

Helping Hand For A New Investor

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BEGINNER'S TIPS FOR DAY TRADING

What You Need:

- \$ Computer or laptop
- \$ Fast, reliable internet connection
- \$ A broker



Best Times to Trade:



Stocks: The first one to two hours after open, and the last hour before close



Forex market trades: 24 hours a day during the week



Day trading futures: Around the open

Problem Statement:

An investor who is new to trading can face many challenges when it comes to researching and analyzing a stock or a company because they are not familiar with the financial statement analysis process and lack the technical analysis skills. Our project aims to help new and beginner investors in the research process and provide them with next day trade recommendations based on our trading strategy.



Data Sources:

Yahoo Finance,

News API,

Tweepy (Twitter API)

json pickle



YAHOO!
FINANCE

News API



Stocks: Picked 4 stocks from TSX for our analysis.

RBC (Financial),

Shopify (Tech),

Enbridge (Oil and Energy),

BARRICK GOLD (Gold/Mining),

BARRICK



PROJECT PLAN

1. Stock and Feature Selection:

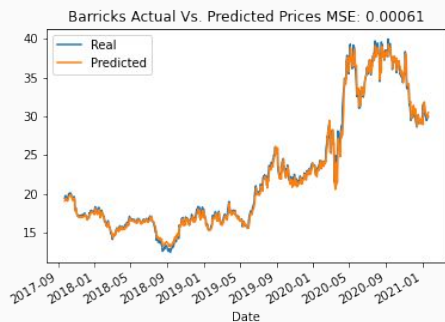
- Selected securities for users to select from and features to consider.

2. Data Collection:

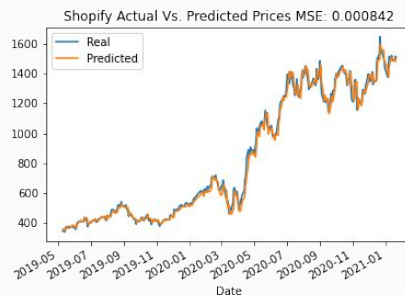
- Collected closing prices of selected stocks to train our model with. First df included, high, low, close, volume, volume change, target daily change, alt stocks daily change, alt stocks volume change, alt stock volume and target stock next day close.
- Found correlation between target stock next day close and our features we believe it may be correlated with.
- Chose features based on highly correlated features
- End data frame had features we wanted to include.

3. Created price prediction model:
 - Using deep learning model to predict stock prices
 - Created array of percent change between previous day close and next day predicted close.
4. Data Collection & Sentiment Analysis:
 - Collected article data using news api
 - Created sentiment analysis charts.
 - Created sentiment scores dataframe
 - Collected tweets using the twitter API -Tweepy
 - Created sentiment analysis charts.
5. Concat data to create classification model to predict gain/loss over next day
 - Run classification model and edit features to improve accuracy
6. Backtest strategy

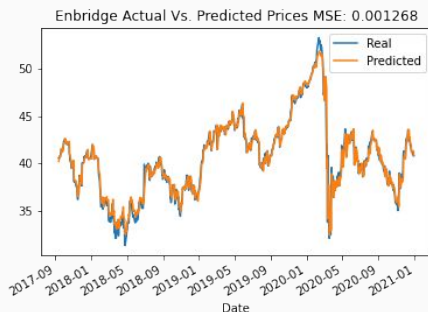
Models and Backtesting Strategy:



Barricks Features: Gold Close, TSX Close, and Barrick Close

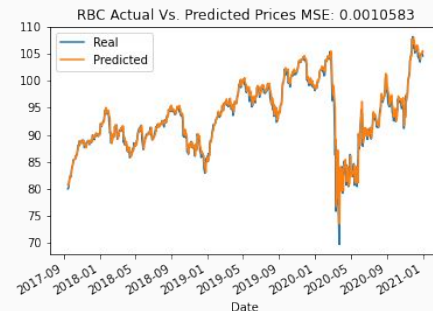


RBC features: High, Vix Close, RBC Close



Enbridge Features: Low, Oil Close, and Enbridge Close

Shopify's Features: High, Low, CAD Close, Shopify Close



Models and Backtesting Strategy:

Barricks Features:

High/Close, Low/Close, Spread, Spread Change, Volume, Volume Difference, Volume Change, Return ewm, Oil Close, Oil Return, Gold Close, Gold Return, CAD Close, CAD Return, TSX Close, TSX Return, Barricks Return

	precision	recall	f1-score	support
0	0.55	0.07	0.12	376
1	0.54	0.95	0.69	435
accuracy			0.54	811
macro avg	0.55	0.51	0.41	811
weighted avg	0.55	0.54	0.43	811

RBC Features:

Vix EWM, High/Close, Low/Close, Vix Close, CAD Close, Spread, Volume Difference, Return EWM, Vix return, TD Return, Tsx return, Return, Chaikin

	precision	recall	f1-score	support
0	0.56	0.16	0.25	197
1	0.54	0.89	0.67	221
accuracy			0.55	418
macro avg	0.55	0.52	0.46	418
weighted avg	0.55	0.55	0.47	418

	precision	recall	f1-score	support
0	0.56	0.58	0.57	405
1	0.56	0.54	0.55	404
accuracy			0.56	809
macro avg	0.56	0.56	0.56	809
weighted avg	0.56	0.56	0.56	809

Enbridge Features:

High % Change, Low % Change, High/Close, Low/Close, Spread, Volume Difference, Volume Change, Return EWM, Oil Return, SU Return, TSX Return, Gas Return, Enbridge Return, Chaikin

	precision	recall	f1-score	support
0	0.66	0.19	0.29	364
1	0.59	0.92	0.72	451
accuracy			0.60	815
macro avg	0.62	0.56	0.51	815
weighted avg	0.62	0.60	0.53	815

Shopify Features:

High % Change, Low % Change, Vix EWM, Vix Close, CAD Close, Spread, Spread Change, Volume Difference, Vol Change, Return EWM, Vix Return, CRM Return, TSX Return, Return, Chaikin

Models and Backtesting Strategy:

Barrick

Your Total Return is 22.76%

Total Portfolio Value is \$1227.6

Portfolio Breakdown
Avail. Funds: \$443.7
Shares Value: \$783.9

Barricks return is 55.56%

	Return	Total
Our Strategy:	22.76%	1227.6
Buy and Hold Strategy:	54.92%	1549.17

Buy Orders: 2776
Sell Orders: 2750
Total Trades: 5526



Enbridge

Your Total Return is 19.46%

Total Portfolio Value is \$1194.62

Portfolio Breakdown
Avail. Funds: \$543.31
Shares Value: \$651.31

Enbridge return is 7.91%

	Return	Total
Our Strategy:	19.46%	1194.62
Buy and Hold Strategy:	30.64%	1306.43

Buy Orders: 408
Sell Orders: 396
Total Trades: 804



RBC

Your Total Return is 43.52%

Total Portfolio Value is \$14351.84

Portfolio Breakdown
Avail. Funds: \$658.08
Shares Value: \$13693.76

RBC Return: 29.19%

	Return	Total
Our Strategy:	43.52%	14351.84
Buy and Hold Strategy:	45.65%	14564.67

Buy Orders: 3364
Sell Orders: 3245
Total Trades: 6609



Shopify

Your Total Return is 136.83%

Total Portfolio Value is \$23682.84

Portfolio Breakdown
Avail. Funds: \$8731.24
Shares Value: \$14951.6

Shopifys return is 184.89%

	Return	Total
Our Strategy:	136.83%	23682.84
Buy and Hold Strategy:	184.36%	28436.46

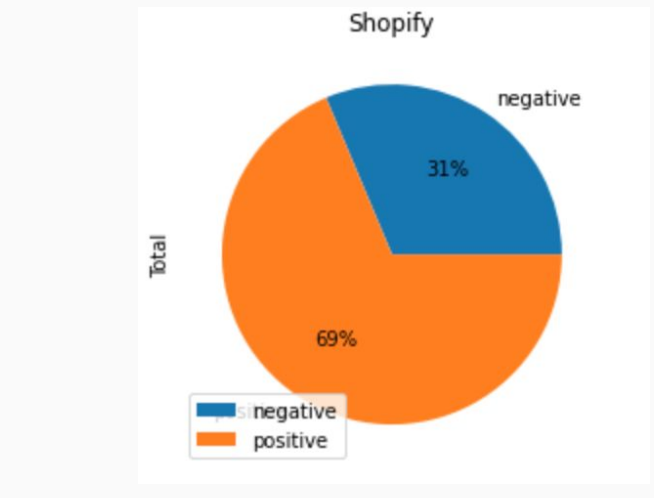
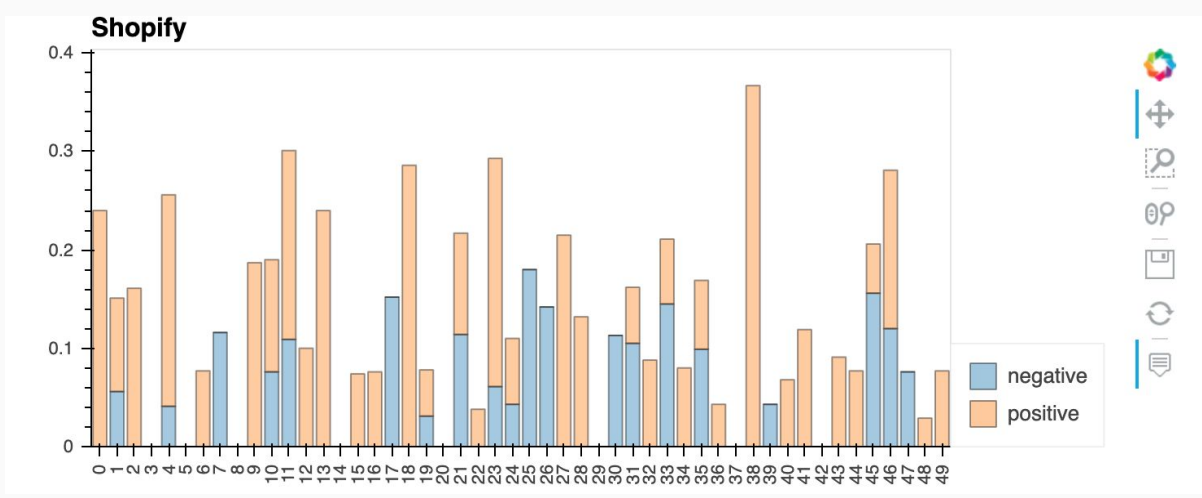
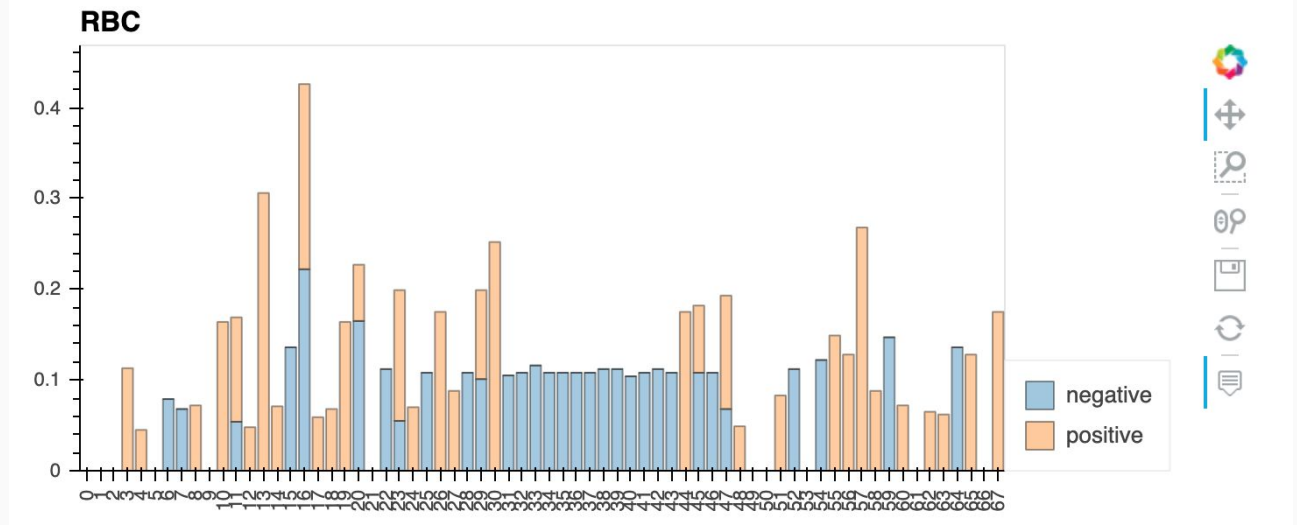
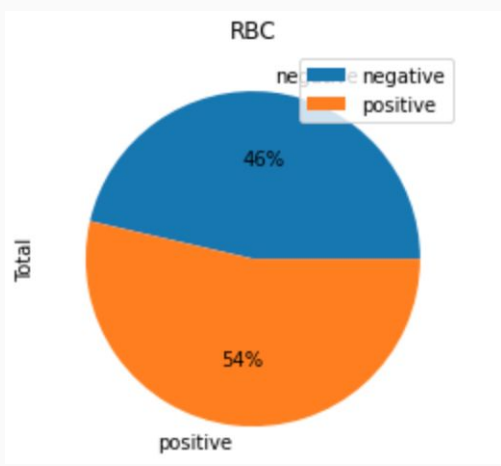
Buy Orders: 127
Sell Orders: 117
Total Trades: 244



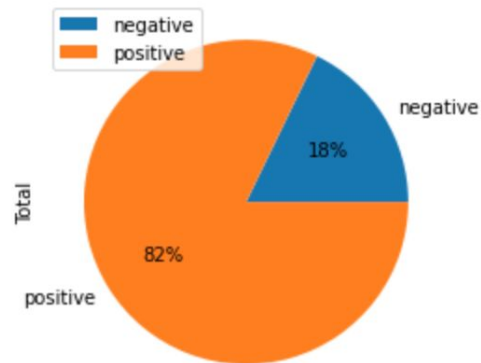
Demonstration

NEWS API

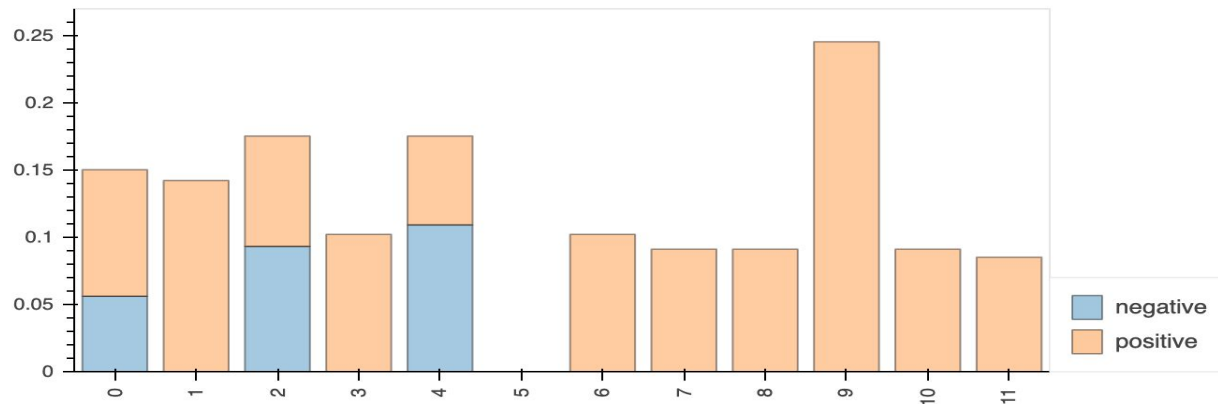
Vader Sentiment Analysis



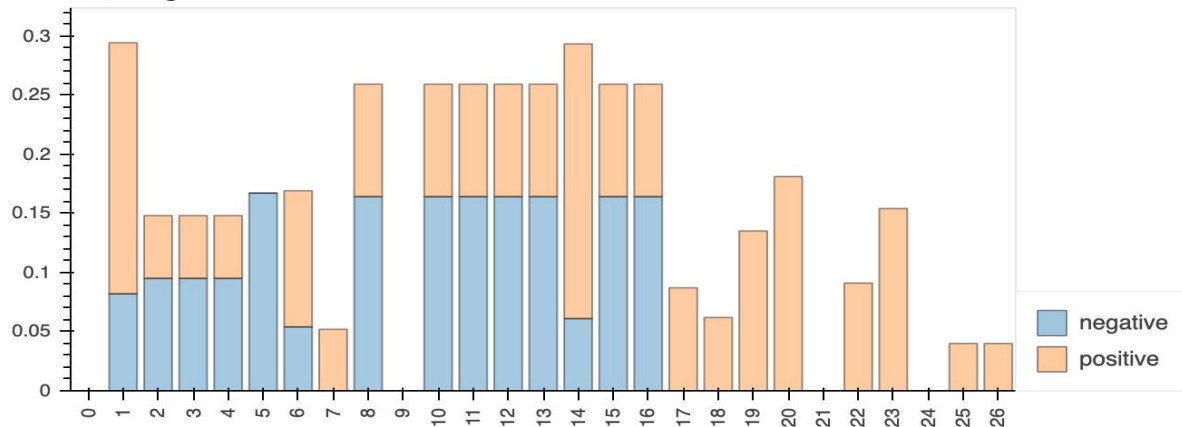
Barrick



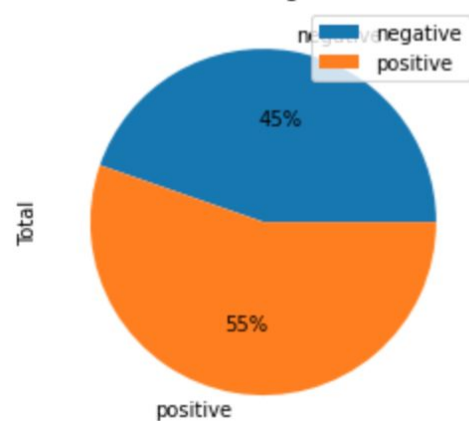
Barrick



Enbridge

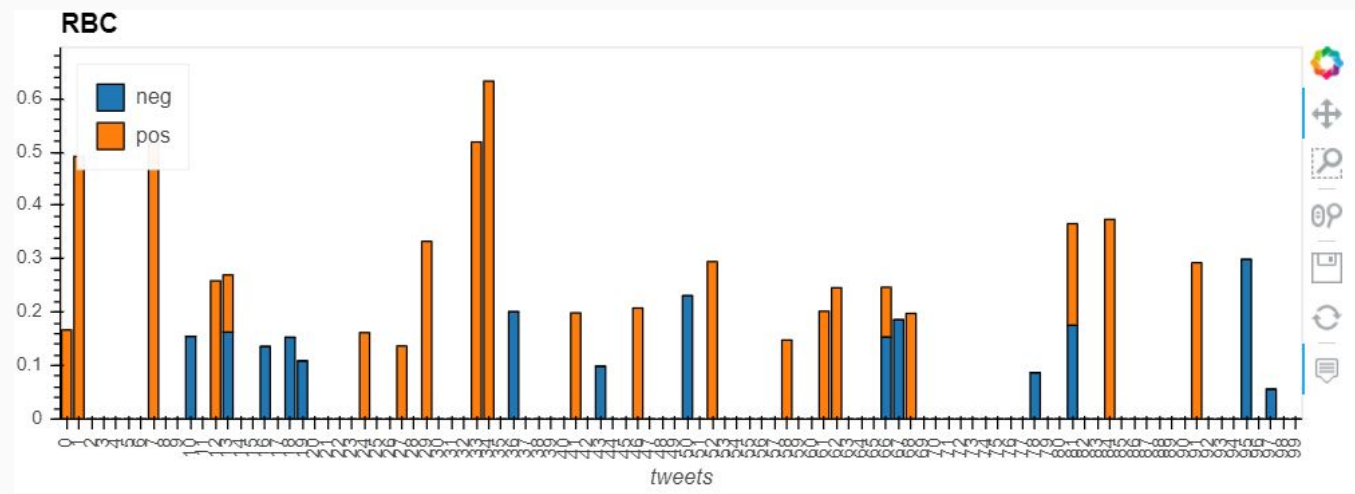
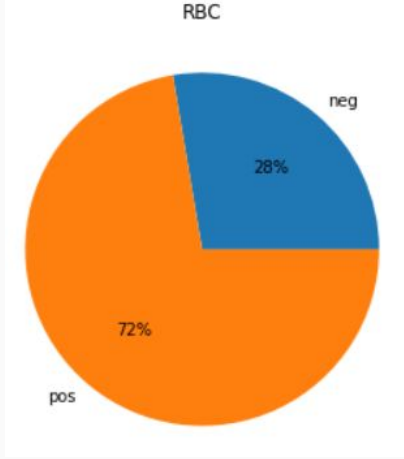


Enbridge

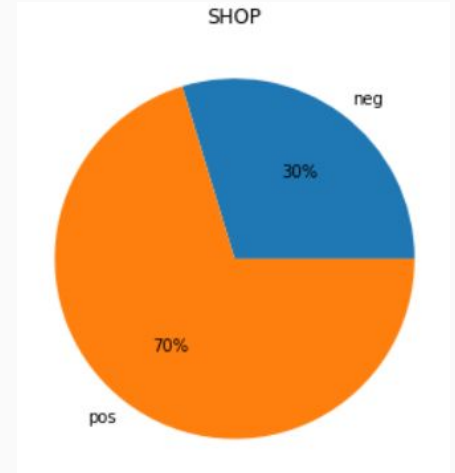
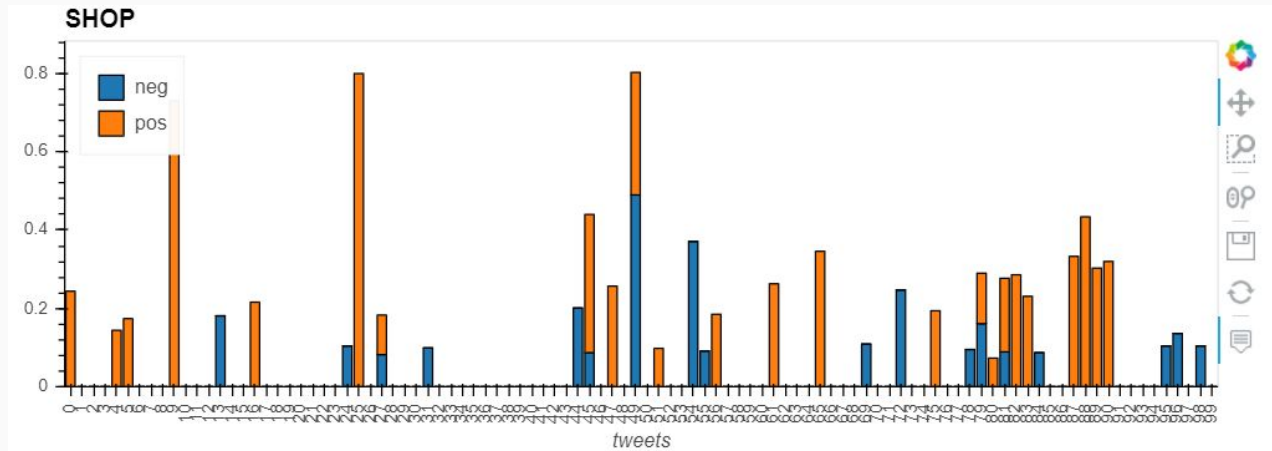


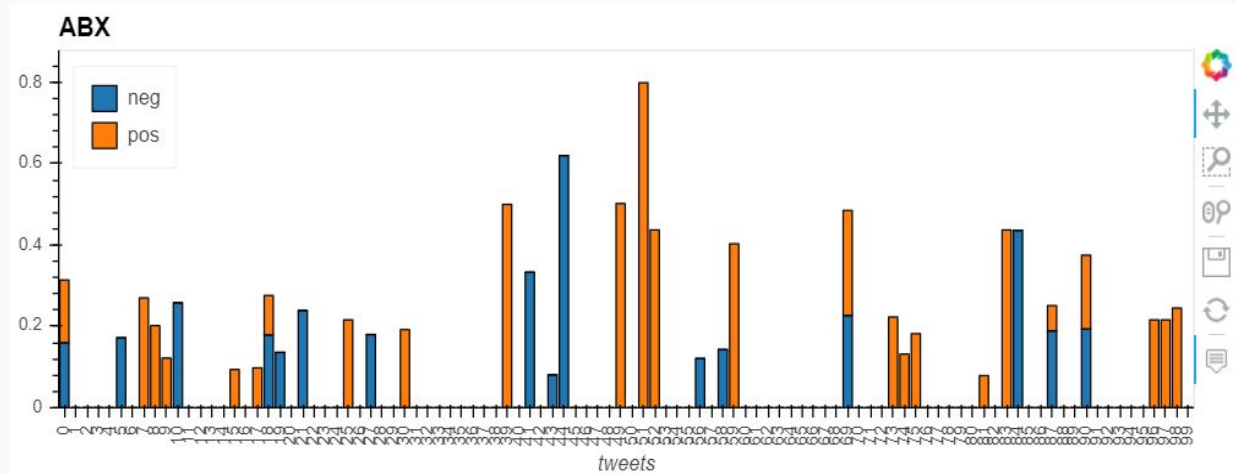
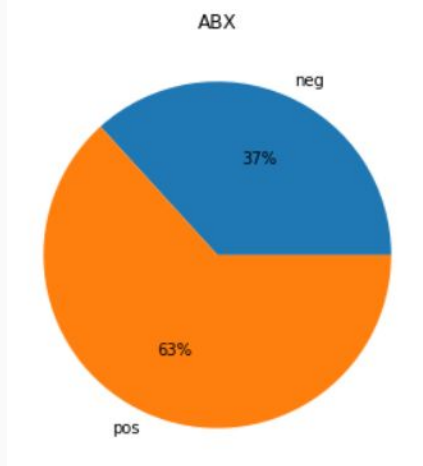
TWITTER API

Vader Sentiment Analysis

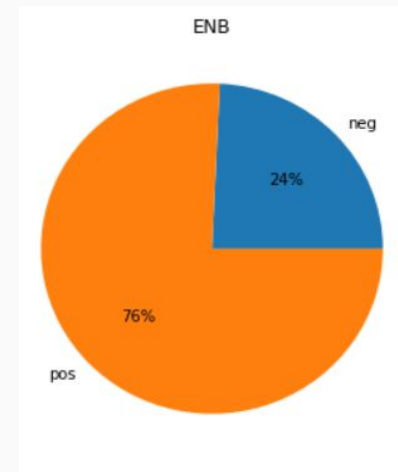
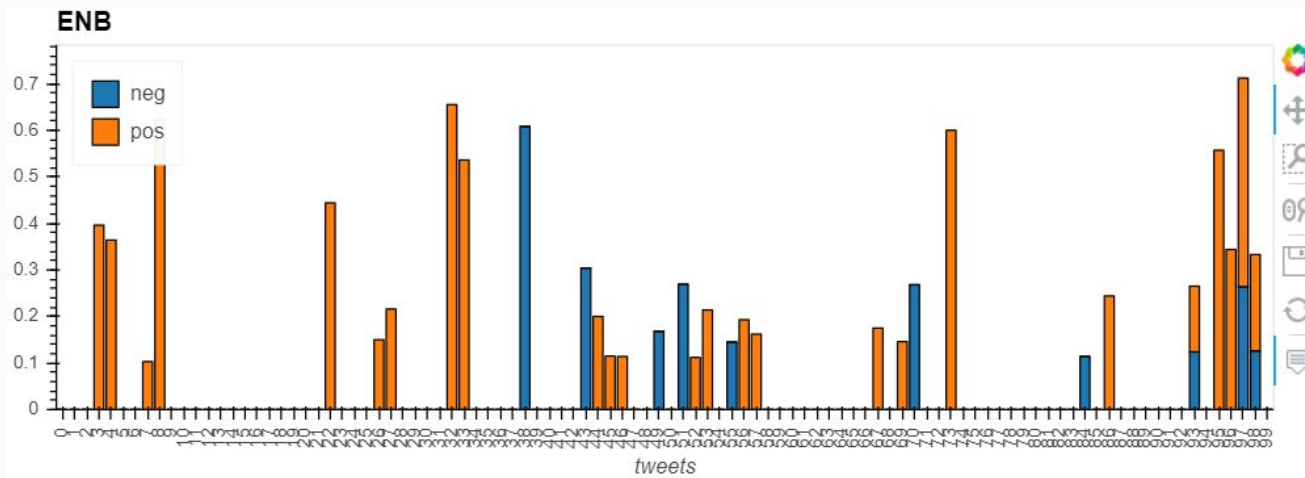


Twitter Vader Sentiment Analysis for Royal Bank and Shopify 3:30 p.m. 2021-01-22





Twitter Vader Sentiment Analysis for Barrick Gold and Enbridge 3:30 p.m. 2021-01-22



Conclusion

Therefore, our trading strategy provides an investor that is new to trading:

- Financial Analysis
- Technical Analysis
- Sentiment Analysis

And, overall confidence and sound investment advice.

Stepping stones to break down the entry barriers for a new investor who lack the technical and financial skills to evaluate a stock.

Questions?