

# The Data-Driven Communicator:

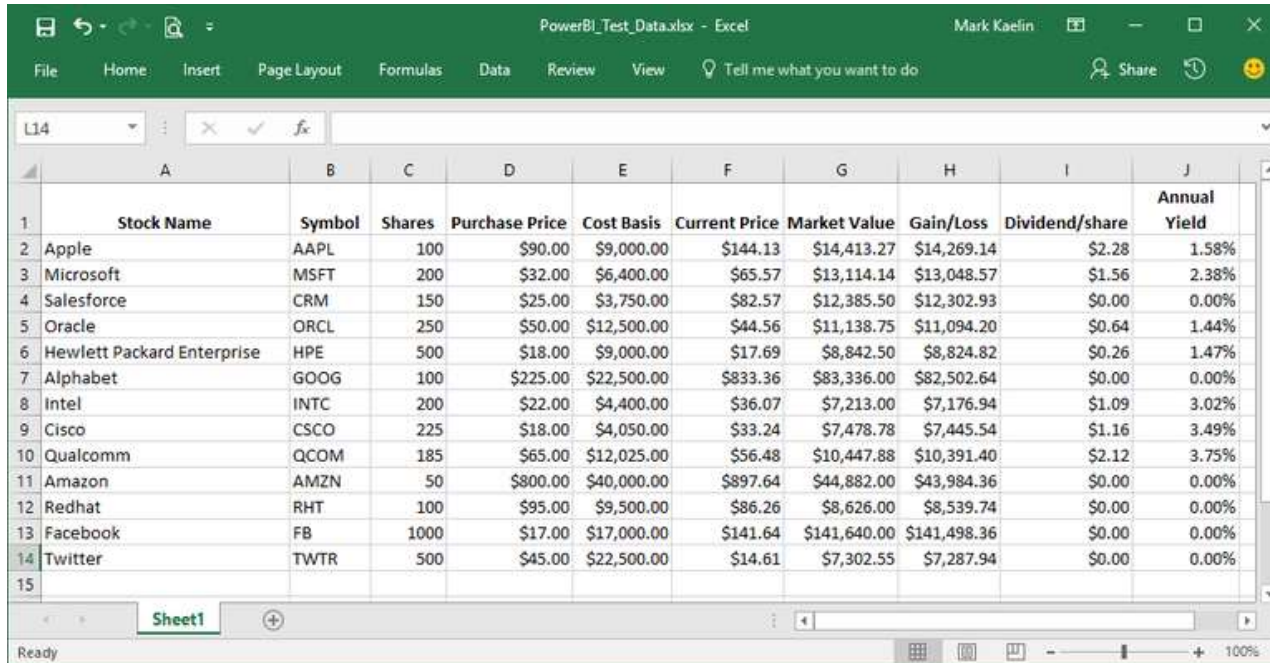
A Crash Course in Social Listening, Analyzing Brand Voice,  
Understanding Sentiment, and More...



**Alexander Rose**  
Assc. Manager, Data Analytics

# \$105+ Billion

## When you hear the words 'raw data' what image comes to your mind?



The image shows a screenshot of an Excel spreadsheet titled "PowerBI\_Test\_Data.xlsx" with the user name "Mark Kaelin". The spreadsheet contains a table of stock data with the following columns: Stock Name, Symbol, Shares, Purchase Price, Cost Basis, Current Price, Market Value, Gain/Loss, Dividend/share, and Annual Yield. The data is as follows:

	A	B	C	D	E	F	G	H	I	J
	Stock Name	Symbol	Shares	Purchase Price	Cost Basis	Current Price	Market Value	Gain/Loss	Dividend/share	Annual Yield
1										
2	Apple	AAPL	100	\$90.00	\$9,000.00	\$144.13	\$14,413.27	\$14,269.14	\$2.28	1.58%
3	Microsoft	MSFT	200	\$32.00	\$6,400.00	\$65.57	\$13,114.14	\$13,048.57	\$1.56	2.38%
4	Salesforce	CRM	150	\$25.00	\$3,750.00	\$82.57	\$12,385.50	\$12,302.93	\$0.00	0.00%
5	Oracle	ORCL	250	\$50.00	\$12,500.00	\$44.56	\$11,138.75	\$11,094.20	\$0.64	1.44%
6	Hewlett Packard Enterprise	HPE	500	\$18.00	\$9,000.00	\$17.69	\$8,842.50	\$8,824.82	\$0.26	1.47%
7	Alphabet	GOOG	100	\$225.00	\$22,500.00	\$833.36	\$83,336.00	\$82,502.64	\$0.00	0.00%
8	Intel	INTC	200	\$22.00	\$4,400.00	\$36.07	\$7,213.00	\$7,176.94	\$1.09	3.02%
9	Cisco	CSCO	225	\$18.00	\$4,050.00	\$33.24	\$7,478.78	\$7,445.54	\$1.16	3.49%
10	Qualcomm	QCOM	185	\$65.00	\$12,025.00	\$56.48	\$10,447.88	\$10,391.40	\$2.12	3.75%
11	Amazon	AMZN	50	\$800.00	\$40,000.00	\$897.64	\$44,882.00	\$43,984.36	\$0.00	0.00%
12	Redhat	RHT	100	\$95.00	\$9,500.00	\$86.26	\$8,626.00	\$8,539.74	\$0.00	0.00%
13	Facebook	FB	1000	\$17.00	\$17,000.00	\$141.64	\$141,640.00	\$141,498.36	\$0.00	0.00%
14	Twitter	TWTR	500	\$45.00	\$22,500.00	\$14.61	\$7,302.55	\$7,287.94	\$0.00	0.00%
15										

How much data do we generate every day?

**4PB Content on FB**

**Will that fit in a  
300M Tweets  
spreadsheet?**

**65BN Msgs on WhatsApp**

## Who is this lightning talk for?

### If you've asked yourself:

- How do I know if my branded social accounts stand out?
- How do people feel about my brand?  
What do they say about it?
- How do I make sense of all of the data we collect through social listening?



Term Freq. & Correlation



Sentiment Analysis



N-grams &  
Conversation Mapping

## Robinhood's mission...

“Robinhood’s mission is to democratize finance for all. We believe that everyone should have access to the financial markets, so we’ve built Robinhood from the ground up to make investing friendly, approachable, and understandable for newcomers and experts alike.”

# How Robinhood ended up in Washington's crosshairs



By [Matt Egan](#), [CNN Business](#)

Updated 4:02 PM ET, Wed February 17, 2021



## r/WallStreetBets + \$GME + Robinhood

MARKETS

# GameStop, Reddit and Robinhood: A full recap of the historic retail trading mania on Wall Street

PUBLISHED SAT, JAN 30 2021-9:40 AM EST | UPDATED SAT, JAN 30 2021-10:14 AM EST



Yun Li  
@YUNLI123

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### KEY POINTS

- Shares of GameStop skyrocketed 400% in the past week, closing out January with a whopping 1,625% gain.
- A band of amateur traders on WallStreetBets aimed to bid up heavily shorted stocks "to the moon," creating massive short squeezes.
- Members in the Reddit forum have tripled to 6.5 million in just a week.
- The mania backfired on free-trading pioneer Robinhood, which had to throttle back trading in the short-squeeze names and raise new funds to meet rising deposit requirements with its clearinghouse.



## Robinhood (RH) as a Case Study

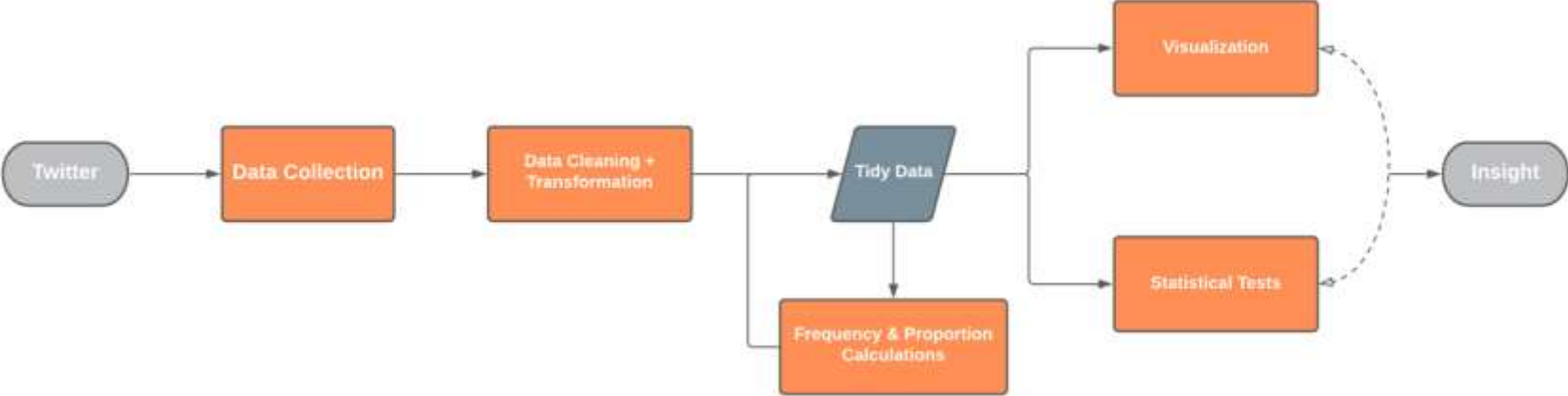
Let's explore those same questions through the lens RH's brand:

- How well does RH's branded Twitter account stand out?
- How did RH's decisions impact the (inferred) sentiment of their user base?
- How can we make sense of r/WallStreetBets reddit data as it pertains to the RH brand?

# Brand Voice Differentiation

**We'll create a “voice print” based on how frequently a brand uses certain words and then compare “voice prints” between brands.**

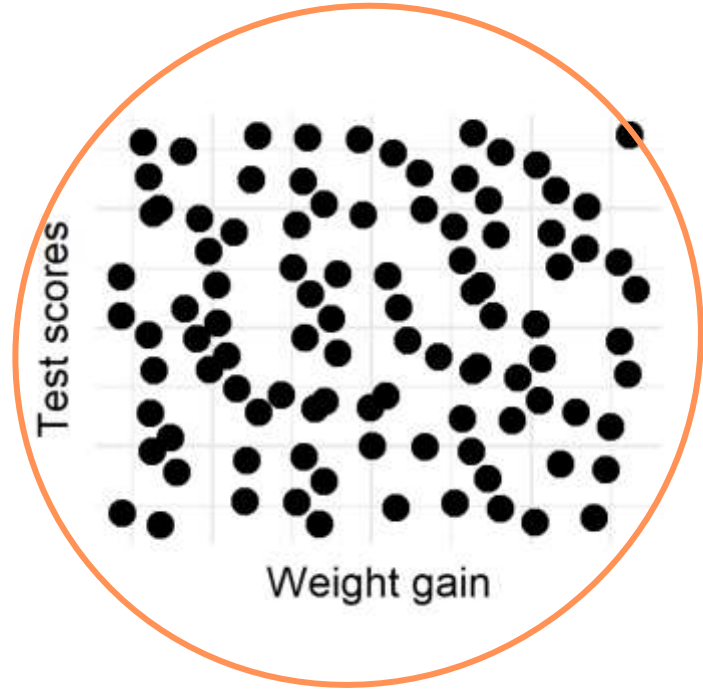
# Brand Voice Differentiation | Approach



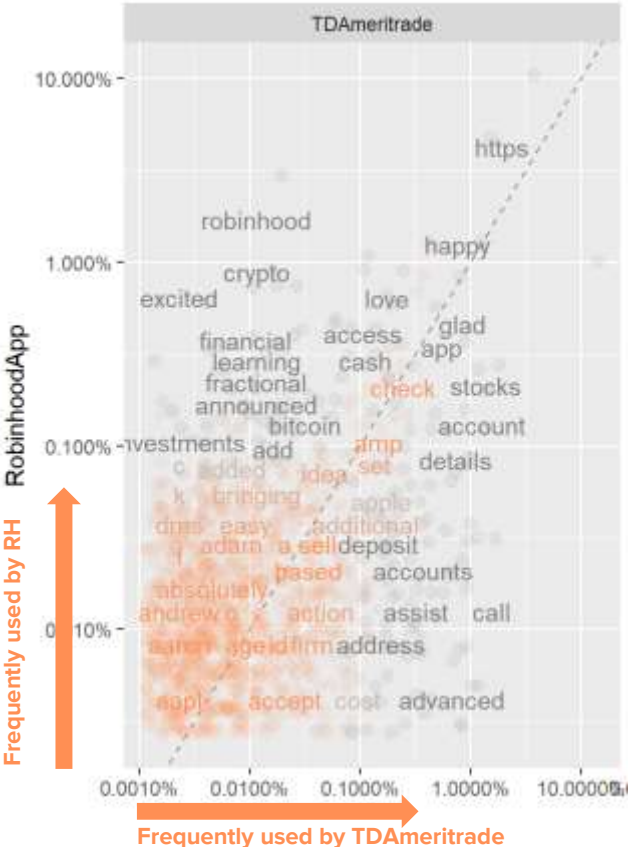
Brand Voice Differentiation | Competitive Set



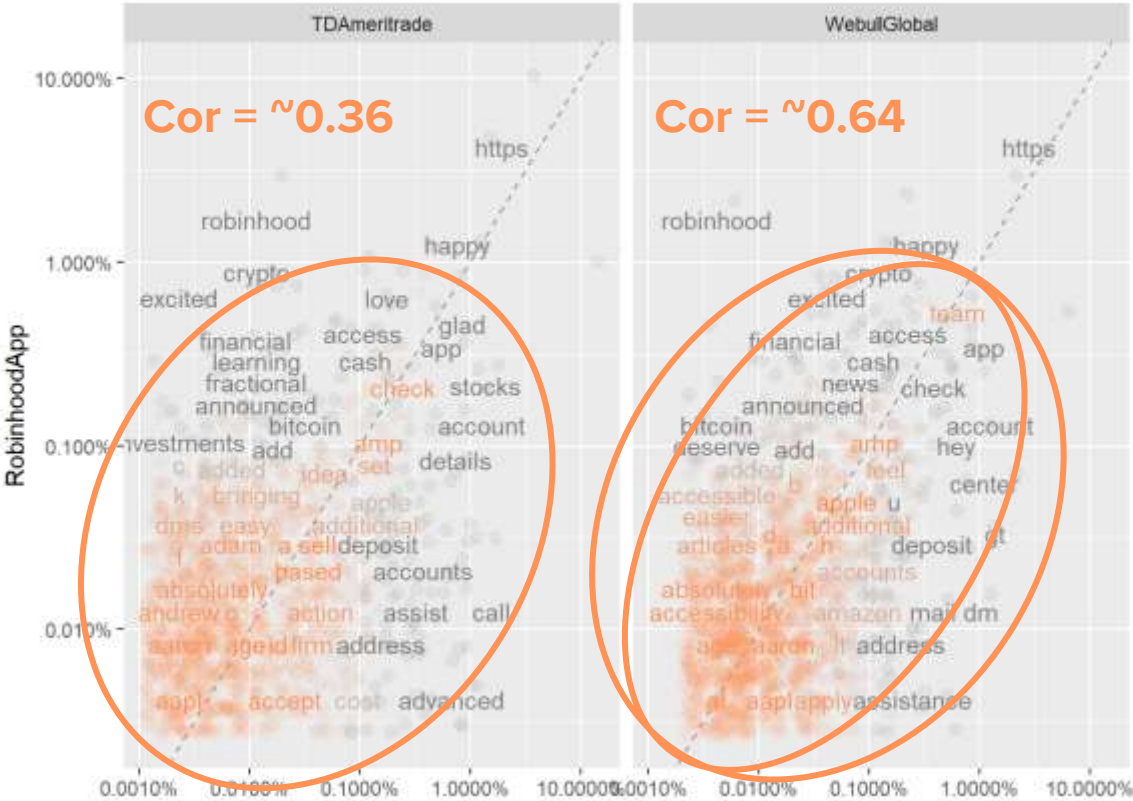
## A Note on Correlation



# Brand Voice Differentiation | Term Frequency & Correlation Tests

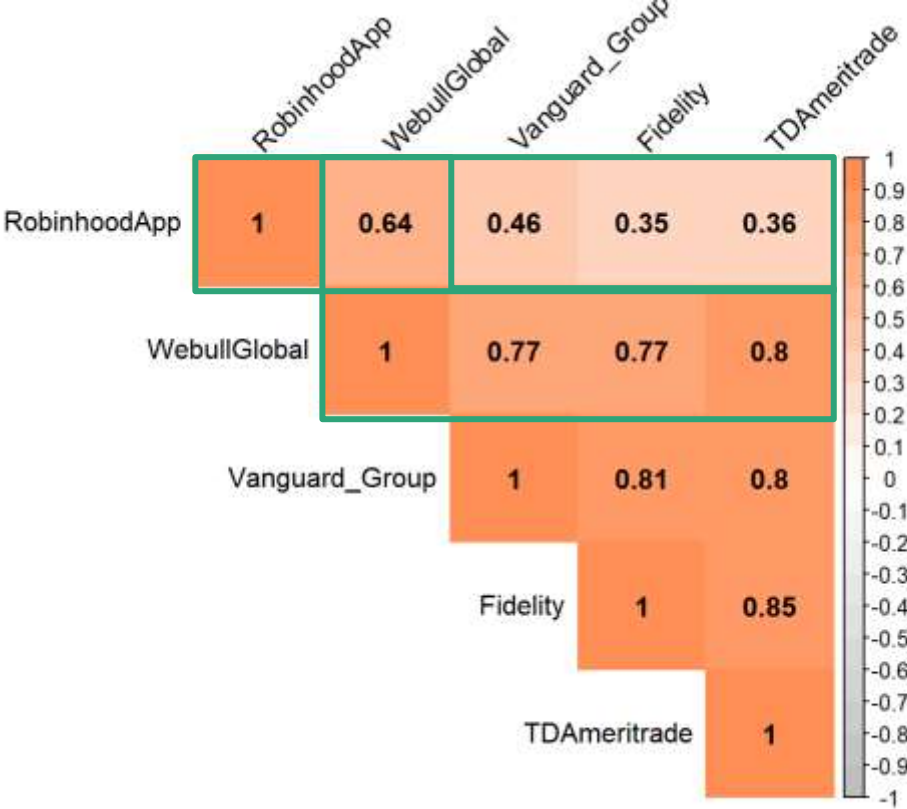


# Brand Voice Differentiation | Term Frequency & Correlation Tests





# Brand Voice Differentiation | Correlogram (Comparing Our CompSet)



## Brand Voice Differentiation | So What?

### What does all of this mean for Robinhood?

- Robinhood has a relatively differentiated brand voice.
- Robinhood has a clear competitor in WeBullGlobal.
- Next Steps for Robinhood:
  - Further differentiate from their nearest competitor
  - Defend their user base against WeBullGlobal

# Sentiment Analysis

# Sentiment in r/WallStreetBets

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412

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6.0k Comments · Award · Share

5.2k

Posted by u/CHAINSAW\_SECTORY · Get off my lawn · 4 days ago · 4 & 237 More

Join /r/WallStreetBets' Third Annual Paper Trading Competition! **Mods**

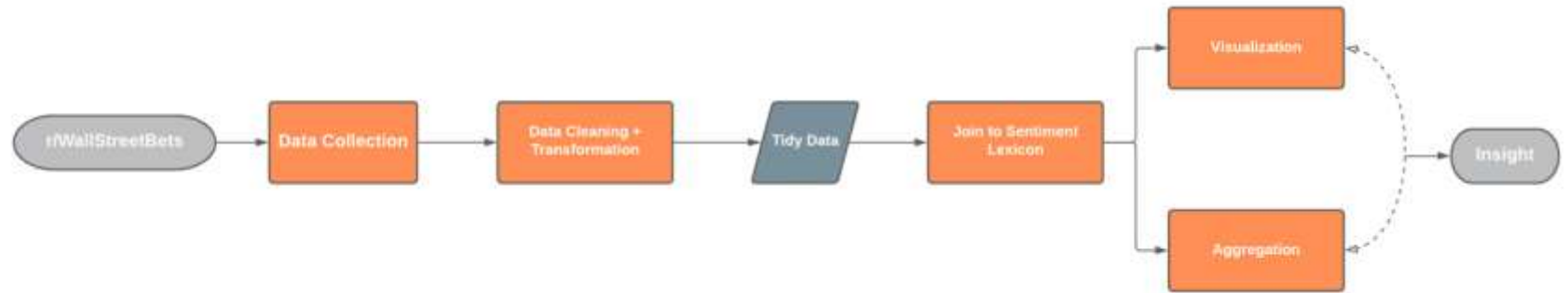
14.5k Comments · Award · Share

18.0k

Posted by u/yesterday · 3 hours ago · 13 & 40 More

Cramer is losing it. **News**

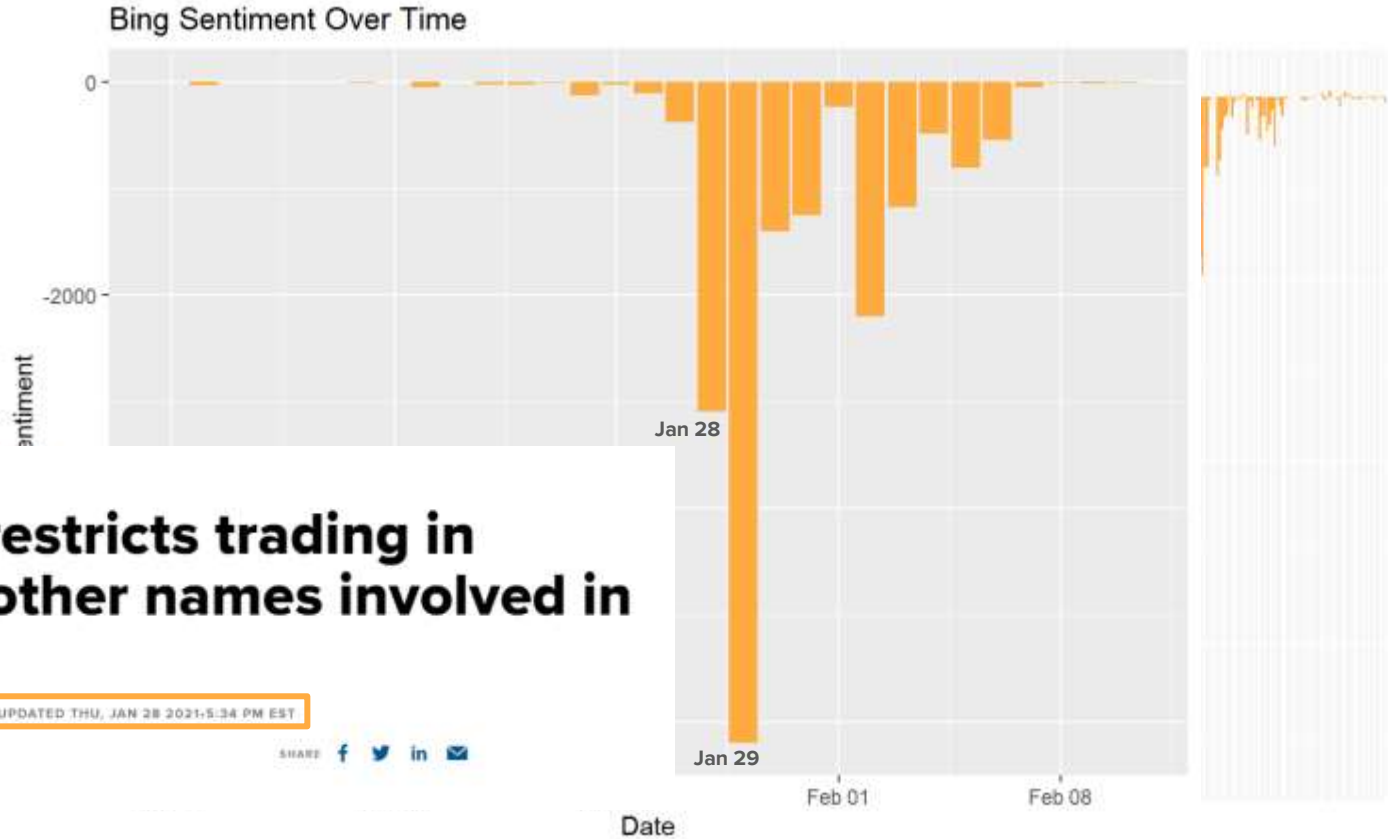
## Sentiment Analysis | Approach



## Sentiment Analysis | An Example

**We were the best advertising for RH. We need to end that now RH has been on some real bullsh.t, that much is clear.**

# Tracking Sentiment Over Time



MARKETS

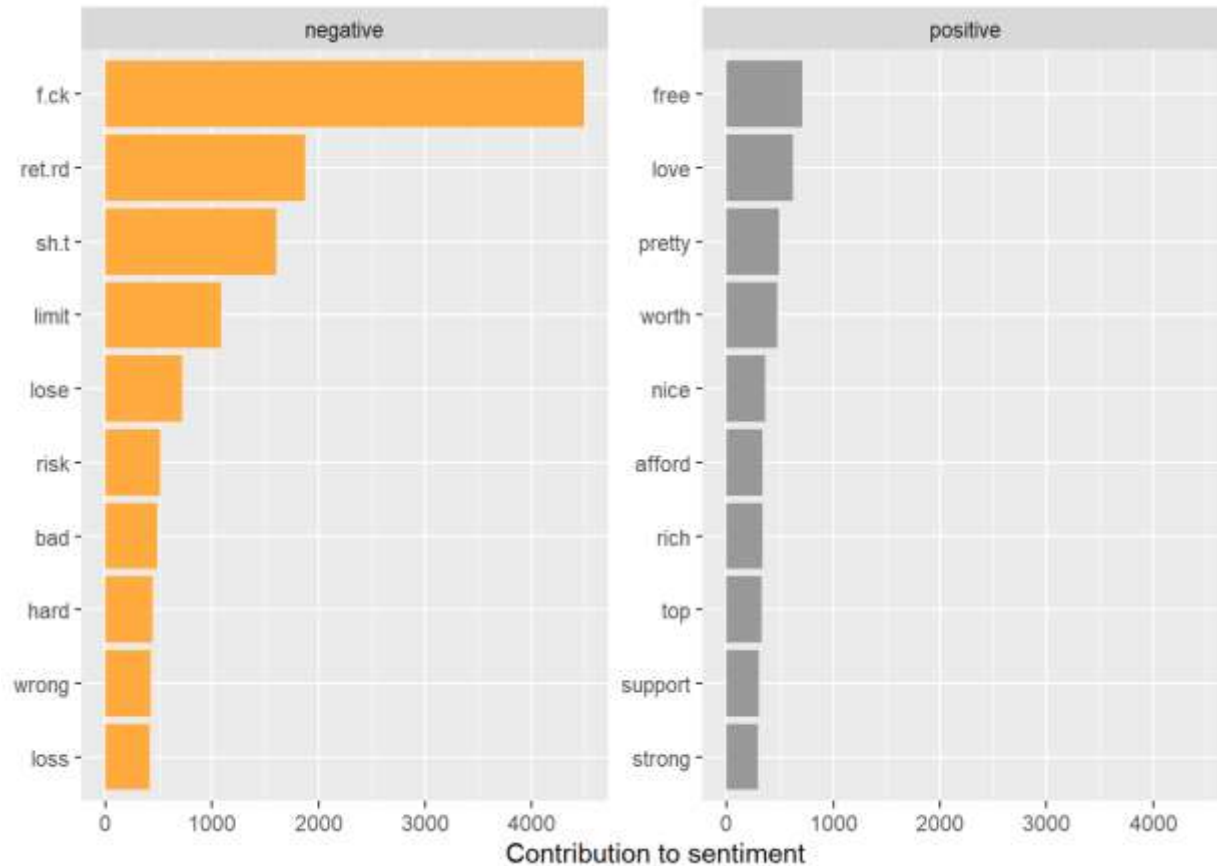
## Robinhood restricts trading in GameStop, other names involved in frenzy

PUBLISHED THU, JAN 28 2021-9:19 AM EST | UPDATED THU, JAN 28 2021-5:34 PM EST

 Maggie Fitzgerald @MAGFITZGERALD

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## Term Frequency + Sentiment Contributions





## Term Frequency + Sentiment Contributions

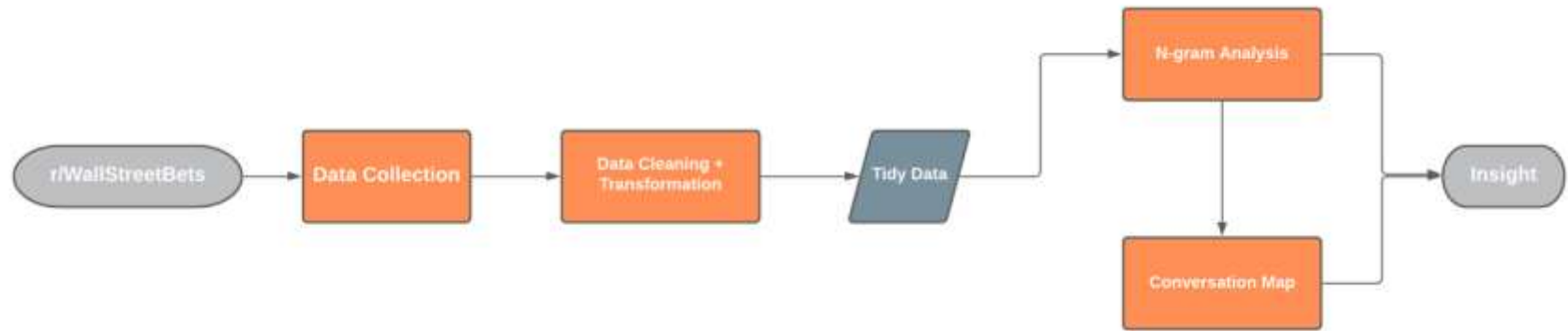
negative



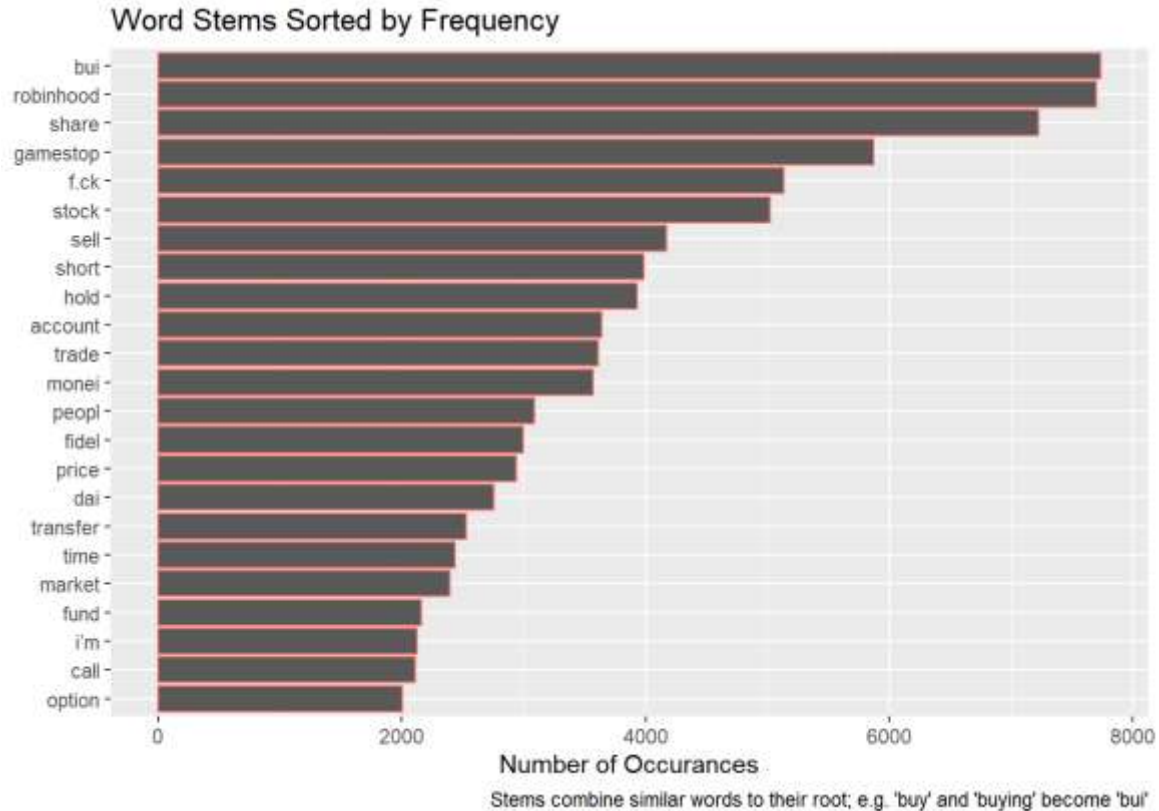
positive

# N-Grams & Conversation Mapping

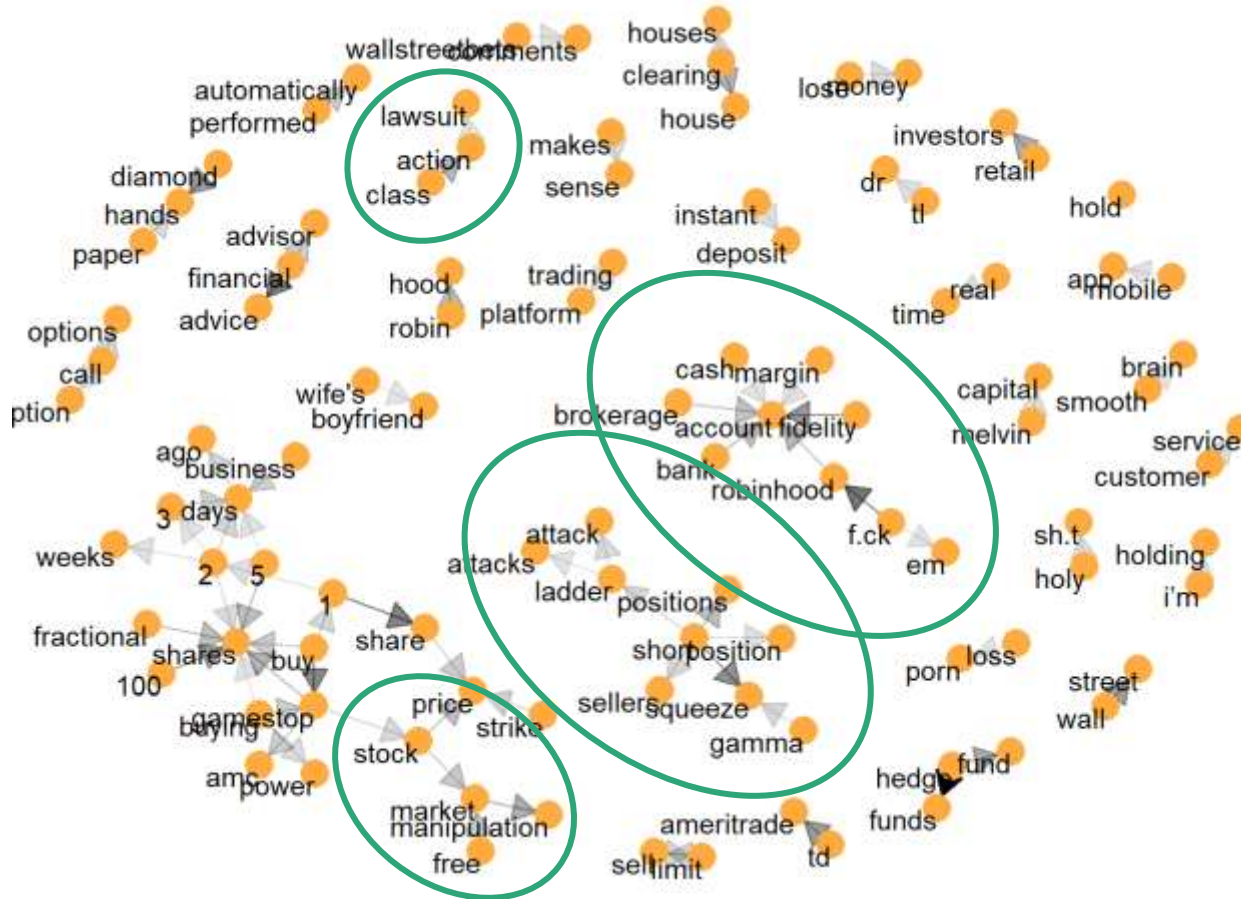
## N-gram Analysis & Conversation Mapping | Approach



# Term Frequency



# Going Beyond Single Words: N-gram Analysis



## Sentiment Analysis and Conversation Mapping | So What?

### What does all of this mean for Robinhood?

- Robinhood violated its brand promise and upset its user base.
- The network forces that turned against Robinhood were swift and startlingly one sided. RH failed to listen and paid the price.
- Next Steps for Robinhood:
  - r/WallStreetBets does not represent 100% of the RH user base.
  - User discovery and a *meaningful* commitment to what users value must come next.

# Questions?

Reach out on Twitter or LinkedIn  
@alexanderhrose

