

Deciphering Crypto Twitter



Overall: ['crypto', 'binance', 'security']

Cluster 1: ['wallstreetbets', 'big', 'announced']

Cluster 2: ['roll', 'bridge', 'price']

Cluster 3: ['roll', 'blockchain', 'ftx']

Cluster 4: ['roll', 'sushi', 'bridge']

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Cluster 5: ['blockchain', 'wallstreetbets', 'airdrop']

Cluster 6: ['nftssaga', 'promote', 'roll']

Negative Ratio

Neutral Ratio

Positive Ratio

Average Sentiment

Sentiment Change Over Time.

والمقدمة فالمقالين والأهمة فاستحالته والمقدران والمقدران والمقاهدا والمستحدرين والقاسية والمراوية فالمناطقة والإفراء فالمناطقة والمتراطة والمناطقة والمتراطة والمترطة والمتراطة والمتراطة والمتراطة والمترطة والمتراطة و

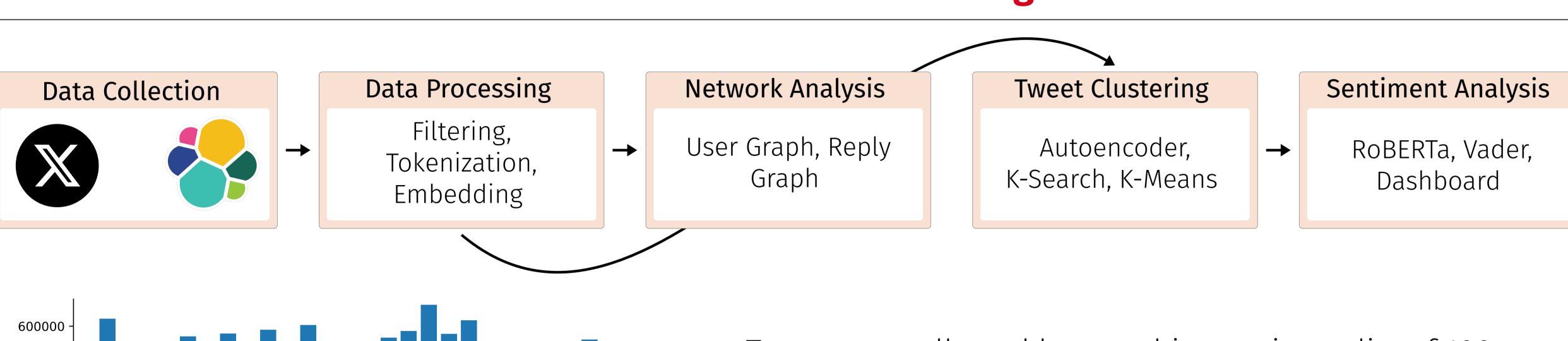
Inwon Kang ¹ Maruf Ahmed Mridul ¹ Abraham Sanders ¹ Yao Ma ¹ Thilanka Munasinghe ¹ Aparna Gupta ¹ Oshani Seneviratne ¹

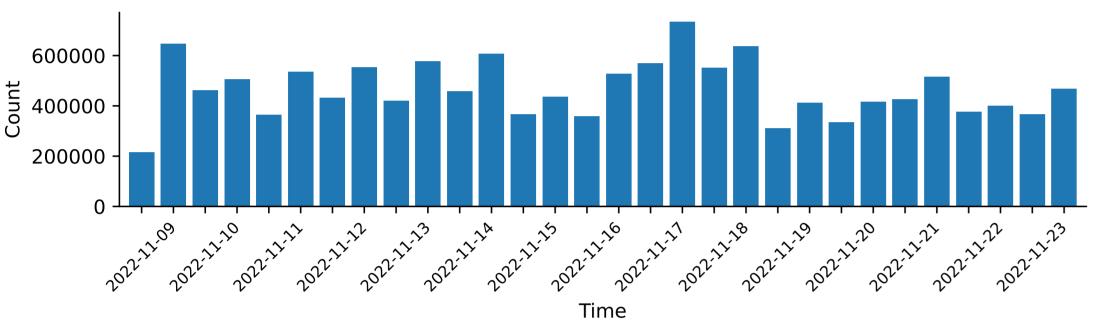
¹Rensselaer Polytechnic Institute

The rise in popularity of cryptocurrencies has led to an emergence of a new form of social media, known as *Crypto Twitter*.

What can this data tell us about the cryptocurrency ecosystem?

Data Collection & Processing

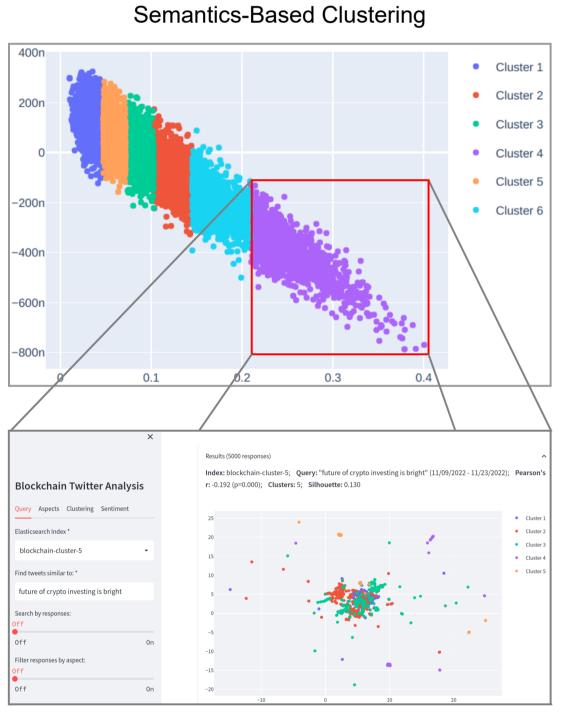




Tweet volumes over collection period. (39,828,572 total)

- Tweets are collected by searching against a list of 100 hand-curated keywords about cryptocurrencies or security.
- Autoencoder is used to reduce the dimensionality of the BERT embeddings for clustering.

Cluster Analysis



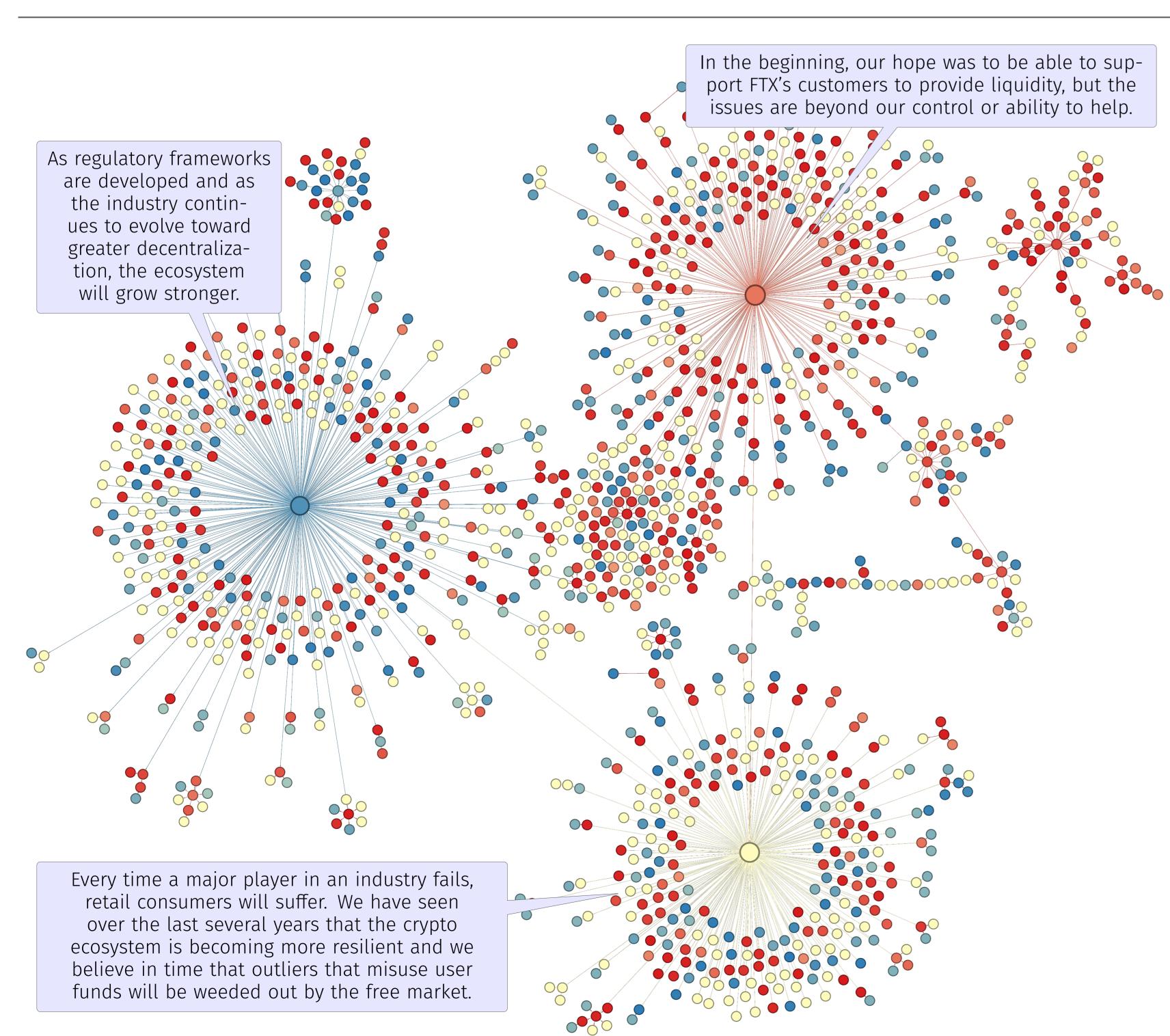
Cluster Analysis Dashboard K-Means Clustering of Tweets.

- The tweet clusters can be characterized into on-topic, conspiracy theorists, meta discussions.
- Sentiment change across clusters over time show correlation to real-life events such as giveaways (airdrops) or scams.

ID	Characterization	Top 10 Keywords
	Overall	user, http, pump, just, signal, happen, crypto, wallstreetbets, event, kucoin
1	Crypto Conspirators	user, pump, http, signal, just, event, happen, wallstreetbets, kucoin, big
2	Meta Crypto Twitter	user, crypto, http, promote, roll, token, price, 000, binance, security
3	Crypto Observers	user, http, crypto, v2, rollup, address, tokens, claiming, compatible, evm
4	Crypto Commenters	roll, crypto, sushi, user, project, security, good, try, http, bridge
5	Crypto Doubters	user, http, pump, crypto, just, signal, kucoin, happen, event, wallstreetbets
6	Interested Investors	promote, user, crypto, price, roll, http, btc, binance, eth, bitcoin

Top 10 most frequent terms of each cluster.

Network Analysis



7th largest weakly connected component in **relply** network.

The three central tweets are from a single thread by Changpeng Zhao, former CEO of Binance.

User-Quote Graph SCC 1 SCC 2 **9** 14000 SCC 3 6000 SCC 4 SCC 5 5000 10000 4000 8000 -40000 3000 6000 2000 4000 1000 2022-11-09 2022-11-11 2022-11-13 2022-11-15 2022-11-17 2022-11-19 2022-11-21 2022-11-23 Timestamp **User-Reply Graph** SCC 1 - 200 SCC 2 175 SCC 3 SCC 4 150 SCC 5 125 2022-11-09 2022-11-11 2022-11-13 2022-11-15 2022-11-17 2022-11-19 2022-11-21 2022-11-23 Timestamp

Change in SCC component size for user networks.

- Heavy influencer presence (Professional Athletes, Tech Influencers, Meta-Commenters, etc.).
- Obesrvable pattern of bot-suspicious accounts.
- Identifiable network of **bot-suspicious accounts boosting** each other's presence.
- Propgation of negative/positive sentiment.
- Identification of potential market manipulation attempts.

WebSci-24, Stuttgart, Germany inwon.kang04@gmail.com