SOCIAL MEDIA DRIVEN MEME STOCKS STOCK PICKS

Trading via the sentiment of retail traders

Willson Pang DSI37

* Disclaimer: Not financial advice

NUMBERS

$12 BILLION

LOSS

Losses that hedge funds incurred during 2021

$6.8 BILLION

LOSS

Melvin Capital's loss in a month during GME frenzy. They have now closed down

$46 MILLION

GAINS

Amount of money Keith Gill made from his initial investment of $53,000

Source:
https://www.wsj.com/articles/melvin-plotkin-gamestop-losses-memestock-11643381321
https://www.ft.com/content/dcd86860-09ed-420e-a5cc-d6d281863c03
https://www.reuters.com/technology/year-gamestop-champion-roaring-kitty-is-quiet-yet-much-richer-2022-02-02/

52%

Amount of global assets that are under the management of retail investors and is expected to grow > 61% by 2030

Source:
https://www.weforum.org/agenda/2022/10/a-fresh-look-at-how-to-empower-retail-investors/

FACTORS THAT INFLUENCE THE INCEPTION OF RETAIL INVESTORS AND MEME STOCKS

01 $0 TRADING APPS & FRACTIONAL SHARES

Stock trading has never been more accessible than ever, individuals are able to buy stocks with as little as $1

02 PANDEMIC DOWNTIME

Pandemic has locked people up at home with a lot of free time

03 STIMULUS MONEY

Governments were handing out free money in an attempt to stimulate the economy

04 SOCIAL MEDIA FRENZY

With the free money and time, people started to band together on social medias to discuss of means to invest and make more money

Source:
https://www.thestreet.com/dictionary/r/retail-investors

“Retail investor activity could continue to have reverberating effects on the market, and may further shift dynamics among institution investors. Taking steps to facilitate strategic transformation and shore up resiliency could be key for firms stay ahead of this next step in the evolution of retail investing.”

—DELOITTE

Source:
https://www2.deloitte.com/us/en/pages/financial-services/articles/the-future-of-retail-brokerage.html

WORKFLOW

SOCIAL MEDIA

Scraping posts from r/wallstreetbets & r/investing subreddit

EDA

Perform EDA to find out the most discussed stocks in each subreddit

FORECAST MODELLING

Build a forecasting model to predict the stock price of the most discussed stocks

RECCOMENDATION

Build and deploy a visualization tool

01

SCRAPING & EDA

Finding out the stocks that is being talked about most

SCRAPING FROM REDDIT

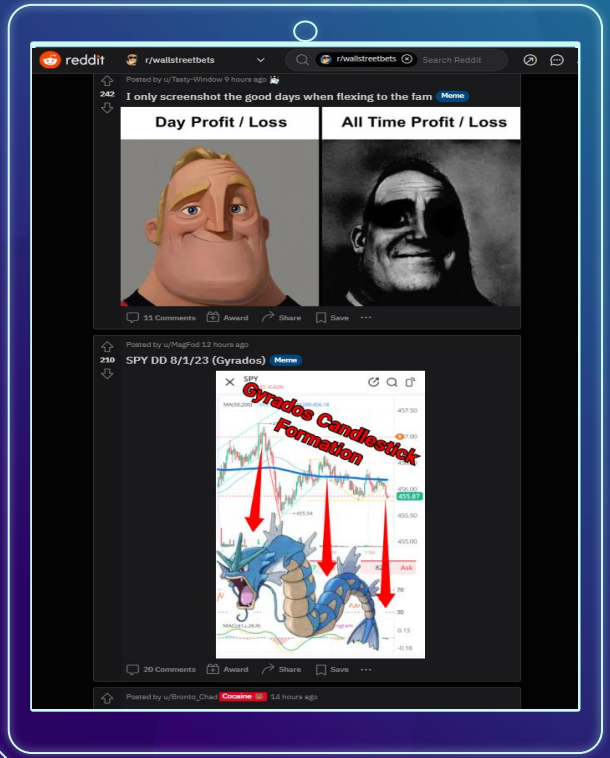
R/WALLSTREETBETS

The main subreddit that generated the meme stocks frenzy, adopts high risk, degenerative strategy

R/INVESTING

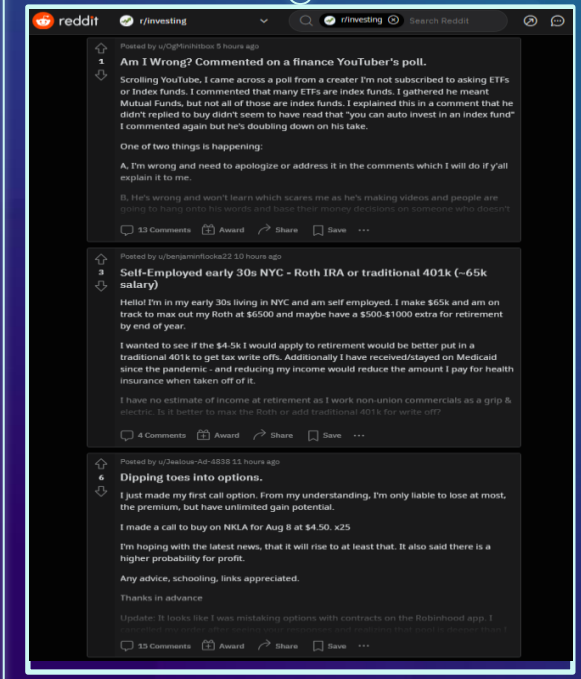
The subreddit that is more mature, and grounded. Adopts a lower risk, conservative strategy

SCRAPING FROM REDDIT



- r/wallstreetbets contains more images as the community tend to post more memes than actually writing down their due diligence

SCRAPING FROM REDDIT



- r/investing contains more written posts as the community are generally a bit more financially literate and do actually write down their due diligence and discuss their view

EDA & EXTRACTION

SCRAPE

Scrape the respective subreddits using reddit api PRAW

CLEANING

Cleaning the scraped data, check for null entries, duplicates, datatypes, etc

FEATURE ENGR

Merging feature, splitting words, defining stop words, filter for ticker potential symbols

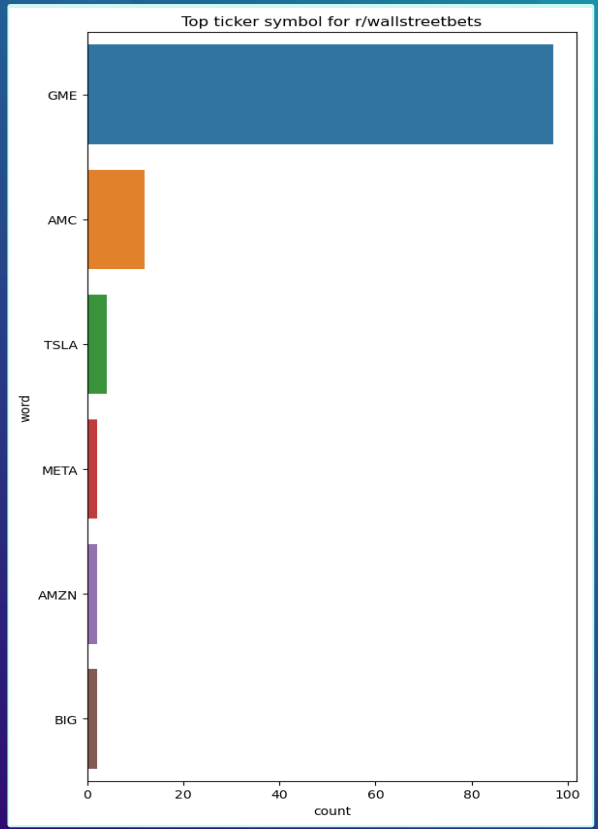
EXTRACTION

Extracting the most discussed ticker symbols in each subreddit

EXTRACTED TICKET SYMBOLS FROM REDDIT

r/wallstreetbets
Most discussed ticker symbols:

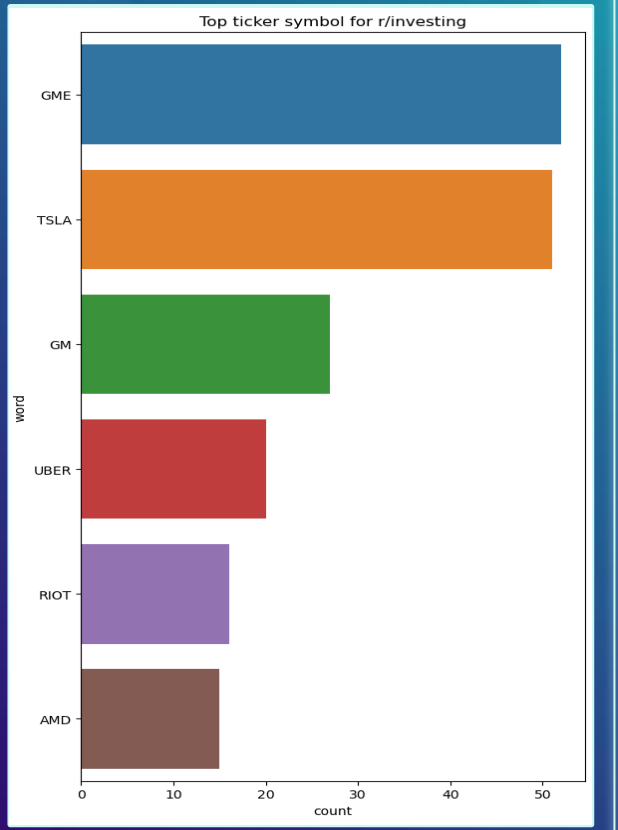
1. GME
2. AMC
3. TSLA
4. META



EXTRACTED TICKET SYMBOLS FROM REDDIT

r/investing
Most discussed ticker symbols:

1. GM
2. UBER
3. RIOT
4. AMD

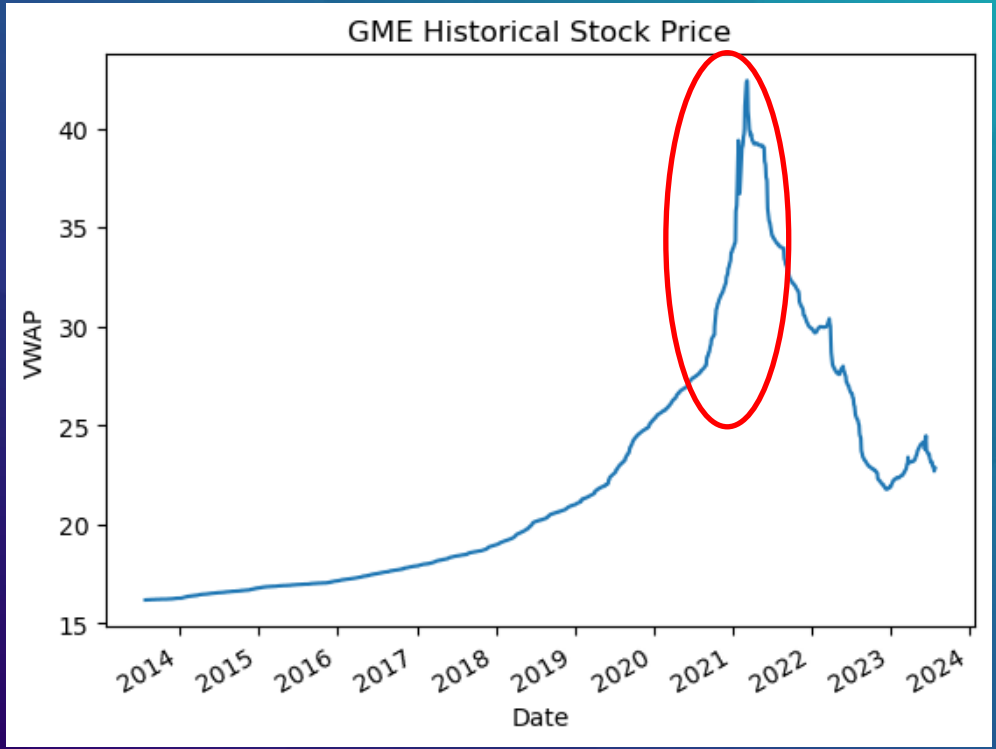


GAMESTOP HISTORICAL STOCK PRICE

VWAP ($) :

Volume Weighted Average Price

- Ratio of the value of a security traded to the total volume of transactions during a trading session.



AMC HISTORICAL STOCK PRICE

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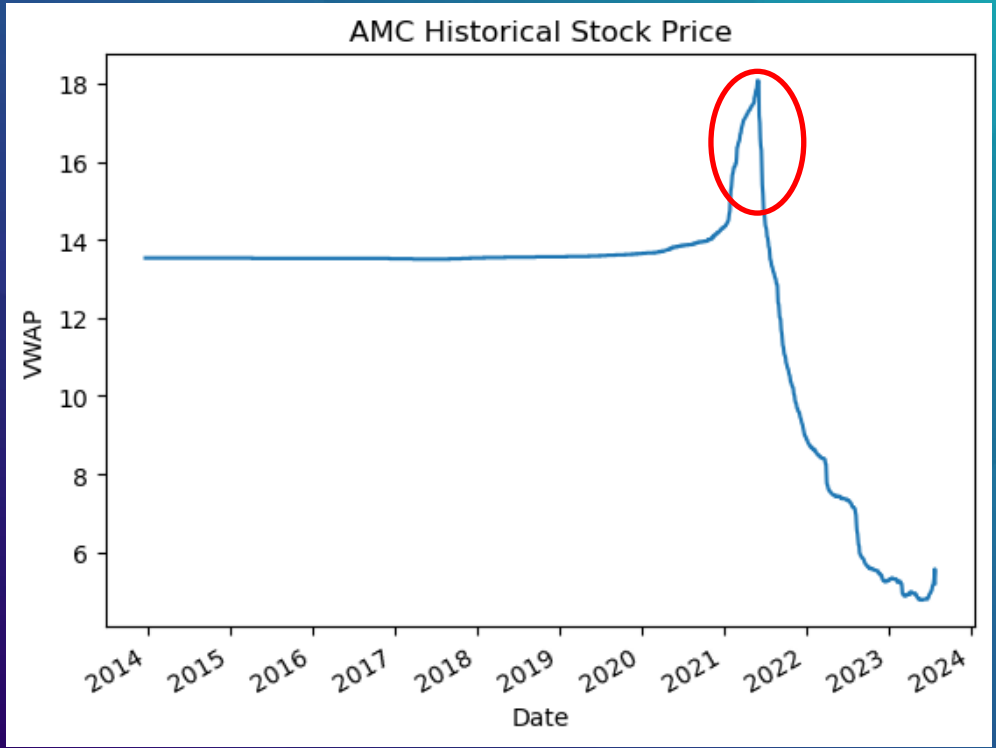

TESLA HISTORICAL STOCK PRICE

VWAP ($) :

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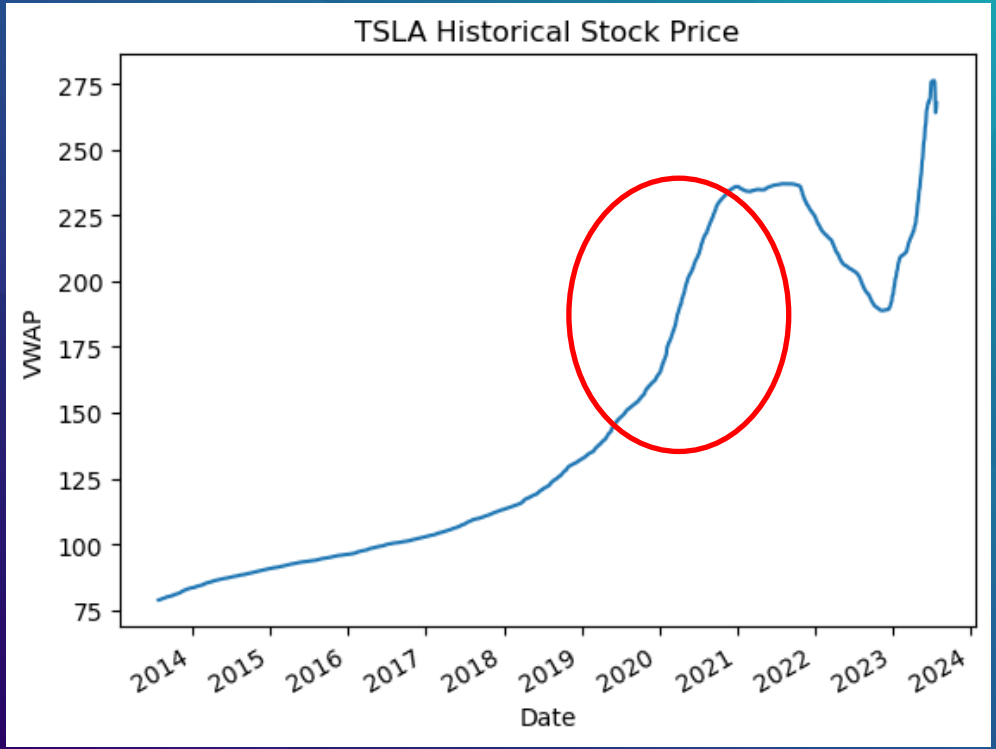

META HISTORICAL STOCK PRICE

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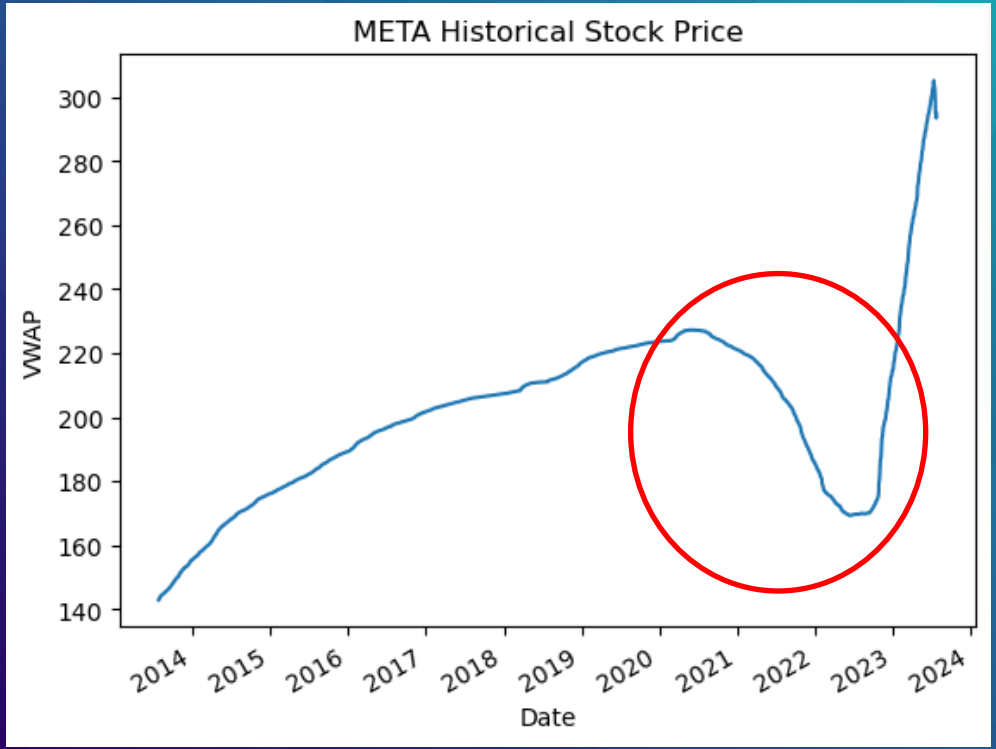

GM HISTORICAL STOCK PRICE

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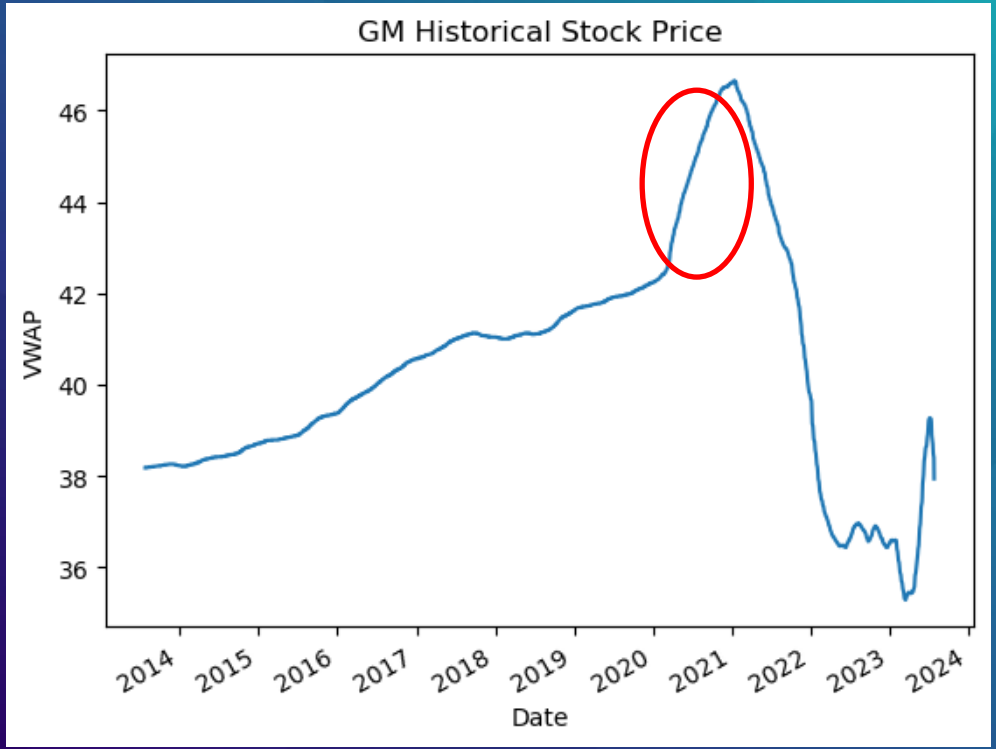

UBER HISTORICAL STOCK PRICE

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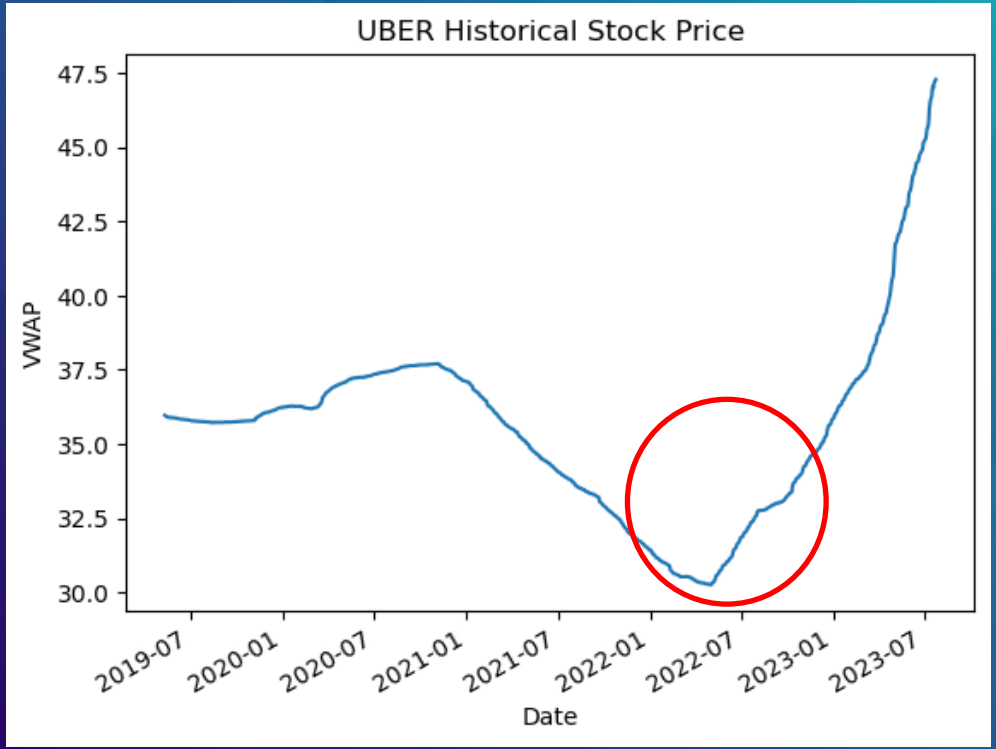

RIOT PLATFORMS HISTORICAL STOCK PRICE

VWAP ($) :

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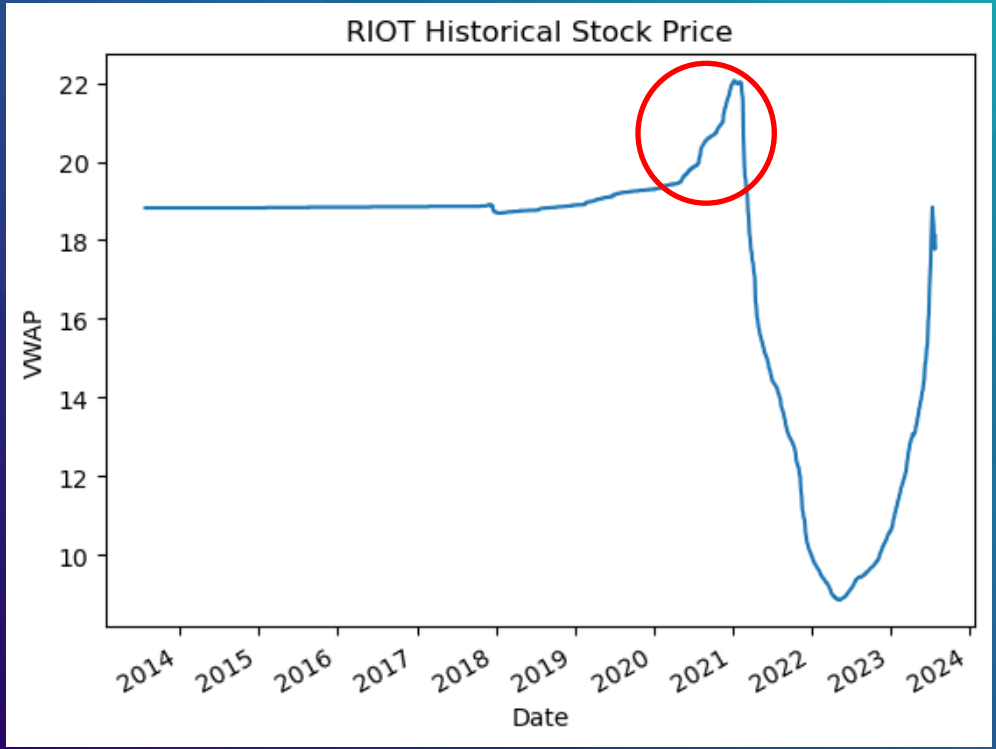

AMD HISTORICAL STOCK PRICE

VWAP ($) :

Volume Weighted Average Price

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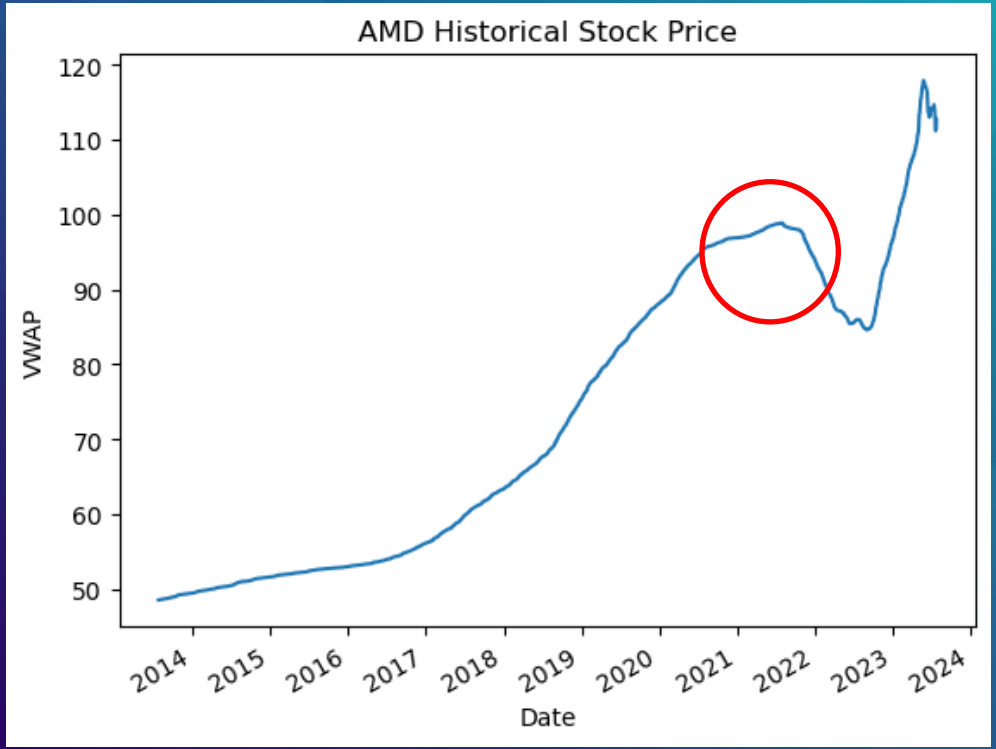

02

FORECAST MODELLING

Building up the model to forecast the future stock prices

REGRESSION MODELS

	R2	MAPE
Orthongonal Matching Pursuit (OMP)	-0.72	8.46%
Linear Regression	-0.72	8.4%
Ridge Regression	-0.72	8.47%
Random Forest Regressor	-1.94	8.97%

OTHER MODELS

	R2	MAPE
Huber Regressor with Condition, Deseasonalize & Detrending	-0.55	0.36%
Auto ARIMA	-0.7	0.39%
Theta Forecaster	-2.47	0.64%
Naïve Forecaster	-3.0	0.67%

FBPROPHET (FINAL)

	R2	MAPE
GME	0.98	2.01%
AMC	0.98	2.36%
TSLA	0.97	2.91%
META	0.72	3.86%

FBPROPHET (FINAL)

	R2	MAPE
GM	0.92	1.05%
UBER	0.99	0.18%
RIOT	0.90	4.4%
AMD	0.96	2.28%

EXTRACTED TICKET SYMBOLS FROM REDDIT

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Most discussed ticker symbols:

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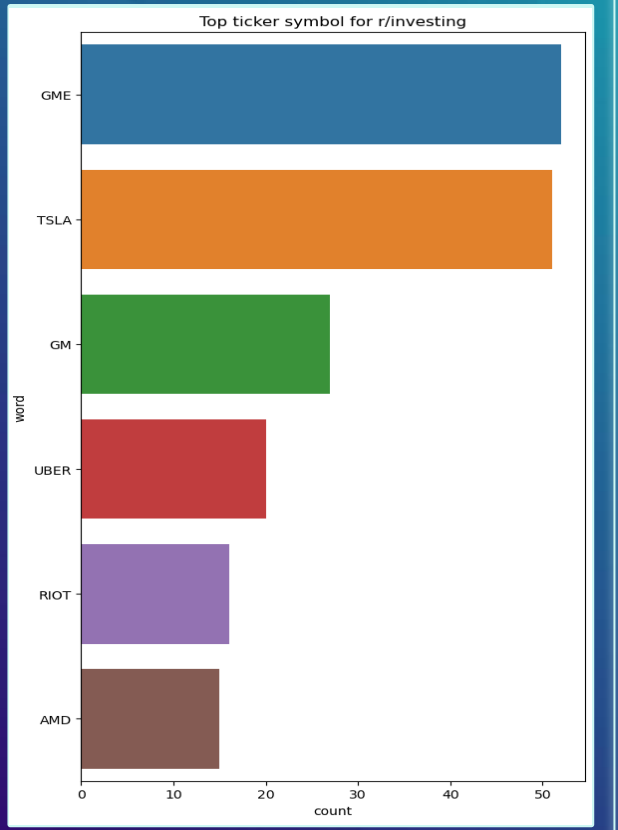
4. AMD



03

RECOMMENDATION

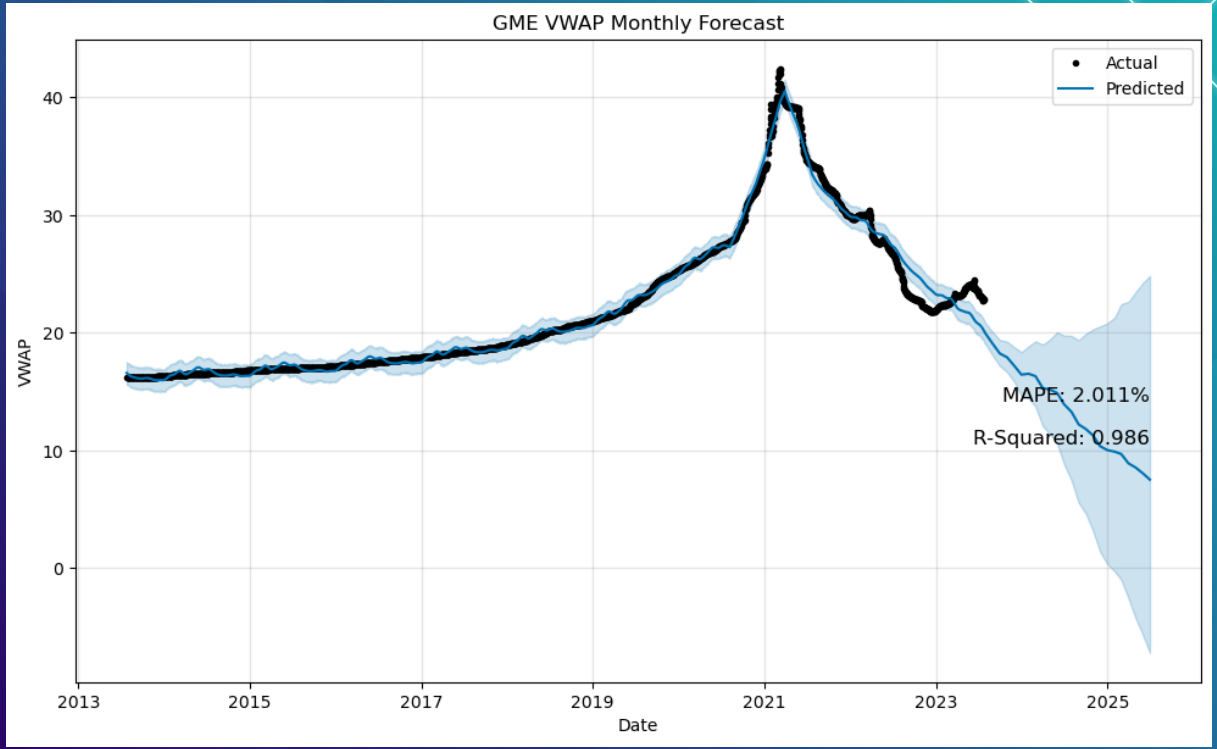
So what to make of it?

GAMESTOP STOCK PRICE FORECAST

Forecast Period : 2 years

Recommendation:

SELL

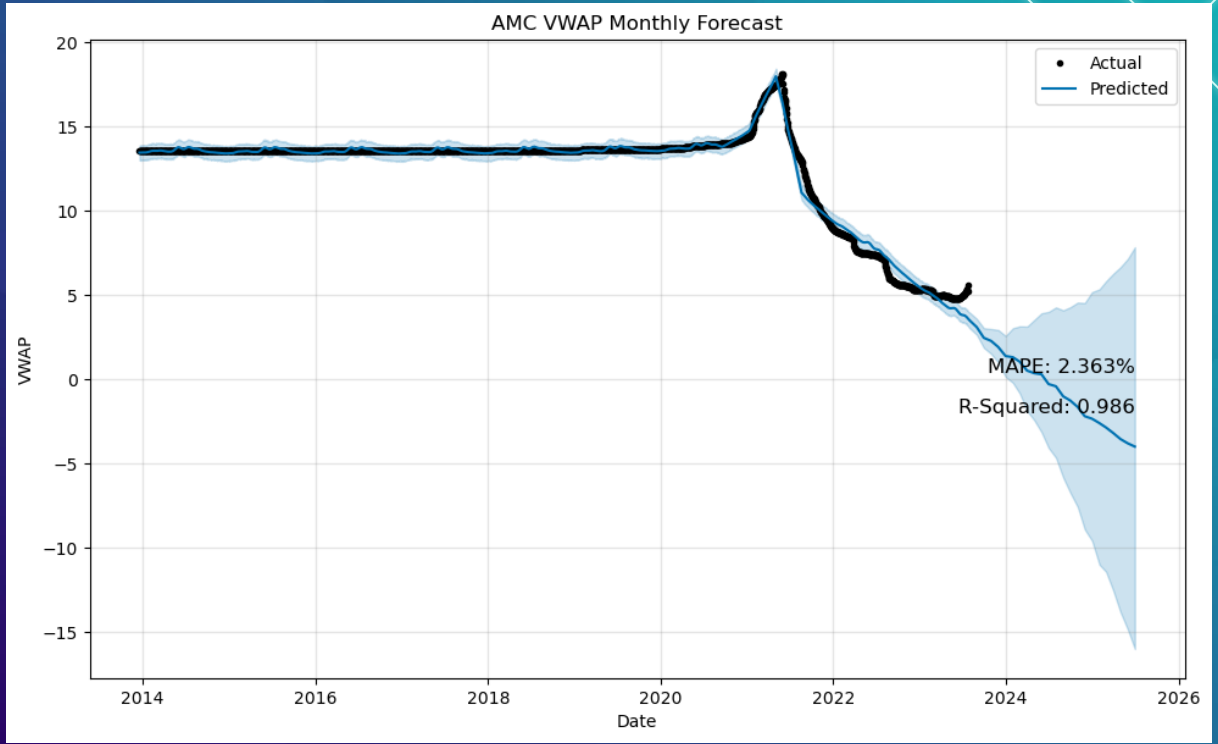


AMC STOCK PRICE FORECAST

Forecast Period : 2 years

Recommendation:

SELL



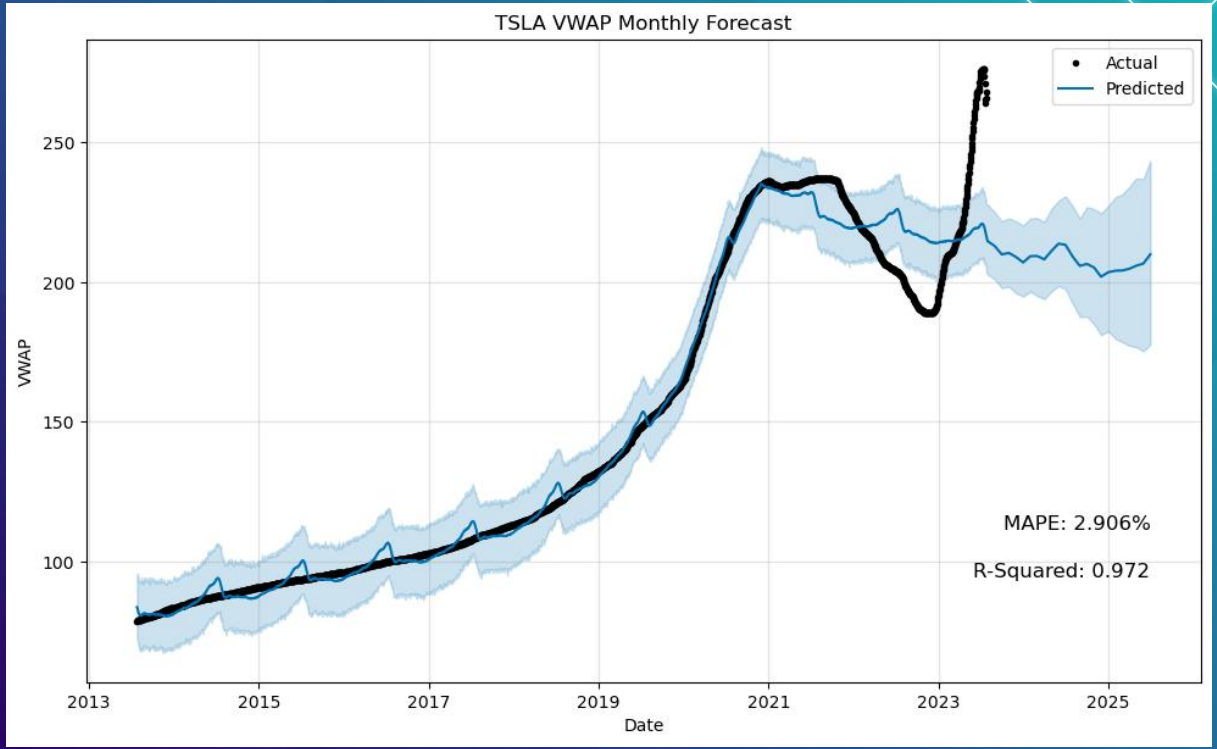
TESLA STOCK PRICE FORECAST

Forecast Period : 2 years

Recommendation:

Depends

on your personal risk tolerance



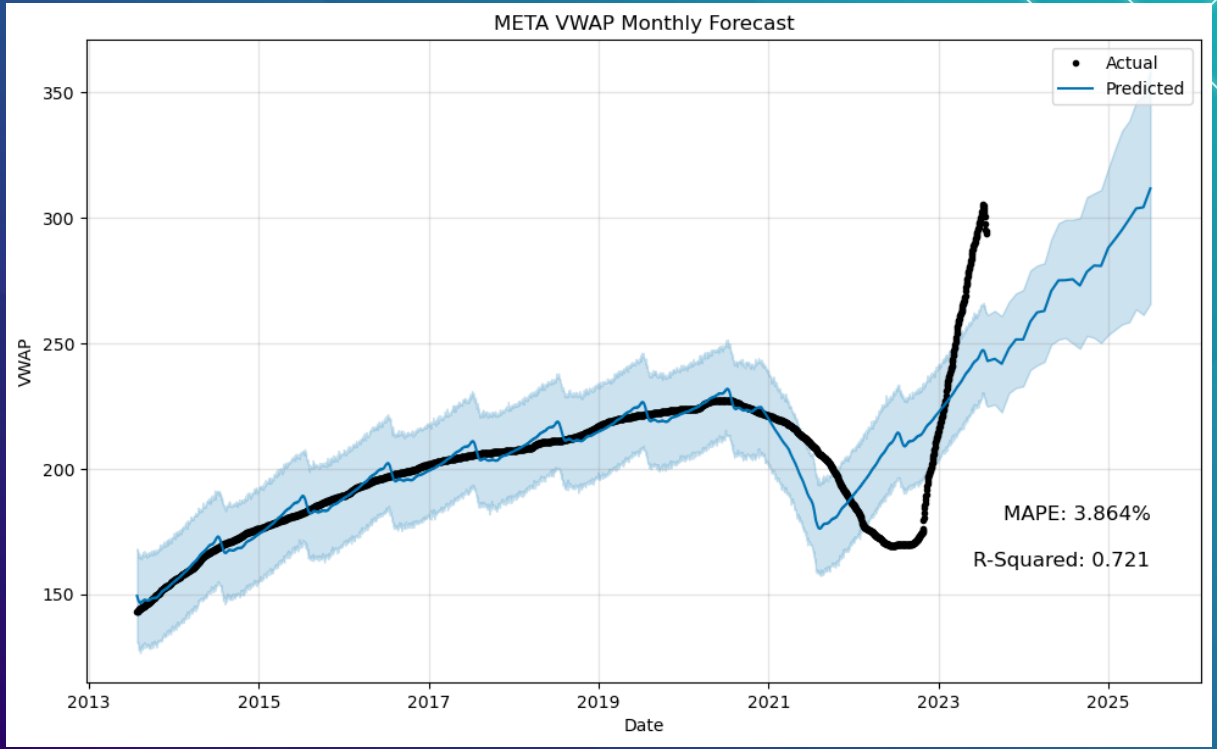
META STOCK PRICE FORECAST

Meta

Forecast Period : 2 years

Recommendation:

BUY

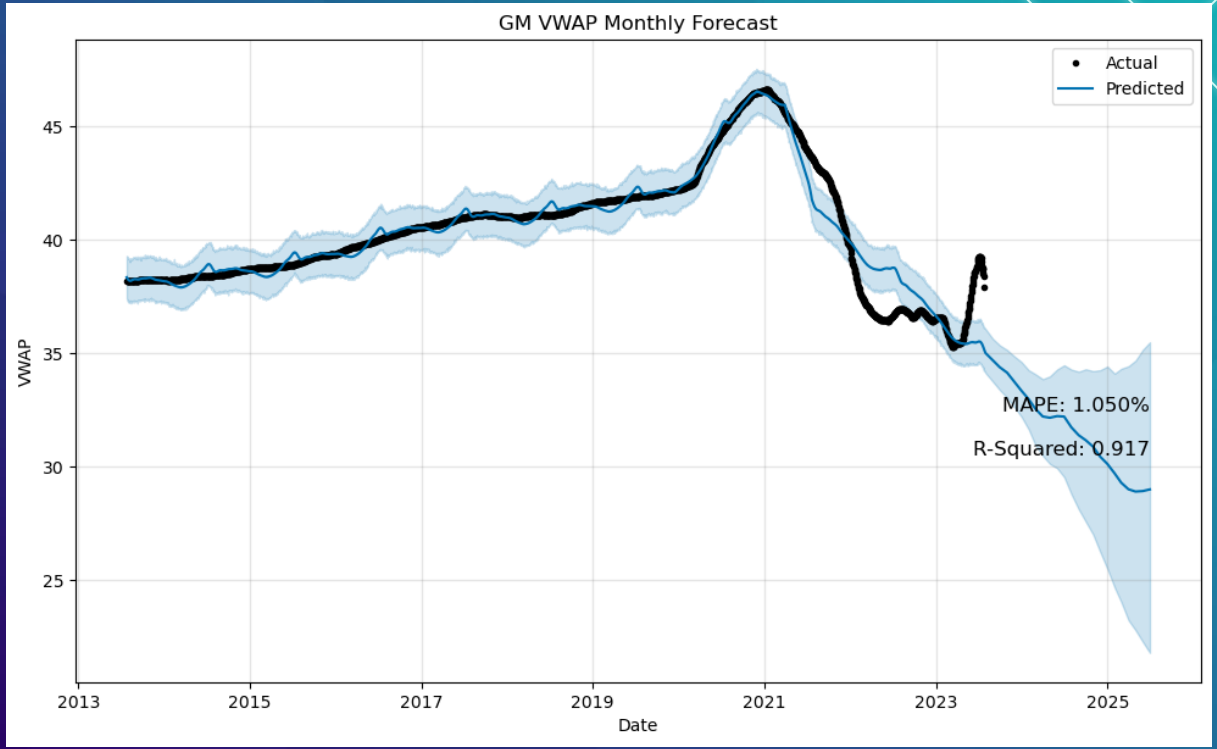


GM STOCK PRICE FORECAST

Forecast Period : 2 years

Recommendation:

SELL

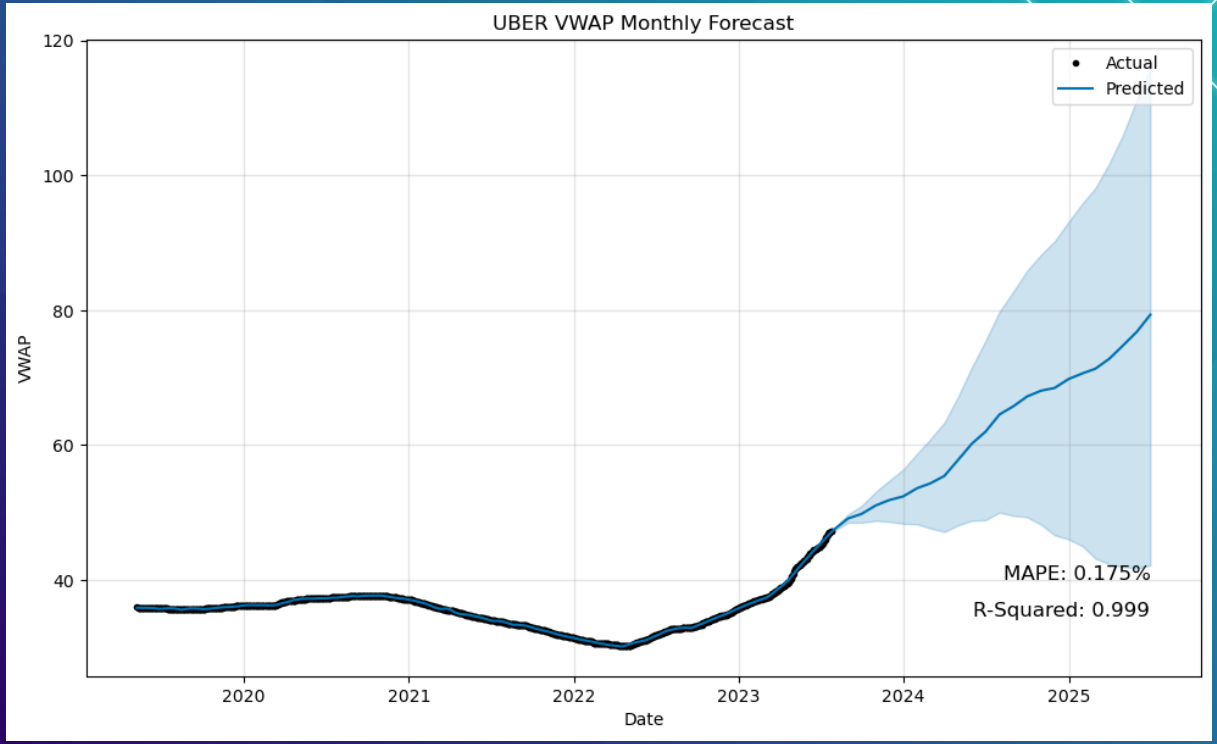


UBER STOCK PRICE FORECAST

Forecast Period : 2 years

Recommendation:

BUY



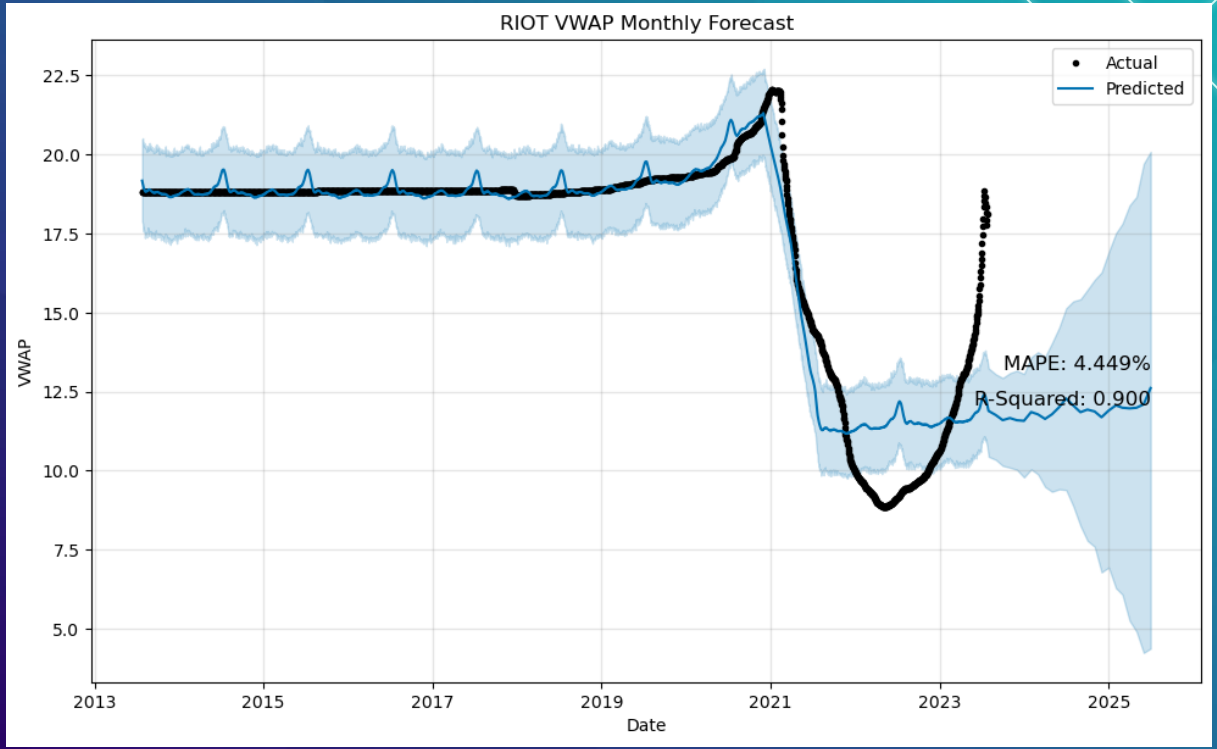
RIOT PLATFORMS STOCK PRICE FORECAST

Forecast Period : 2 years

Recommendation:

Depends

on your personal risk tolerance

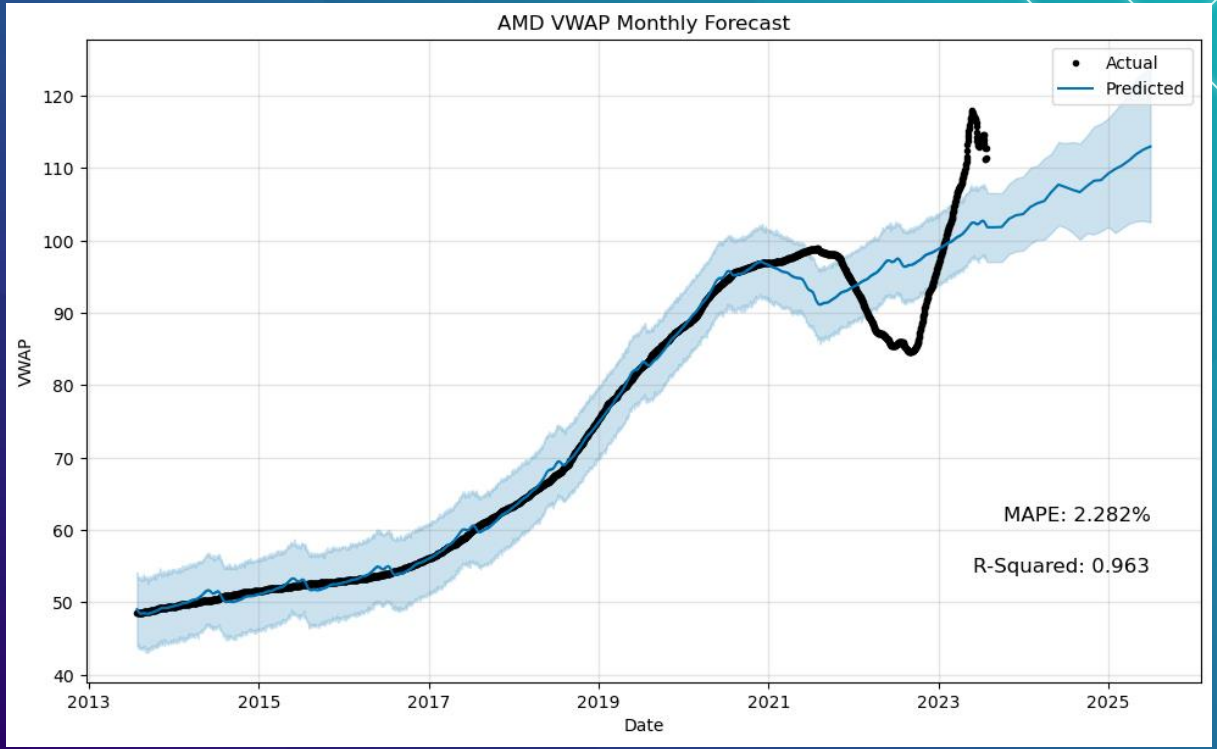


AMD STOCK PRICE FORECAST

Forecast Period : 2 years

Recommendation:

BUY



DISCLAIMERS

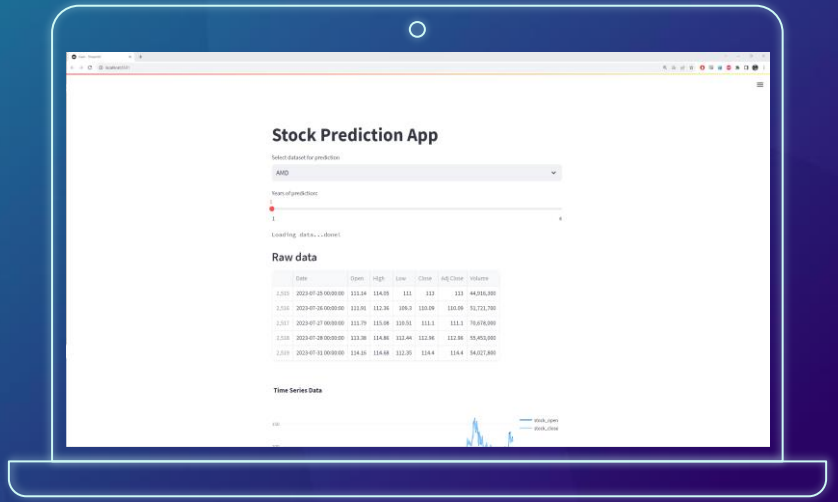
1. This is NOT financial advise.
   - Please always consult a professional investment advisor before making any investment decision.
2. Correlation does not imply causation.

1. “Nobody knows if a stock is gonna go up, down, sideways, or in circles.”
   - Mark Hanna, Wolf of Wall Street (2013)
2. “All models are wrong, but some are useful.”
   - George Box

04

DEMONSTRATION

Demonstration of the streamlit visualization dashboard



FUTURE WORKS

NLP

To implement more advanced NLP techniques into the process of filtering for ticker symbols from social media

NEURAL NETWORKS

To test and implement other neural network forecasting model in an attempt to develop a model that can better deal with non-stationary data

DYNAMIC

To implement dynamic data to get updated predictions everytime the app is used

SOCIAL MEDIAS

To expand our data collection to other forms of social media other than reddit to better grasp retail investors' trend

EXPANSION

Expand our selection of stocks to generate forecast for whicever stock the user is interested in

SENTIMENT

To build and implement a robust sentiment analysis model to also incorporate sentiment retail investors' to each ticker symbol

THANKS!

Do you have any questions?

Wanna fund me? Kindly approached me to discuss for future collaboration opportunities.