

A COVID-19

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# SENTIMENT ANALYSIS

How different states felt about  
lockdown and reopening.

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# Problem Statement

As the Covid-19 pandemic continues to be the topic of conversation across all dinner tables and of course TV screens in the United States, **general sentiment regarding COVID-19 announcements** have become a point of interest.

Since most of the response to this pandemic has been mostly regional and state based, we wanted to focus on collecting tweets from several high profile states that have been impacted by the virus, compare **how the states reacted to the news of their respective shut down and reopening announcements, and determine if states reacted differently to the announcements.**

The states we're going to be looking at are:

- New York, New Jersey, Texas, Florida, Ohio, Georgia, Michigan and Illinois.

# Data



**Twitter**

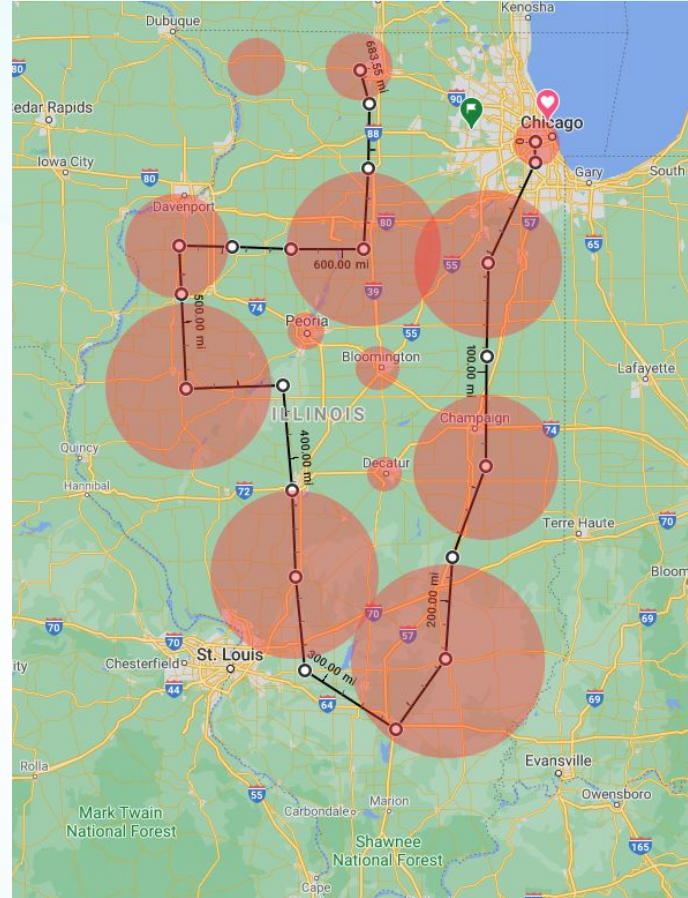
Scraping and Cleaning



# Data



## Twitter Scraping and Cleaning

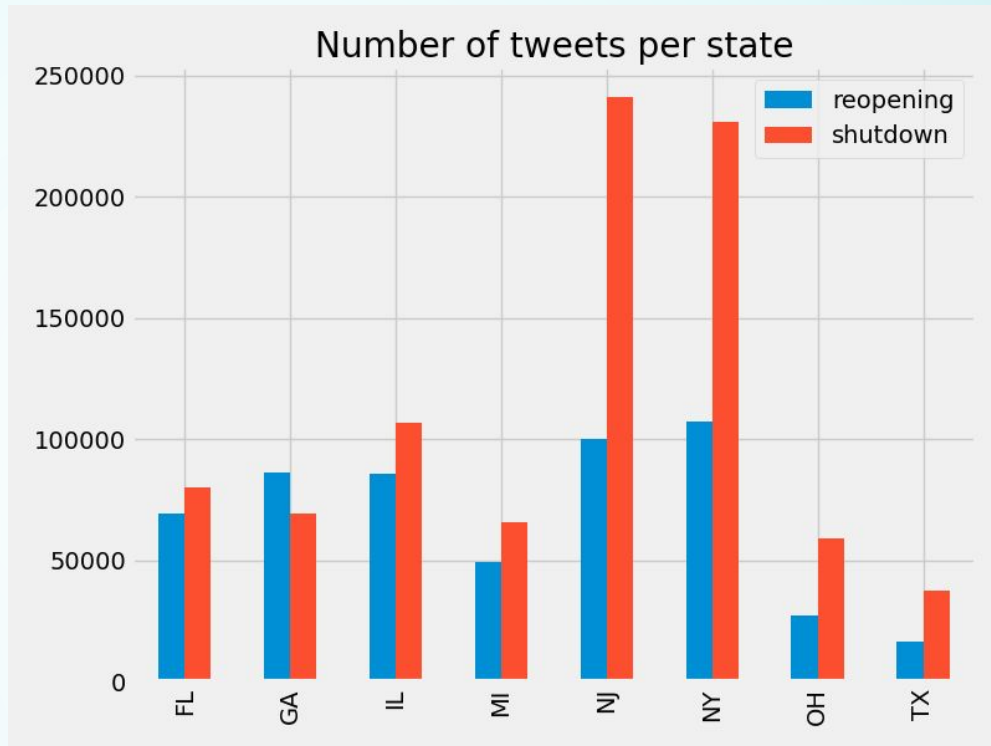


# Data



## Twitter

### Scraping and Cleaning



# EDA: Most Words Used

- Pulled tweets not just related to covid

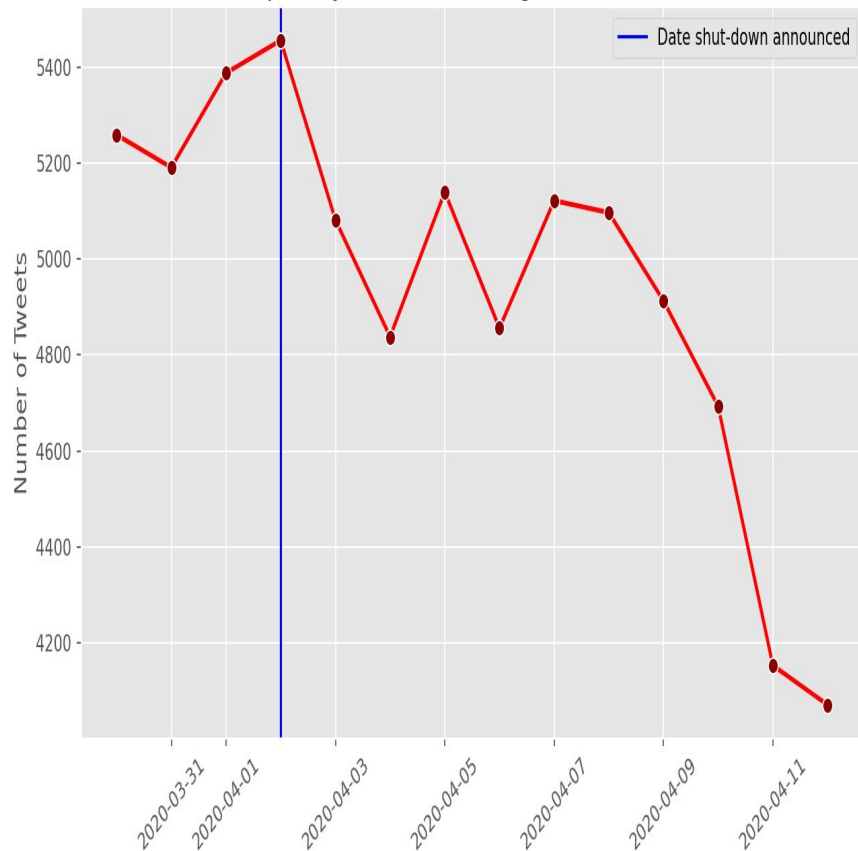
- Results show covid related tweets were a high level of interest

Some of the Top 20 Words

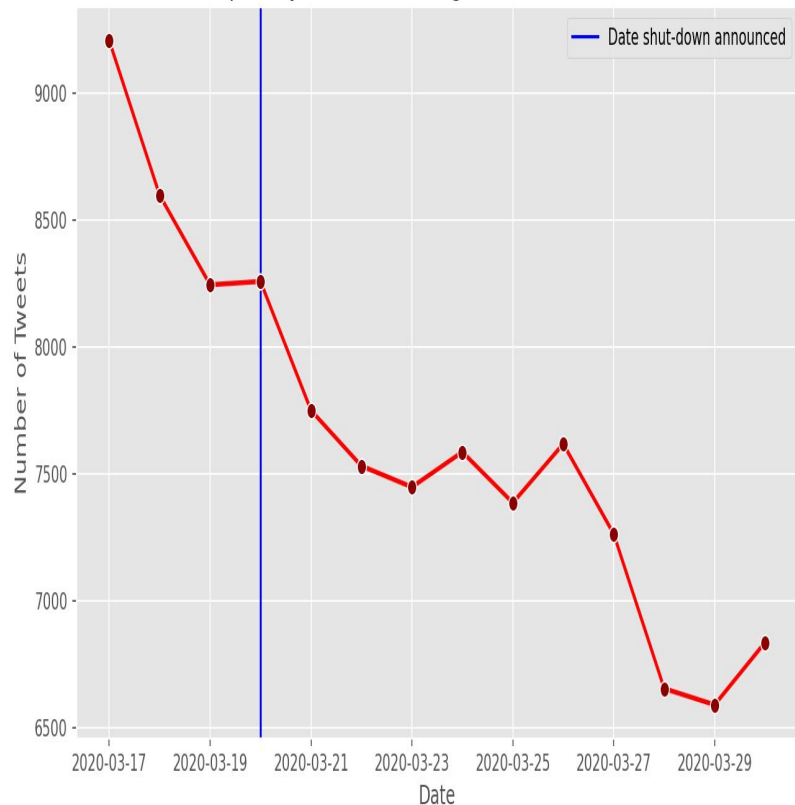
Rank	Word	Amount
10	today	8024
11	right	8002
12	home	7454
13	quarantine	6223
14	coronavirus	4382

# EDA: Evaluating Shutdown dates

Tweets per day in GA surrounding Covid shutdown date



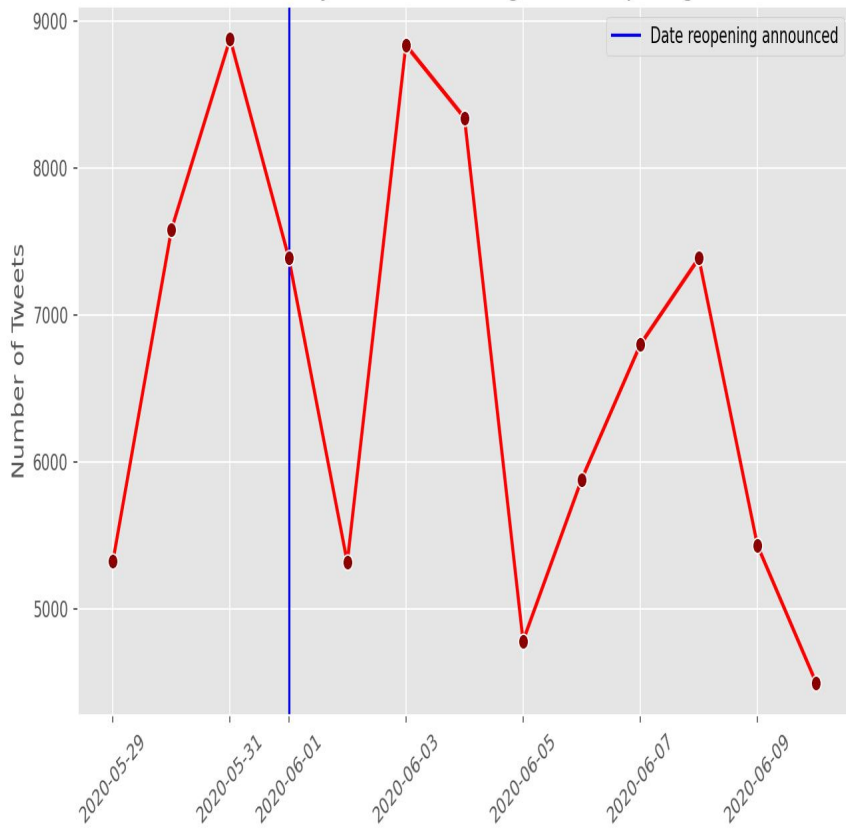
Tweets per day in IL surrounding Covid announcement date



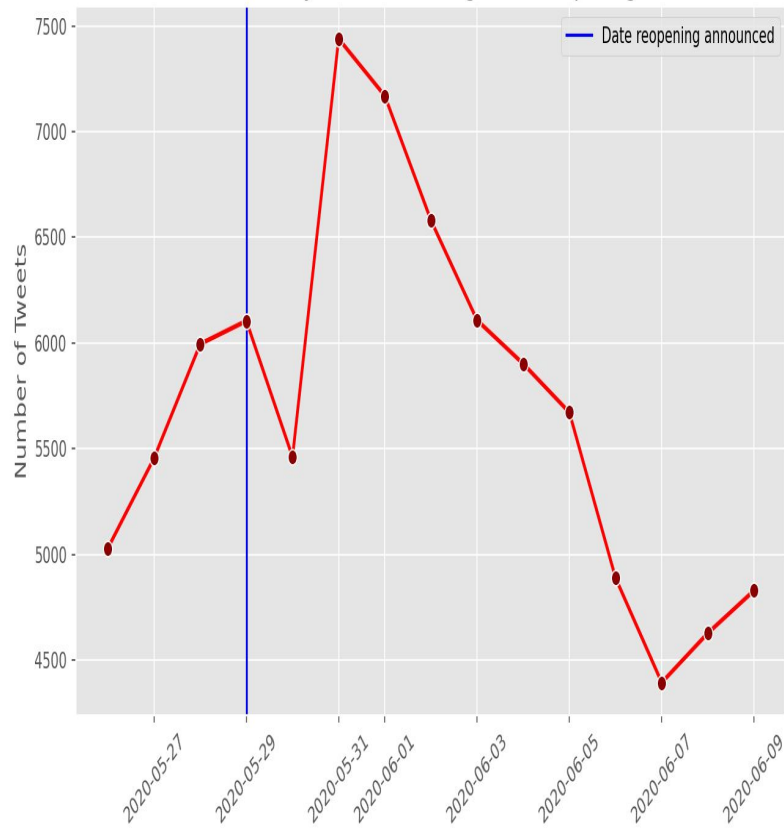


# EDA: Evaluating Reopening dates

Tweets Per Day in GA Surrounding Covid Reopening Date



Tweets Per Day in IL Surrounding Covid Reopening Date



# Results/Analysis

## Sentiment Analysis with VADER

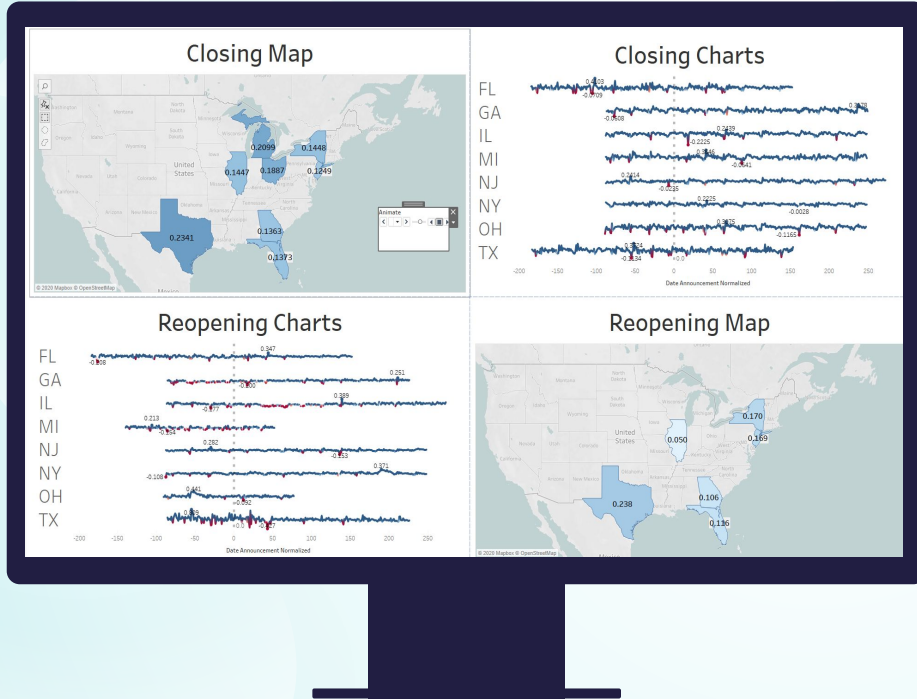
Natural Language Processing  
Tool that works well with social  
media text.

1. positive sentiment: `compound score >= 0.05`
2. neutral sentiment: `( compound score > -0.05) and ( compound score < 0.05)`
3. negative sentiment: `compound score <= -0.05`

# Example of Tweets with VADER Score



Tweets	Username	Positive Score	Neutral Score	Negative Score	Compound Score
“Hello friends! Another weekend is just over the horizon & we’re all pondering what it will bring. As long as were all surrounded by the love of friends and family, I know it will be wonderful! Embrace the blessings in your life & stay positive! Happy Wednesday! #HumpDay **Smile Face, heart, heart emojis** - at The Ritz-Carlton Key Biscayne, Miami	aamj1529	0.422	0.578	0.0	0.9903
“What are y’all up to I need some human contact”	QuiannaRee	0.0	1.0	0.0	0.0
“In quarantine, humankind learned how important it is to listen to scientific experts when they warn us about epidemics. Now how about listening to their warnings regarding ecological collapse? The global crisis is an opportunity to stop learning the hard way. #Earthday	SEOMalkamDior	0.085	0.647	0.268	-0.836



# Dashboard



## Future Steps

01

### All the States

Running Sentiment Analysis on every state.

02

### Hypothesis Testing

Testing to see if variations in sentiment are significant.

03

### Comparing Major Events

Does sentiment align with major events in certain states?

04

### Background on Twitter Users

Does the average Tweeter play an important role in sentiment?

## Sources:

<https://medium.com/analytics-vidhya/simplifying-social-media-sentiment-analysis-using-vader-in-python-f9e6ec6fc52f>

<https://www.nytimes.com/interactive/2020/us/states-reopen-map-coronavirus.html>

<https://coronavirus.jhu.edu/>

<https://covidtracking.com/>



# THANK YOU!

Do you have any  
questions?

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