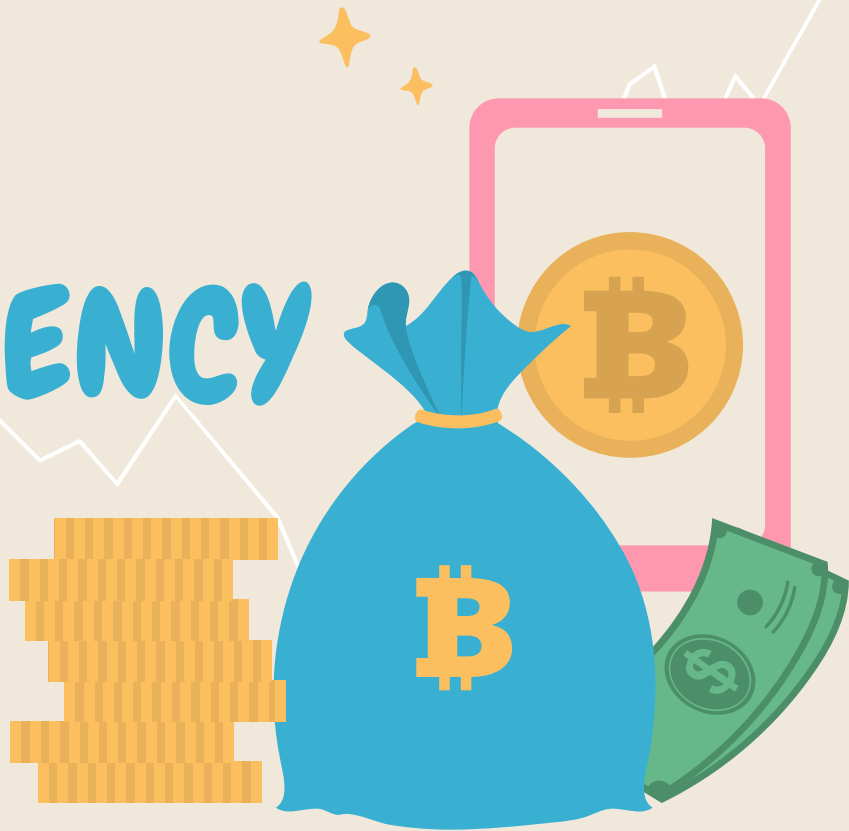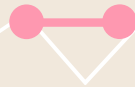# An ear to r/CRYPTOCURRENCY

Clayton Young

Background

Why Crypto?

Background

Business

- Meta
- NFTs
- Crypto.com Center

Financials

- Fees
- Speed
- Inflation concerns

Privacy and Data

- Decentralized
- Censorship

Culture

- 37 million people in poverty*
- r/Wallstreetbets and GameStop

R/CRYPTOCURRENCY MEMBERS:

4,100,000

Topic Modeling

Non-negative Matrix Factorization (NMF)

- Posts and comments from Oct 1st-Dec 12th
- Nouns and adjectives from spaCy
- Create dictionary with each crypto as key
    - Ranging from ~3K-21K

Topic Modeling

$ADA	1	2	3	4	5	6	7	8	9	10
Price	bag	profit	run	end	bit	point	volatility	opportunity	doubt	fud
Subreddit hate	sub	hate	post	sh*t	opposite	reason	sentiment	opinion	fud	Sh*tcoin
Price hope	holder	gain	patience	congrat	life	hopium	investment	bull	fan	majority
News & Price	pump	reason	dump	post	news	bit	thank	hour	yesterday	couple
Development	stablecoin	contract	post	sh*t	dapp	hype	news	gain	reason	comment

Sentiments!

"'I would like to speak to the CEO of Bitcoin for causing this dip"

Vader

Negative: 0.0,
Neutral: 0.839,
Positive: 0.161
Compound: 0.3612

DeepMoji

😋 👌 👍

Topic Modeling and Sentiments

$ADA

Topics:

- Price
- Subreddit hate
- Price hope
- News & Price
- Development

$ALGO

Topics:

- Crypto voting
- Subreddit sentiment
- News
- Culture
- Staking

$BTC

Topics:

- Price prediction
- Market cycle
- News+price
- Fiat comparisons
- status other cryptos

$CRO

Topics:

- Congrats to buyers
- Marketing
- Card benefits
- Performance
- Speculation

$DOT

Topics:

- Hopeful predictions
- DOT features
- DOT owners
- Staking
- Price speculation

$ETH

Topics:
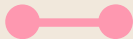
- Changes in price
- Competitors
- Scaling issues
- Positions
- Faith in project

$SOL

Topics:

- Subreddit hate
- SOL dynamics
- Development SOL holders
- More SOL dynamics

Summary

Topic modeling

- Topics ranged from price and hate to development and marketing
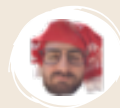- Able to get a feel for what's going on in the market

Sentiments

- Algorand has the most positive sentiment
- Deepmoji angry faces aren't always negative in sentiment!

THANKS!

Do you have any questions?

Clayton.Young@ucsf.edu

Supplemental

Topic Modeling and Sentiments

$ADA	$ALGO	$BTC	$CRO	$DOT	$ETH	$SOL
Topics:	Topics:	Topics:	Topics:	Topics:	Topics:	Topics:
• Price • Subreddit hate • Price hope • News & Price • Development	• Crypto voting • Subreddit sentiment • News • Culture • Staking	• Price prediction • Market cycle • News+price • Fiat comparisons • status other cryptos	• Congrats to buyers • Marketing • Card benefits • Performance • Speculation	• Hopeful predictions • DOT features • DOT owners • Staking • Price speculation	• Changes in price • Competitors • Scaling issues • Positions • Faith in project	• Subreddit hate • SOL dynamics • Development SOL holders • More SOL dynamics
ada {'neg': 0.077, 'neu': 0.783, 'pos': 0.14, 'compound': 1.0}	algo {'neg': 0.05, 'neu': 0.775, 'pos': 0.175, 'compound': 1.0}	btc {'neg': 0.073, 'neu': 0.806, 'pos': 0.121, 'compound': 1.0}	cro {'neg': 0.05, 'neu': 0.801, 'pos': 0.149, 'compound': 1.0}	dot {'neg': 0.05, 'neu': 0.803, 'pos': 0.147, 'compound': 1.0}	eth {'neg': 0.069, 'neu': 0.8, 'pos': 0.131, 'compound': 1.0}	sol {'neg': 0.09, 'neu': 0.781, 'pos': 0.129, 'compound': 1.0}

Topic Modeling

$ALGO	1	2	3	4	5	6	7	8	9	10
Crypto voting	governance	period	vote	apy	voting	poll	program	holder	whale	round
Subreddit sentiment	sub	meme	post	love	bag	shilling	baby	shitcoin	thank	place
News	governor	pump	option	news	reminder	voting	period	vote	hour	holder
Culture	moon	news	ecosystem	meme	blockchain	bit	dex	post	upvote	shit
Staking	reward	staking	bag	pump	option	blockchain	ecosystem	apy	pool	meme

Topic Modeling

$BTC	1	2	3	4	5	6	7	8	9	10
Price prediction	end	prediction	cycle	world	hour	post	point	chance	bull	pump
Market cycle	bear	run	bull	profit	cycle	shit	point	cap	world	gain
News and price	ath	hour	correction	pump	cycle	portfolio	season	news	bullrun	bit
Fiat comparisons	moon	cap	sub	shit	shitcoin	point	currency	post	world	fiat
BTC status among other cryptos	king	shit	shitcoin	reason	portfolio	world	currency	fiat	meme	game
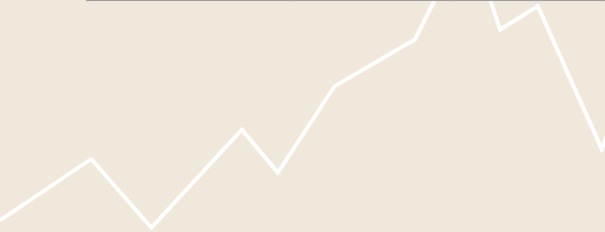
Topic Modeling

$CRO	1	2	3	4	5	6	7	8	9	10
Congrats to people bought	bag	holder	cent	news	gain	congrat	debit	yesterday	investment	sub
Crypto.com marketing	marketing	team	potential	hype	adoption	cap	point	campaign	holder	strategy
Crypto.com card benefits	reward	stake	app	staking	cashback	tier	benefit	debit	box	purchase
Performance	portfolio	moon	green	run	cap	bit	rest	gain	investment	couple
Speculation	pump	bit	cap	sub	end	holder	dump	chart	profit	correction

Topic Modeling

$DOT	1	2	3	4	5	6	7	8	9	10
Hopeful predictions	auction	slot	supply	news	bit	run	tomorrow	pump	hype	winner
DOT features	parachain	ecosystem	crowdloan	chain	blockchain	opportunity	polka	pump	winner	tomorrow
DOT owners	ath	portfolio	gain	hodler	ball	minute	profit	congrat	hour	holder
Staking	reward	staking	crowdloan	ecosystem	slot	profit	apy	bit	option	shit
Price speculation	bag	ecosystem	portfolio	holder	pump	problem	hope	run	discount	bubble

Topic Modeling

$ETH	1	2	3	4	5	6	7	8	9	10
Changes in price	ath	chart	portfolio	post	hour	pump	end	congrat	correction	couple
Competitors	killer	point	sub	maxi	bit	fact	shit	self	place	dapp
Scaling issues	layer	solution	chain	problem	blockchain	rollup	point	security	issue	contract
Positions	bag	portfolio	shit	holder	thank	gain	shitcoin	buy	sub	run
Faith in project	profit	moon	end	investment	point	bit	gain	cap	rest	address

Topic Modeling

| $SOL	1	2	3	4	5	6	7	8	9	10
Subreddit hate	sub	post	hate	moon	sentiment	blockchain	opinion	profit	reason	issue
SOL dynamics	fud	holder	point	supply	post	validator	ath	developer	couple	thread
Development news	news	team	dev	issue	fact	investor	article	supply	blockchain	chain
SOL holders	bag	pump	holder	investor	profit	face	dev	opportunity	point	number
SOL Dynamics 2	shit	post	team	supply	blockchain	validator	node	investor	fact	gain

To capture 80% variance, {ada': 369, 'algo': 292, 'btc': 721, 'cro': 333, 'dot': 194, 'eth': 497, 'matic': 184, 'sol': 211} dimensions

—Truncated SVD

Number of comments for each
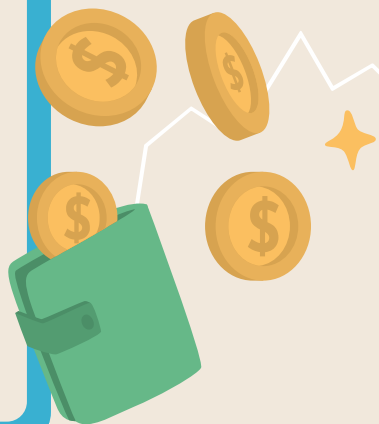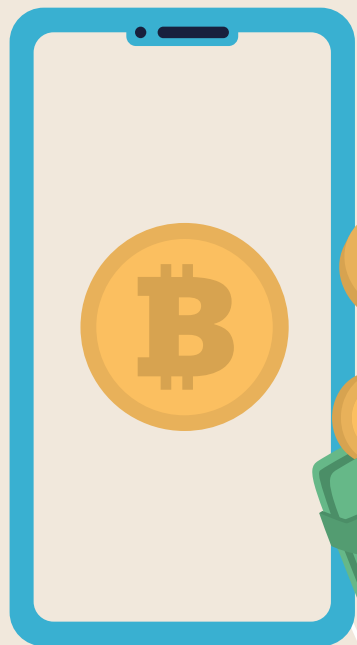
- ada 7184
- algo 5793
- btc 21632
- cro 7641
- dot 3475
- eth 12973
- sol 2951

ADA

ADA	component_1	component_2	component_3	component_4	component_5
project try	0.00000	0.00000	0.00000	0.00000	0.00000
day dip buy ashe phoenix	0.00035	0.00003	0.00010	0.00334	0.00059
mate fee growth	0.00139	0.00000	0.00097	0.00139	0.00151
discount price	0.00001	0.00000	0.00001	0.00002	0.00003
reason competitor	0.00099	0.00362	0.00027	0.01045	0.00982
...	...	...	...	...	...
guy advice chunk profit cap coin future reason profit project money way bit moment question guy coin future research cap bit cap example crypto world money option option	0.00592	0.00315	0.00418	0.00744	0.01747
problem trading platform limit order price reason daytrading account bank statement bank statement account guy platform daytrading	0.00065	0.00190	0.00024	0.00485	0.01162
cost base income taxis exchange information spreadsheet trouble formula cost base income tax reporting exchange trade coin staking answer	0.00073	0.00069	0.00115	0.00037	0.00191
guy advice chunk profit cap coin future reason profit project money way bit moment question guy coin future research cap bit cap example crypto world money option option	0.00592	0.00315	0.00418	0.00744	0.01747
coin wallet crypto app phone phone phone gain future shitcoin coin pincode example exchange bust news attack coin wallet coin fingerprint exchange metamask wallet	0.00100	0.00226	0.00285	0.00434	0.01063

6820 rows × 5 columns