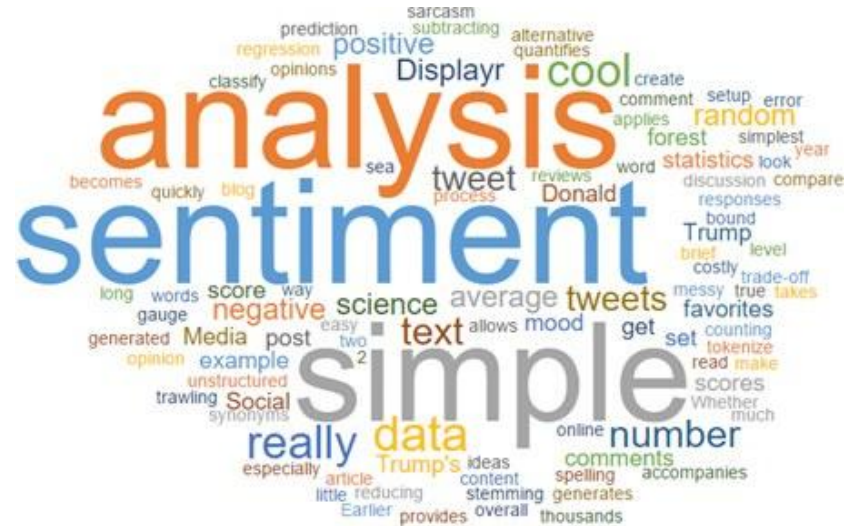

Crypto Sentiment

Antonio Guerrero, Alex Mack & Mark Campbell

Gauge Sentiment

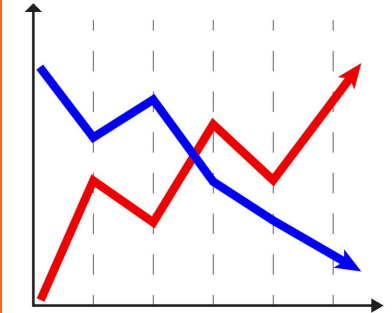
As sentiment analysis technologies continue to evolve and become more advanced and accurate, they are being utilized more frequently in trading and investing. We explored Twython, Google Trends & OpenBlender to determine the overall interest in Bitcoin.

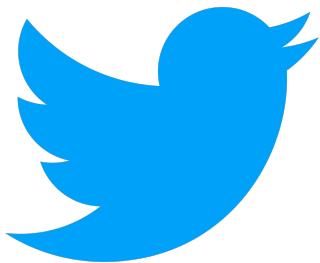




Project Goals

- Predicted whether Bitcoin would rise or fall based on Bitcoin news.
- Analyzed the sentiment of this news and its correlation with bitcoin prices.
-





Twitter Data Gathering

We gathered tweets from seven days into the past using the Twython package for Python. This package is able to run API queries directly on Python.

We created a Twitter developer account for free that was able to help us provide keys for reaching the APIs.

377,247 Retweets 1,465,110 Likes

 29K  377K  1.5M



Google Trends

- Analyzes the top queries in Google Search across various regions and languages in real time.
- Powerful measure of public interest in a topic

OpenBlender

- API allows you to enrich your dataset with input from thousands of news sources.



VADER Score

- VADER (Valence Aware Dictionary for Sentiment Reasoning)
- Ranges between -1 and +1. With -1 being very negative sentiment and +1 being very positive sentiment
- Factors in the strength or intensity of emotion



Twitter Sentiment Analysis

By using the Vader Score analysis library, we obtained the sentiment of the tweets, and we multiplied that sentiment with the number of followers, and the number of likes to get a more accurate sentiment that tells us significantly if more people are reading those tweets.

Analysis

Use the VADER
score

Correlate it with
daily returns

Decisions
determined by
the correlation
coefficient



Crypto Data Gathering

We used a free API called [cryptocompare](#) to get historical data for the cryptocurrency of our liking, and storing the data into a CSV file.

Sentiment VS Crypto

Better to see the visuals...



Conclusions

- Small correlation between the sentiment of the news and the trend in bitcoin prices.
- We can see changes in crypto right after the sentiment is strong.
- RandomForest Model was used to predict the trend in bitcoin prices and we achieved an accuracy of 95%



Future Considerations

- Develop another model with better accuracy because we had a high MSE
 - Combine Google Trends, OpenBlender and Twython data
 - Add more data sources and other keywords to the analysis
-

