Cryptocurrency Sentiment Analysis

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Introduction

- Cryptocurrency Market is very volatile
- Use sentiment towards cryptocurrency
- Client: Those interested in the Cryptocurrency market
- **Agenda:**
  - Analyze Cryptocurrency sentiment
  - identify its relation with price
  - compare negative and positive values

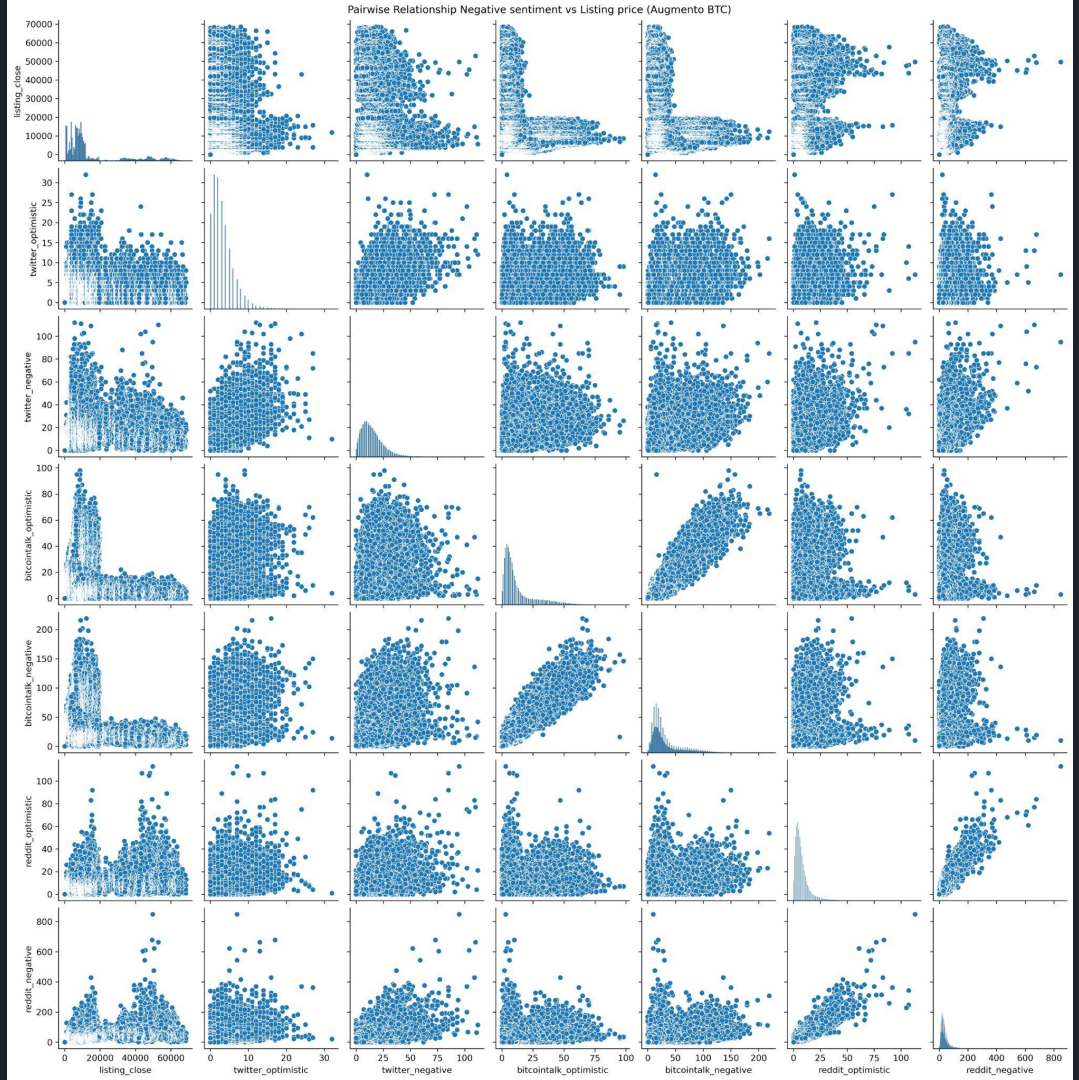
Methodology

- Data
  - Cryptocurrency API: Augmento, SentiCrypt
  - Already collected data from Augmento
- Tools:
  - Python, Pandas, Numpy, SQLAlchemy
  - Matplotlib, Seaborn, Scikit-Learn
  - Github, Flask, Heroku

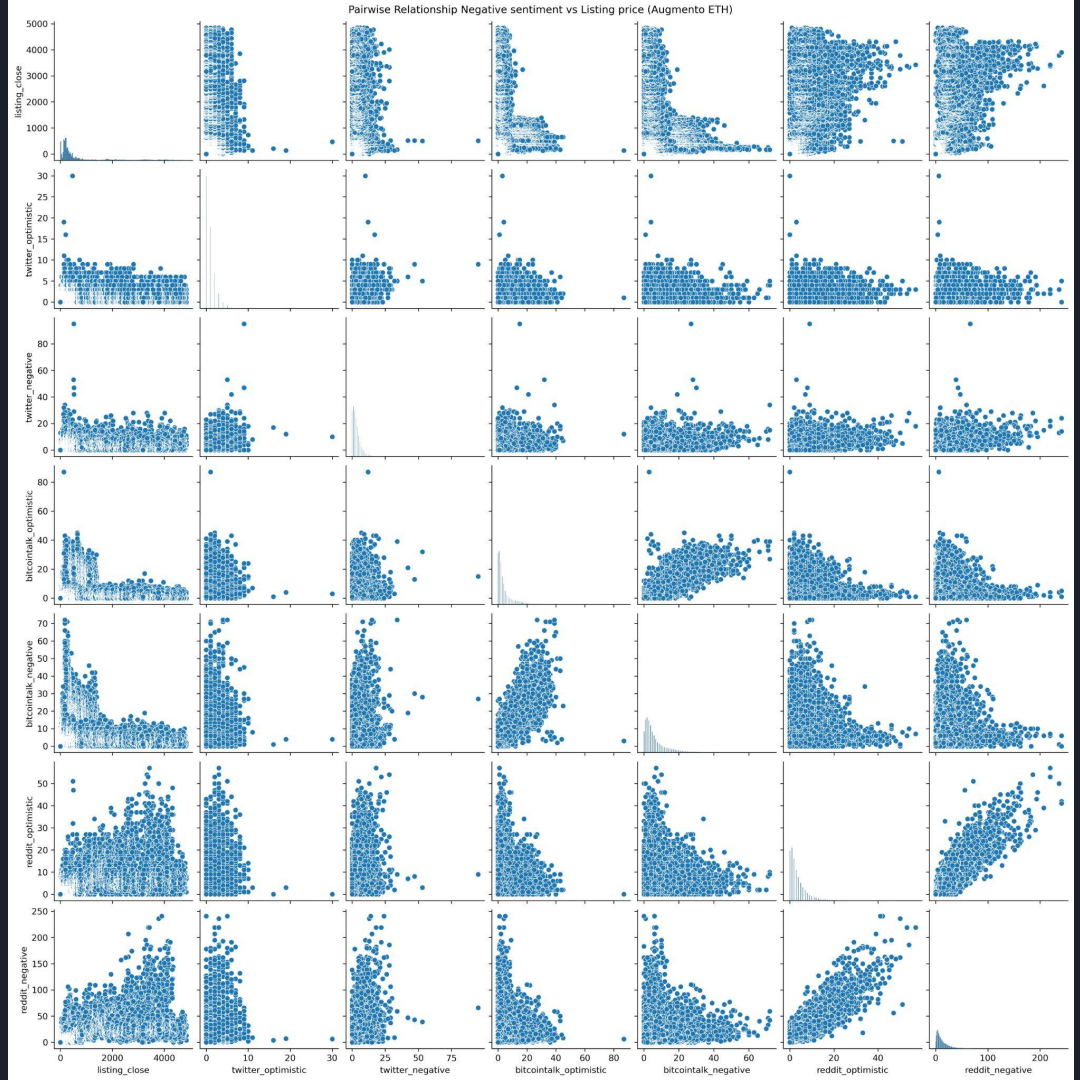
Cryptocurrency Prediction based on Sentiment Values

```
Linear Regression R2 train: 0.641918624489575
Linear Regression MSE: 100548795.00038819
Linear Regression R2 test: 0.610132951217764
Linear Regression MSE: 120925019.06479543
Mean absolute error: 7463.618134340333
0.5905028669544384
```

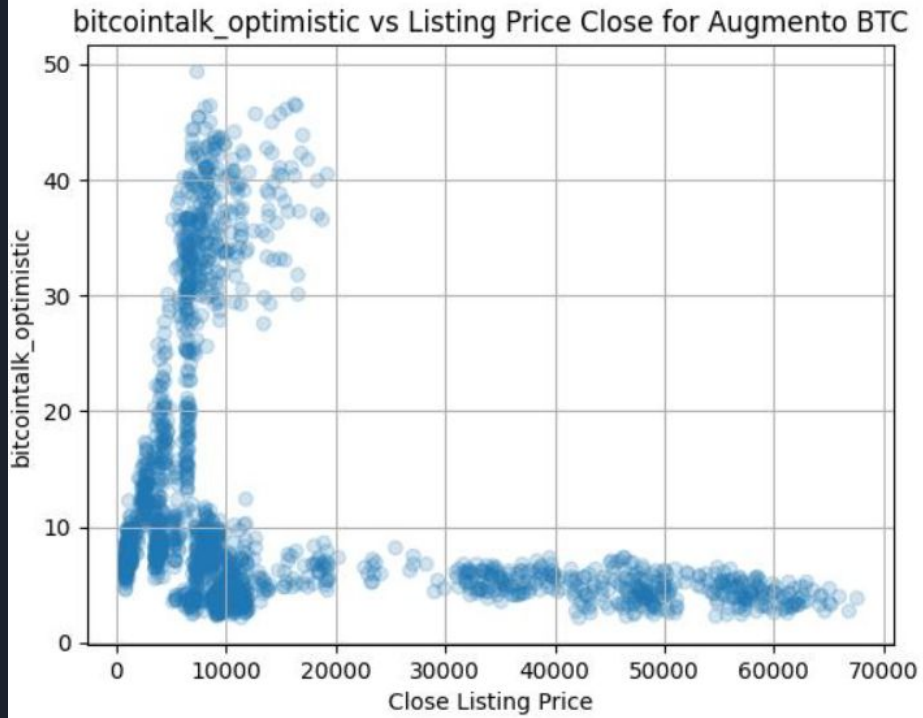
Correlation between Sentiment Values and Cryptocurrency Value (Augmento BTC)

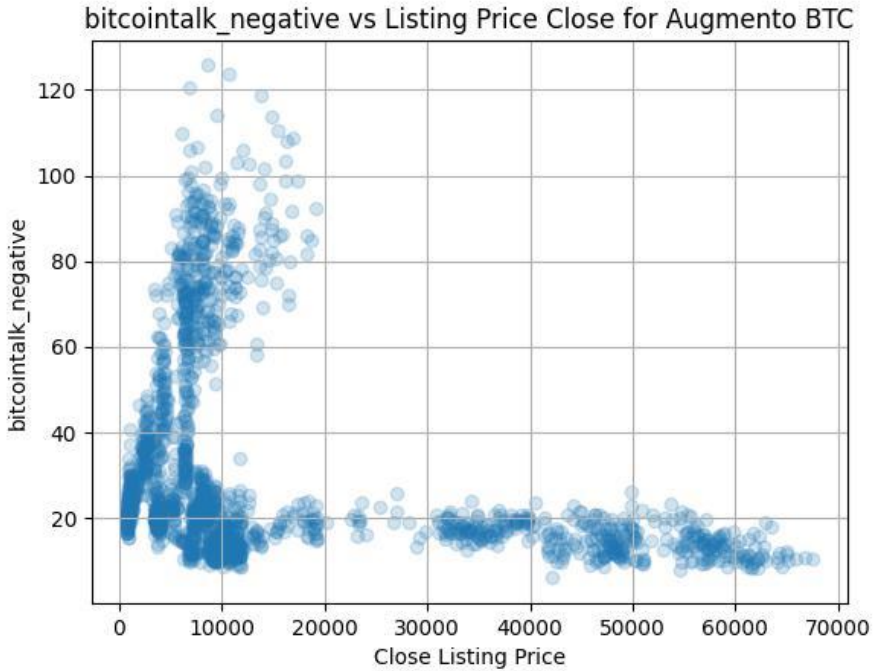


Correlation between Sentiment Values and Cryptocurrency Value (Augmento ETH)



Average Daily Entries of Weekdays





Flask Web App

Select a Sentiment Value:

○ listing_close ○ twitter_negative ○ twitter_optimistic ○ bitcointalk_negative ○ bitcointalk_optimistic ○ reddit_optimistic ○ reddit_negative ○ bitcointalk_positive ○ reddit_positive ○ twitter_positive ○ twitter_prediction ○ bitcointalk_prediction ○ reddit_prediction

Select a Dataframe:

○ btc_aug ○ eth_aug

twitter_negative	twitter_optimistic	bitcointalk_negative	bitcointalk_optimistic	reddit_optimistic	reddit_negative	bitcointalk_positive	reddit_positive	twitter_positive
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Submit

Model Prediction:
listing_close : 1459616.49

Model Graphs:

Future Work

- Make Web app prettier and adjusted to size of window
- Add in different Regression
- Ability for user to save the plot
- Add in data analysis for Senticrypt into Flask webapp

Conclusion

- Linear Regression Model Precision: 61%
- Relation between Sentiment and Cryptocurrency Value
- Engineered Model that predicts Cryptocurrency Value
- Created Web app for Users to interact with

Appendix

- APIs:
  - Augmento:https://www.augmento.ai/
  - SentiCrypt:https://senticrypt.com/docs.html
- Timeframe:
  - Augmento: November 2016 - January 2022
  - SentiCrypt: January 2022

Thank you