402	2021-02-10	0.070111	0.072896	DOGE	0.040331	Bought some Dogecoin for lil X, so he can be a...
403	2021-02-11	0.072844	0.069676	DOGE	-0.044173	Frodo was the underdoge, All thought he would ...
404	2021-02-12	0.069650	0.070069	DOGE	0.005640	Doge is underestimated
407	2021-02-15	0.062568	0.056591	DOGE	-0.095080	An acceptable percentage. Doge is much more co...
408	2021-02-15	0.062568	0.056591	DOGE	-0.095080	If major Dogecoin holders sell most of their c...
413	2021-02-20	0.055132	0.054384	DOGE	-0.013693	I just set up some little Doge mining rigs wit...
415	2021-02-22	0.056044	0.053725	DOGE	-0.040282	Dojo 4 Doge
422	2021-03-01	0.048070	0.050599	DOGE	0.053005	Doge meme shield (legendary item)
423	2021-03-02	0.050596	0.050262	DOGE	-0.006660	2022: Dogecoin is dumb
424	2021-03-03	0.050278	0.050592	DOGE	0.006566	Very much so & its leader shall be The Doge
427	2021-03-06	0.049601	0.050984	DOGE	0.027717	Doge spelled backwards is Egod
435	2021-03-14	0.062384	0.058592	DOGE	-0.061507	Why are you so dogemantic, they ask

@TESLA STOCK PRICE IS TOO HIGH IMO

@DOGEFATHER

@ DOGE BARKING  
AT THE MOON

@BITCOIN CURES CANCER



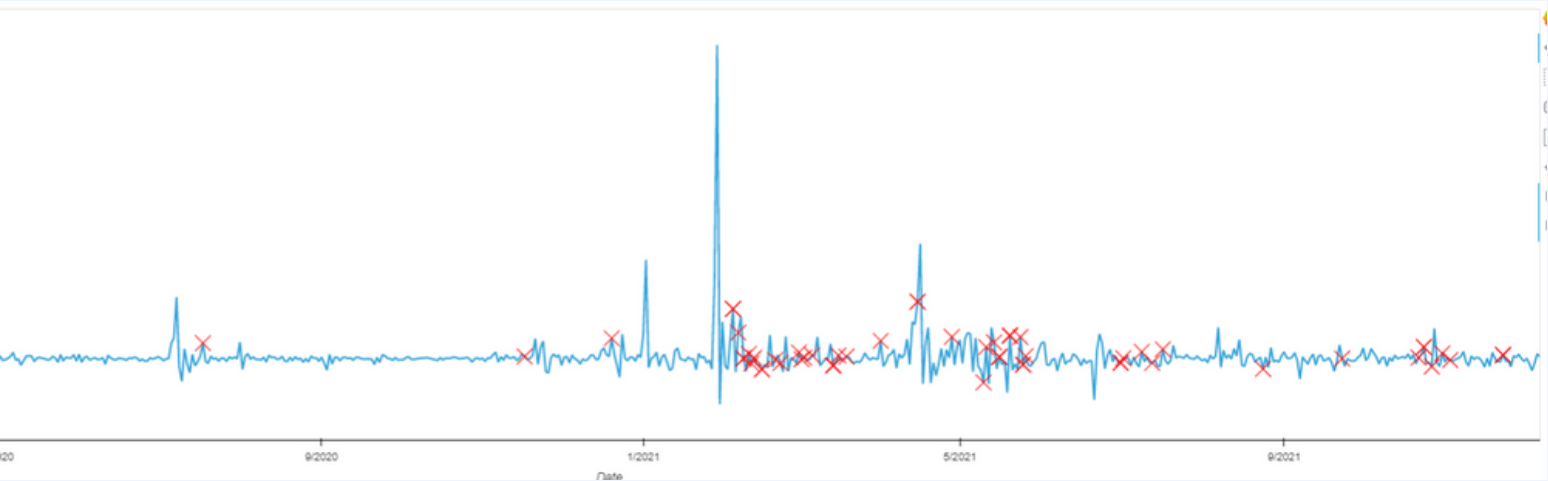
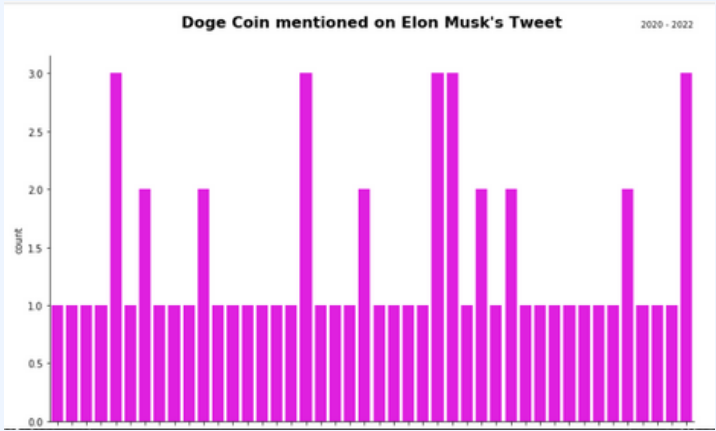
@DOGECAKE

@BITCOIN IS MY SAFE WORD

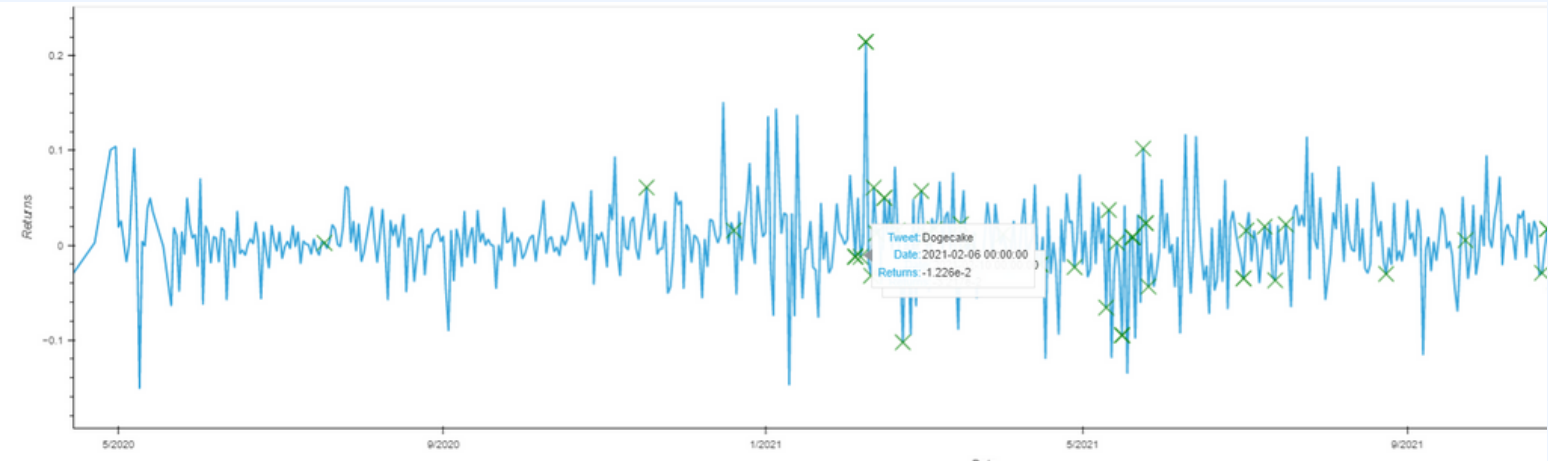
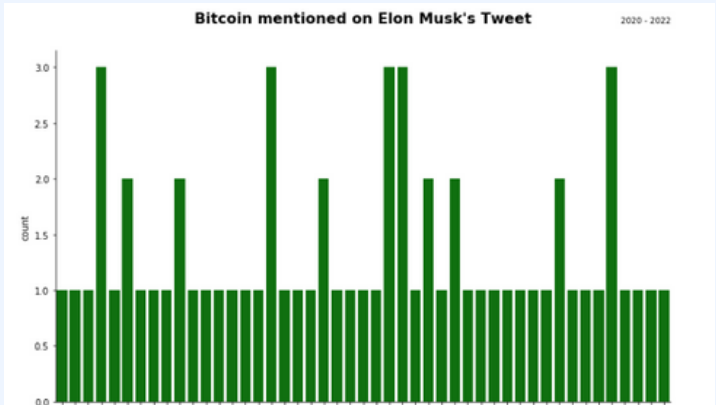


— ELON MUSK

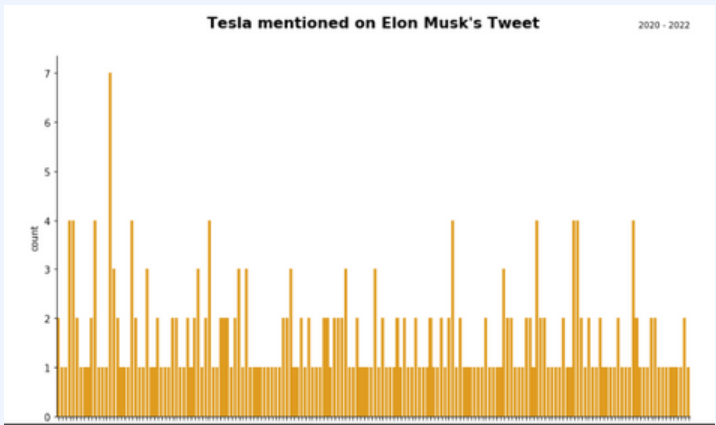
DOGE COIN



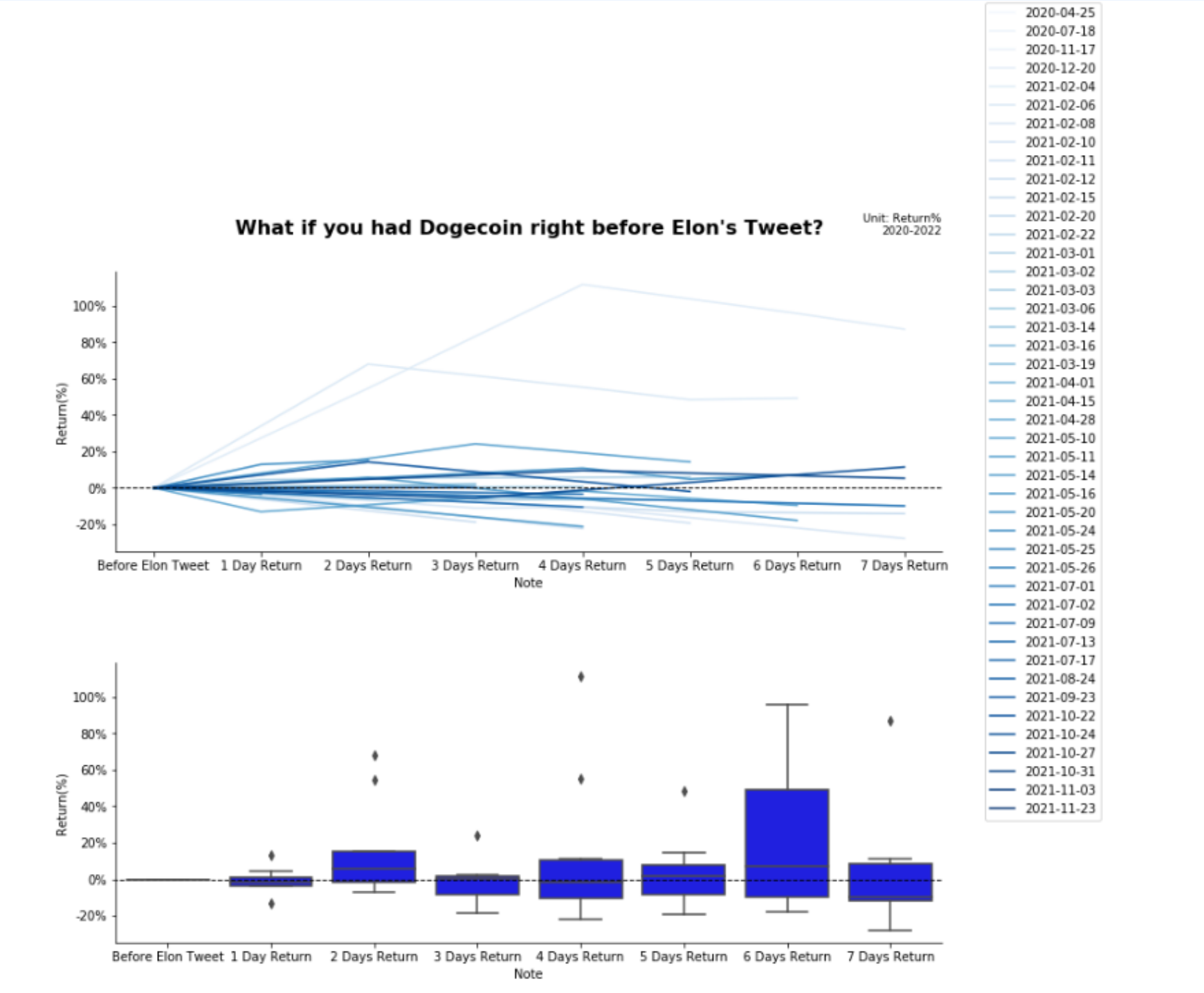
BITCOIN



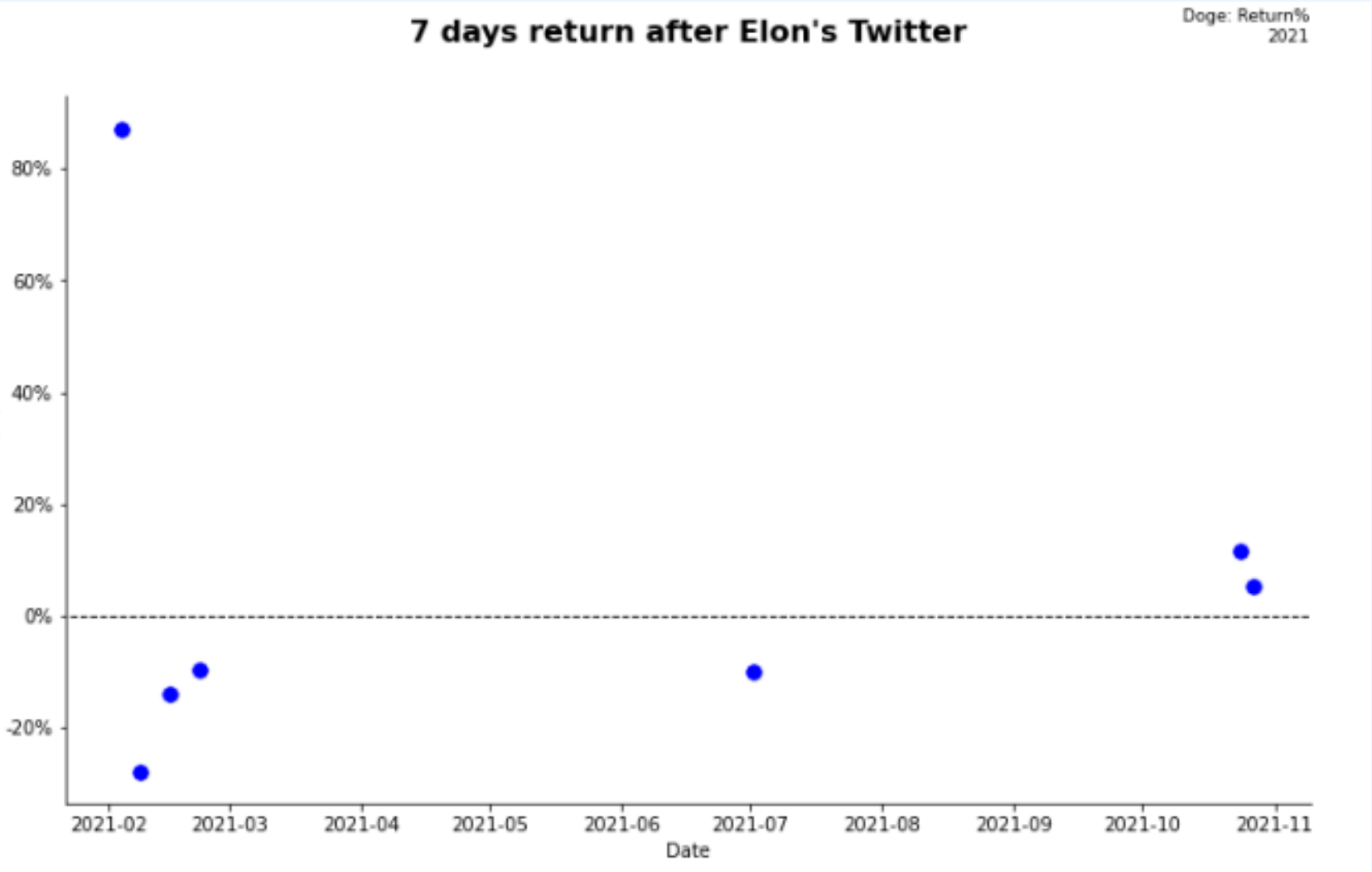
TESLA







The graph above shows the return for 7 days after purchase. The most influential days is the day Elon tweets, there is however a significant change on day 6. But this does not take into consideration the engagement on each of his tweets.



This shows the returns after 7 days.

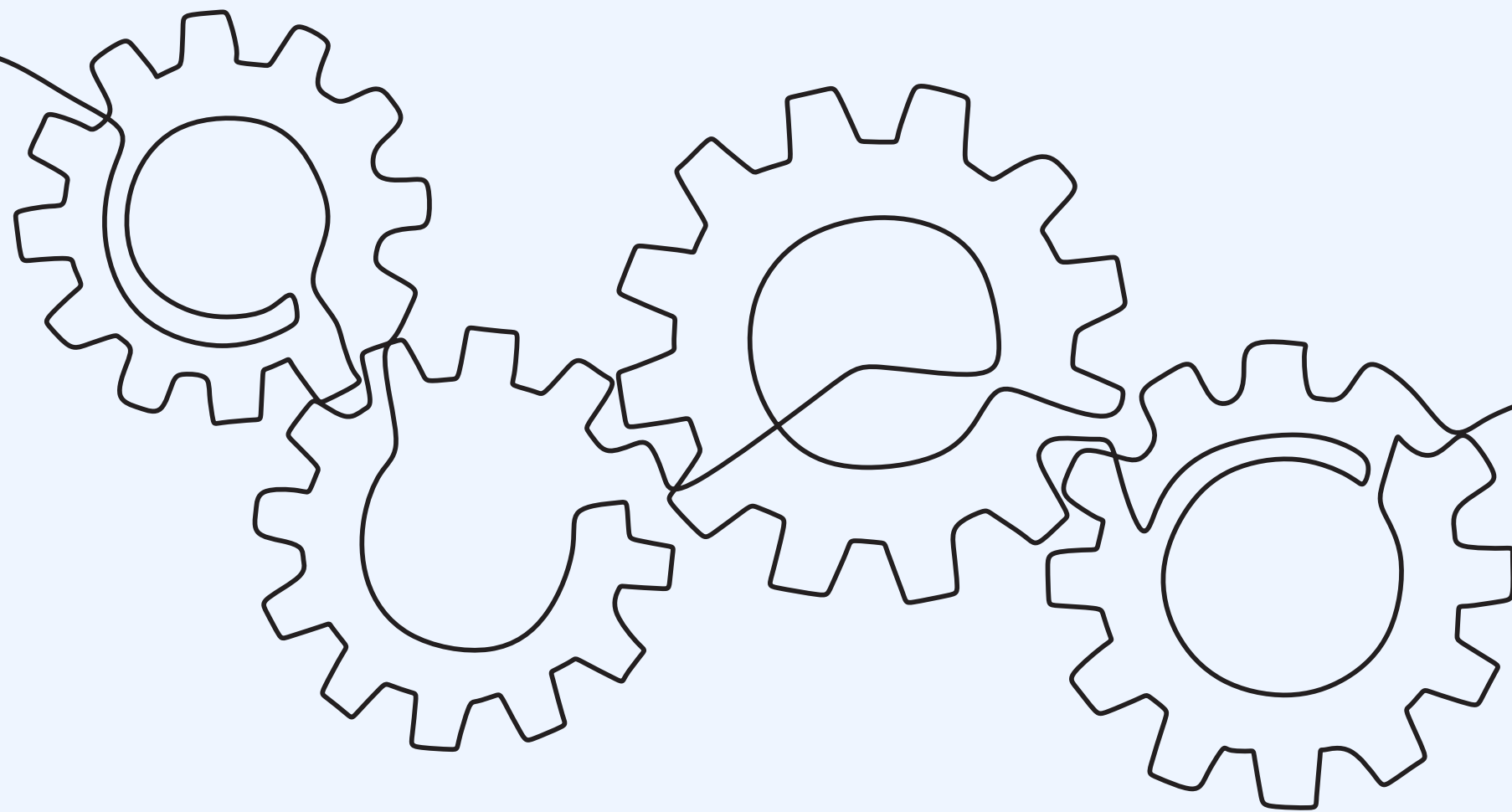
# ENGAGEMENT



Next step was to determine not just if the tweet itself had an impact on the stock or cryptocurrency but if the engagement on that tweet - likes & retweets had an impact.

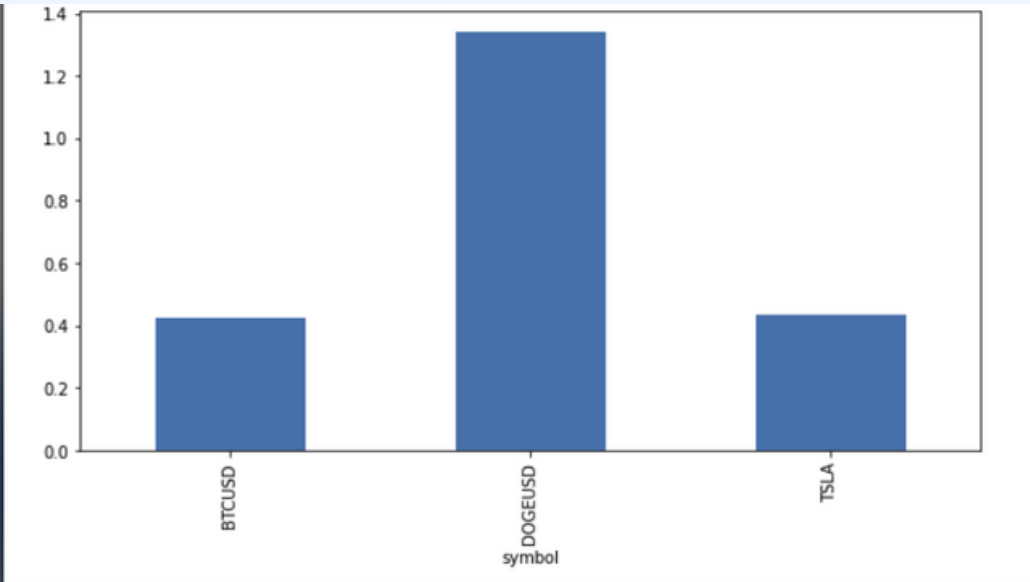


# FUNDAMENTAL ANALYSIS



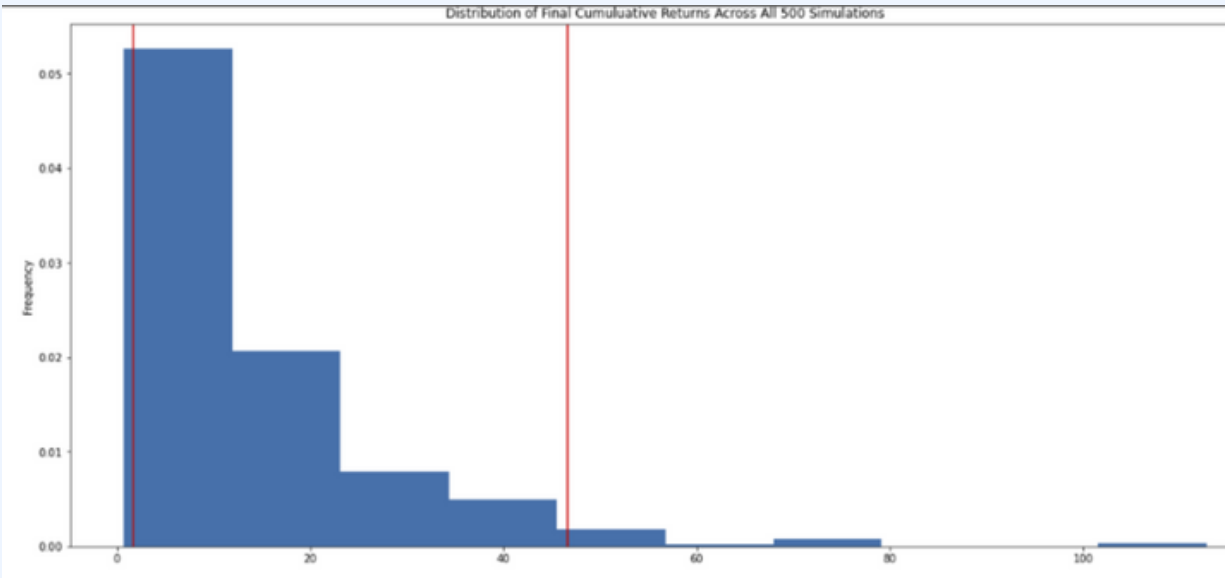
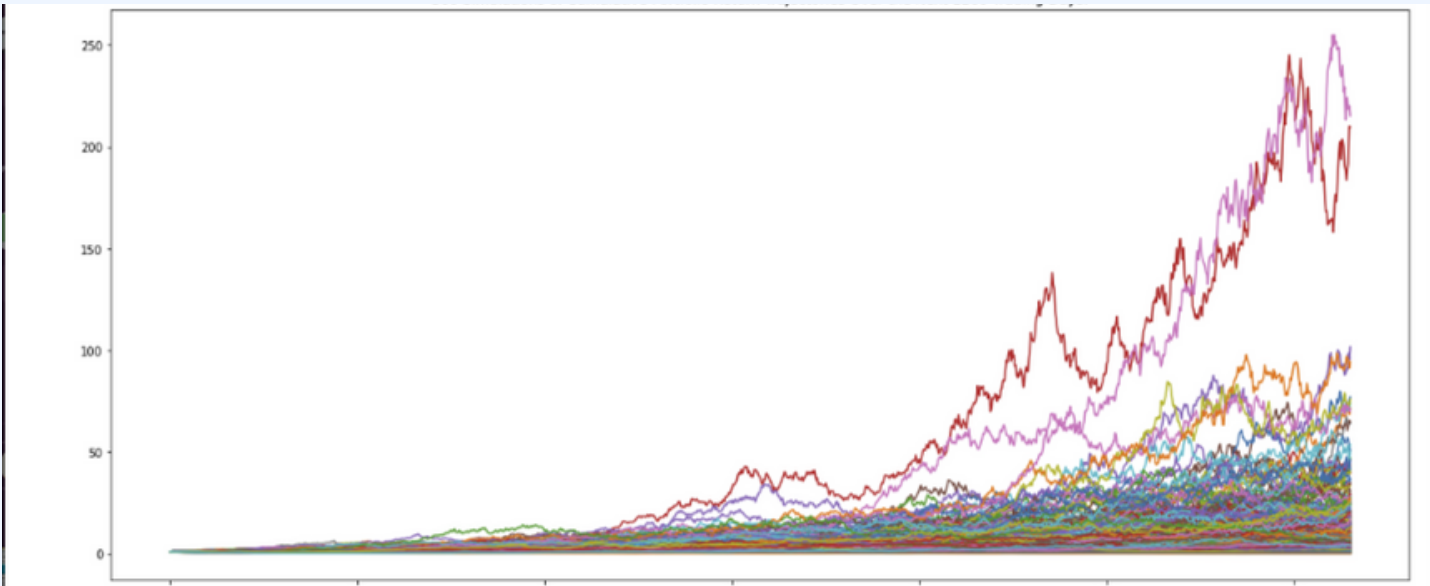
# SHARPE RATIO

Doge coin is the best return to risk asset.



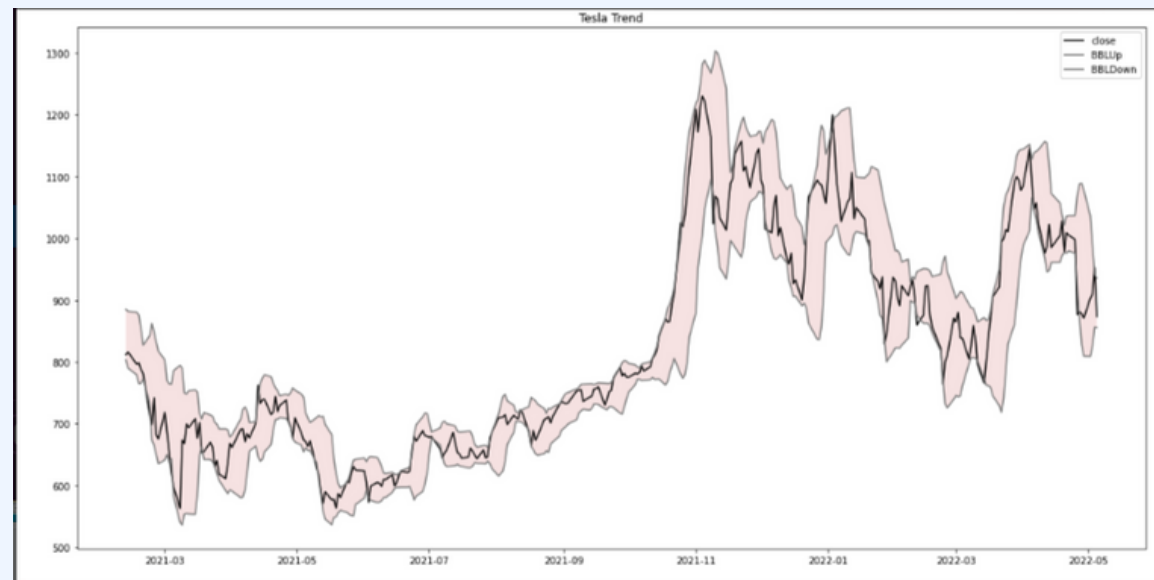
# MONTE CARLO

Simulation on return of \$500K investment. There is a 95% chance that on this portfolio return after 5 years will range between \$240K - \$2.5M

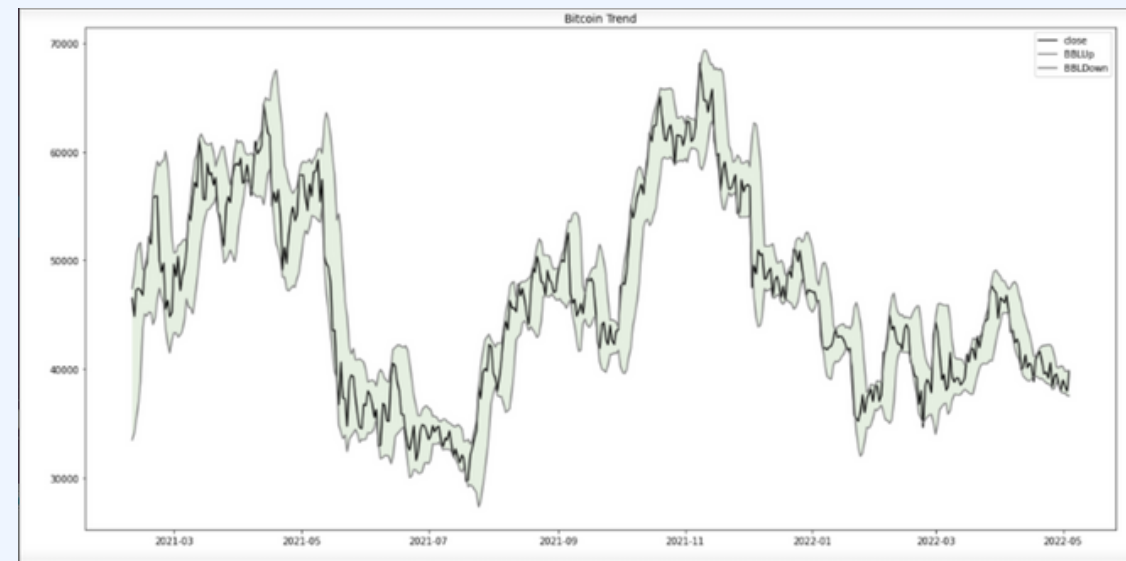


# BOLLINGER BARS

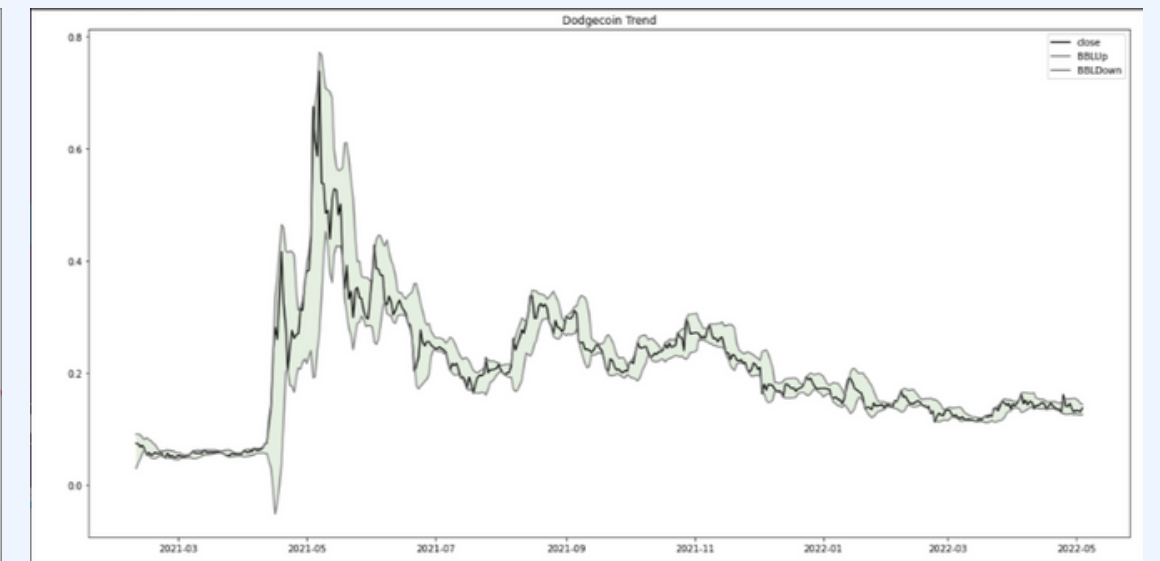
Bitcoin and Tesla is far more volatile than doge coin.



TESLA



BITCOIN



DOGE COIN

# CONCULSION

This is a high risk investment strategy -  
Not for the faint hearted.



# APPENDIX

