

Trading System using Streamlit

From: Lance Cheah

Introduction

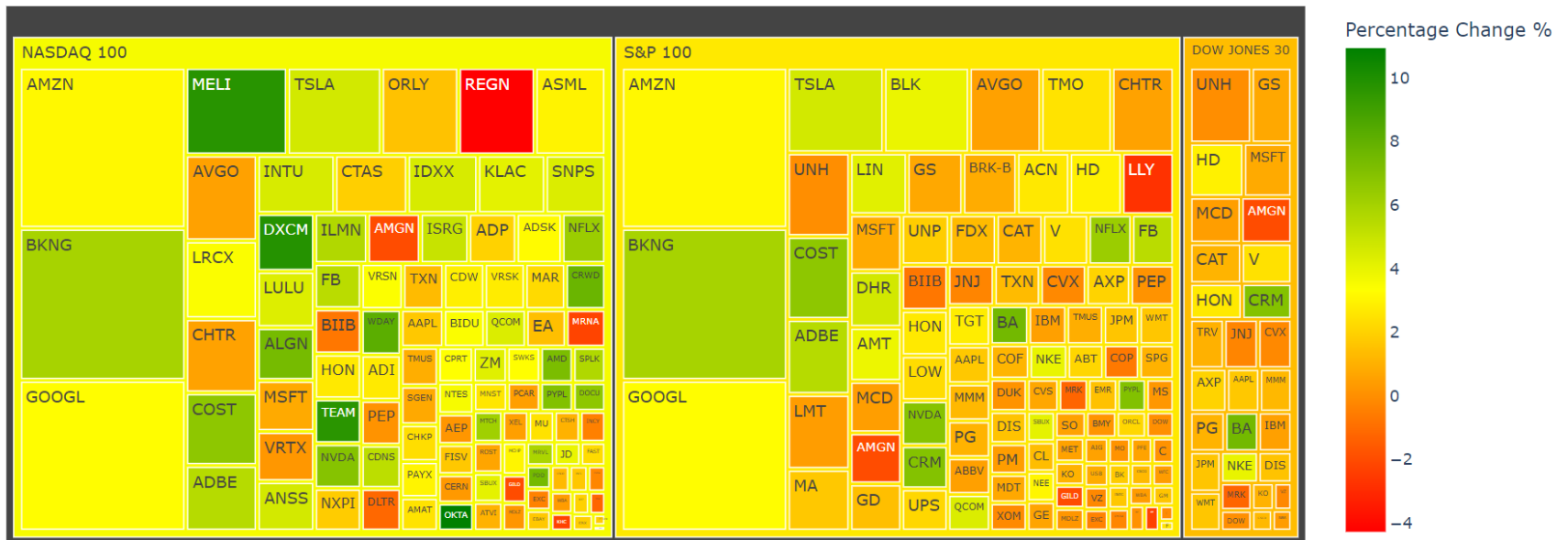
- ◉ The 3 main functions we are building:
- ◉ A stock analysis
- ◉ A Breakout System
- ◉ A Sentiment Analysis

Stock Analysis

- ◉ In this analysis, we are creating a few useful functions such as:
- ◉ A Interactive Tree Diagram
- ◉ Real time News
- ◉ Stock Chart
- ◉ Volume Chart
- ◉ Fear Index (VIX)

Interactive Tree Diagram

Stock Index Map



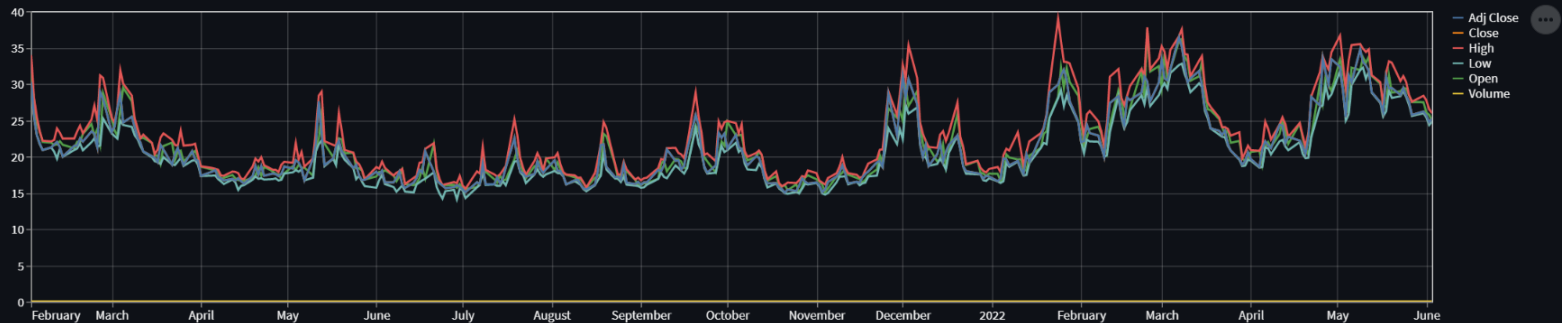
Real Time News, Stock Price, Volume



Fear & Greed Index (VIX) with Stock Database

	Open	High	Low	Close	Adj Close	Volume
2021-02-01T00:00:00	133.7500	135.3800	130.9300	134.1400	132.9531	106239800
2021-02-02T00:00:00	135.7300	136.3100	134.6100	134.9900	133.7956	83305400
2021-02-03T00:00:00	135.7600	135.7700	133.6100	133.9400	132.7549	89880900
2021-02-04T00:00:00	136.3000	137.4000	134.5900	137.3900	136.1744	84183100
2021-02-05T00:00:00	137.3500	137.4200	135.8600	136.7600	135.7525	75693800

Fear and Greed Volatility Index - VIX



Breakout Trading Strategy

- ◉ In this analysis, we are creating a few useful functions such as:
- ◉ Real time comparison of multiple stocks
- ◉ Selection of period to optimize the best return
- ◉ Portfolio return
- ◉ Individual stock (Return, Sharpe, Drawdown)

Main Screen

Fully interactive (Real Time)

Menu

Breakout

Select Indices

NASDAQ 100

Select Stock Symbol

MSFT X AAPL X

TSLA X

Start Date

2021/02/01

End Date

2022/06/04

Period

5 - +

DOW JONES

32813.23

↓ -0.54%

S&P 500

4101.23

↓ -0.75%

NASDAQ

11994.46

↓ -0.72%

Trading System

Breakout Trading Strategy

Breakout wikipedia +

Portfolio KPI Score

	Return	Sharpe Ratio	Max Drawdown
Portfolio	0.0900	0.6800	0.0600

Portfolio Chart +

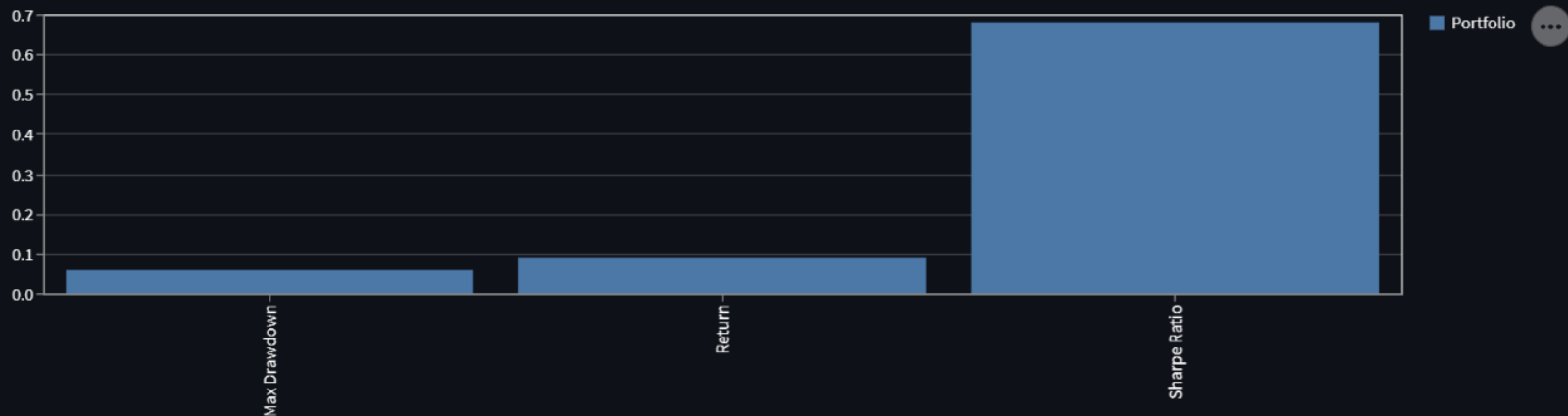
Portfolio KPI & Chart

(Return, Sharpe Ratio, Draw Down)

Portfolio KPI Score

	Return	Sharpe Ratio	Max Drawdown
Portfolio	0.0900	0.6800	0.0600

Portfolio Chart



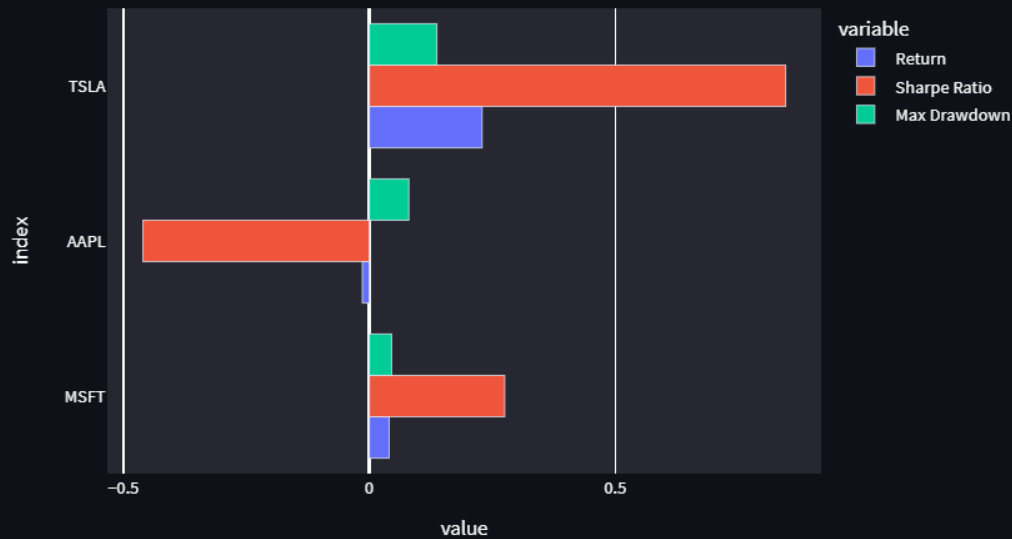
Portfolio Return



Individual Stock KPI with Chart

Individual Stock KPI Scores

	Return	Sharpe Ratio	Max Drawdown
MSFT	0.0403	0.2751	0.0452
AAPL	-0.0143	-0.4602	0.0803
TSLA	0.2291	0.8463	0.1372



Sentiment Analysis

- ◉ In this analysis, we are creating a few useful functions such as:
- ◉ Tweet are pull from Twitter for our analysis.
- ◉ Unlimited on the number of tweet for analysis.
- ◉ Able to search different dates for research
- ◉ Wordcloud for easy view on the frequent words.
- ◉ Top 5 Positive & Negative Keywords.
- ◉ Break down on the Positive, neutral & negative sentiment on the tweet.

Sentiment Analysis

Menu

Sentiment

Query:

AAPL

Enter the number of tweets you want to Analyze:

100

Start Date:

2022/06/01

End Date:

2022/06/04

Trading System

Sentiment Analysis

	Datetime	Tweet Id	Text	Username
0	2022-06-03T17:25:44+00:00	1532775556034572288	SAAPL dropping below the 20MA an...	TSwingah
1	2022-06-03T17:21:37+00:00	1532774519189954561	Intraday Option Volumes \$TSLA 1.2...	MarketRebels
2	2022-06-03T17:21:10+00:00	1532774404027043842	SAAPL see you next week bae	_theWillmeister
3	2022-06-03T17:15:25+00:00	1532772958187532288	We need some buyers in \$TSLA and ...	JakeCatskill
4	2022-06-03T17:12:47+00:00	1532772293918789632	Most Traded Contracts SAAPL 03 Ju...	MarketRebels
5	2022-06-03T17:03:26+00:00	1532769941367054336	🔥 OPTION PLAY! 🔥 Ticker: SAAPL...	CeoPurchases
6	2022-06-03T17:02:33+00:00	1532769722239922176	SAAPL Strike: 150.00 Expiration: 202...	TWAOPTIONS
7	2022-06-03T17:02:33+00:00	1532769722231533568	SAAPL Strike: 146.00 Expiration: 202...	TWAOPTIONS
8	2022-06-03T16:56:34+00:00	1532768214874193920	Rally again?? \$SPY \$QQQ SAAPL SA...	vnkumarvnk
9	2022-06-03T16:56:31+00:00	1532768200495988736	SAAPL back over its vwan here \$OO...	momotrader

Download Text Analysis Results

Since 3 days, 0:00:00, there have been, 100, tweets on AAPL

Details breakdown

Since 3 days, 0:00:00, there have been, 100, tweets on AAPL

Number of Positive Sentiment: 39

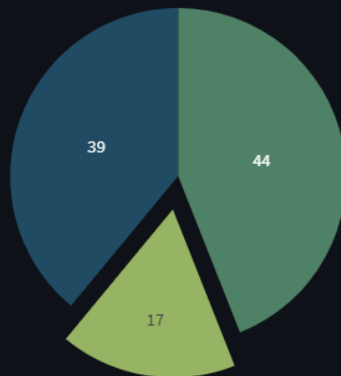
Number of Neutral Sentiment: 44

Number of Negative Sentiment: 17

Pie Cart Visualization

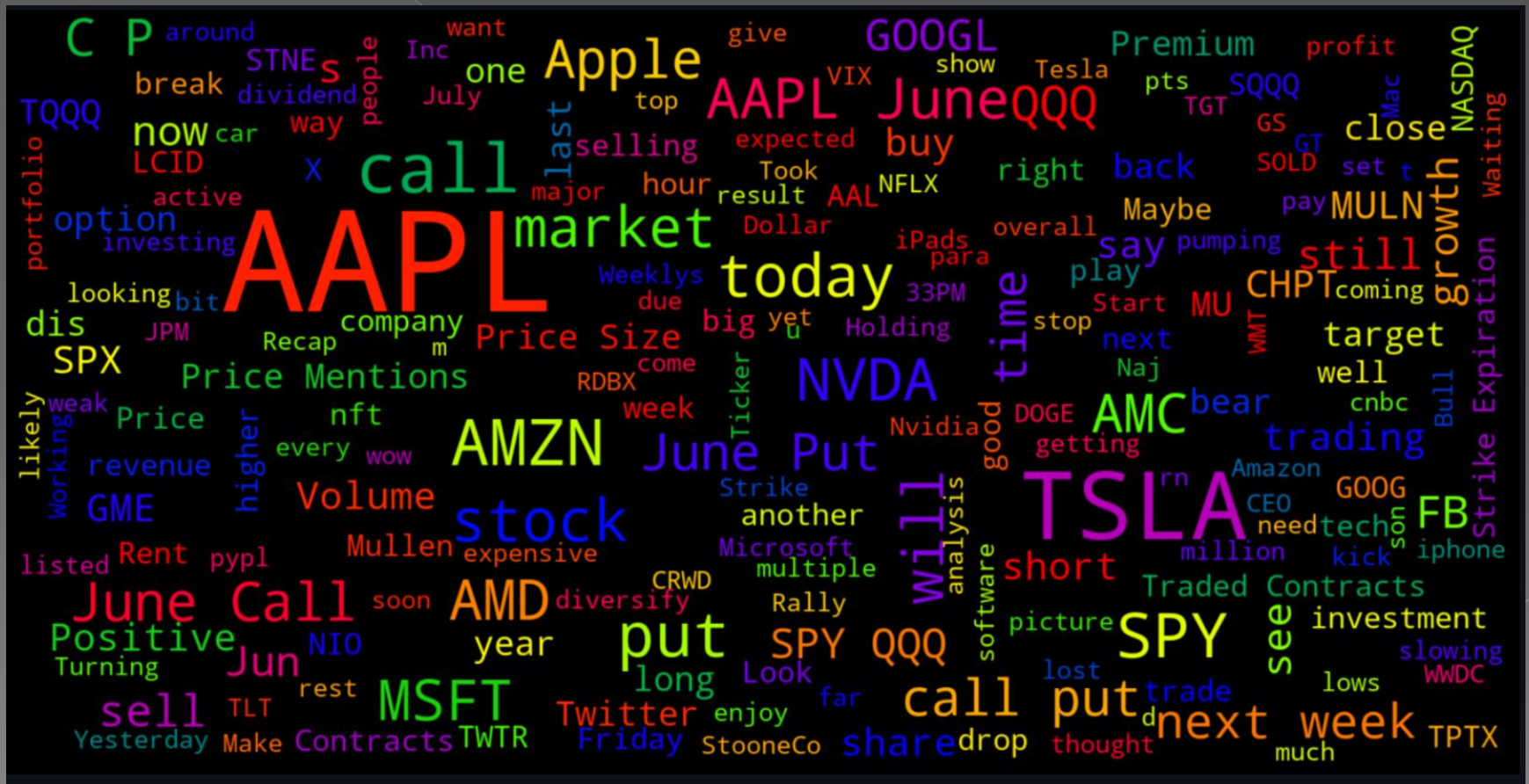
Word Cloud Visualization

+



■ Neutral [44%]
■ Positive [39%]
■ Negative [17%]

Wordcloud on frequent keywords



Top 5 Keywords

Top 5 Positive Keywords

The top 5 Positive Sentiment:

```
▼ [
  ▼ 0 : [
    0 : "AAPL"
    1 : 18
  ]
  ▼ 1 : [
    0 : "n"
    1 : 11
  ]
  ▼ 2 : [
    0 : "stocks"
    1 : 5
  ]
  ▼ 3 : [
    0 : "TSLA"
    1 : 5
  ]
  ▼ 4 : [
    0 : "will"
    1 : 3
  ]
]
```

Top 5 Negative Keywords

The top 5 Negative Sentiment:

```
▼ [
  ▼ 0 : [
    0 : "AAPL"
    1 : 11
  ]
  ▼ 1 : [
    0 : "Strike"
    1 : 3
  ]
  ▼ 2 : [
    0 : "Expiration"
    1 : 3
  ]
  ▼ 3 : [
    0 : "TSLA"
    1 : 3
  ]
  ▼ 4 : [
    0 : "Pu"
    1 : 2
  ]
]
```


Ending Notes

- ◉ I have attached a library.txt in case you need help on certain library version no compatible.
- ◉ Here is the link to the github:
<https://github.com/Lancecheah/Enko/tree/main/Trading%20System%20using%20Streamlit>