Natural Language Processing:

Joe Biden's 2020 Election Tweets

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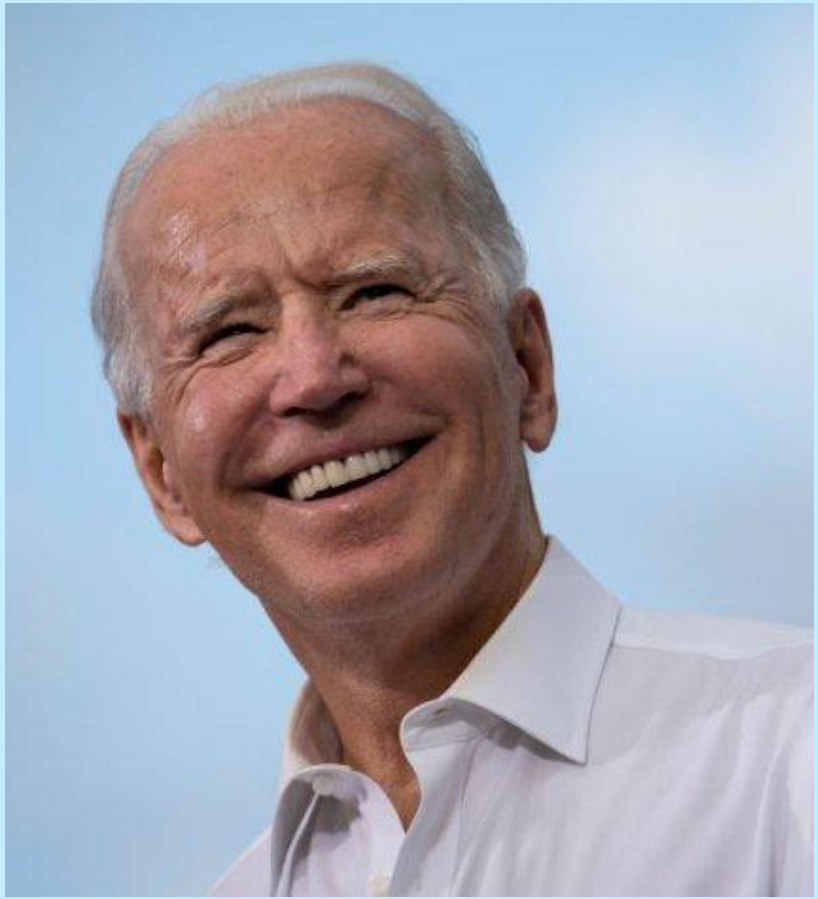
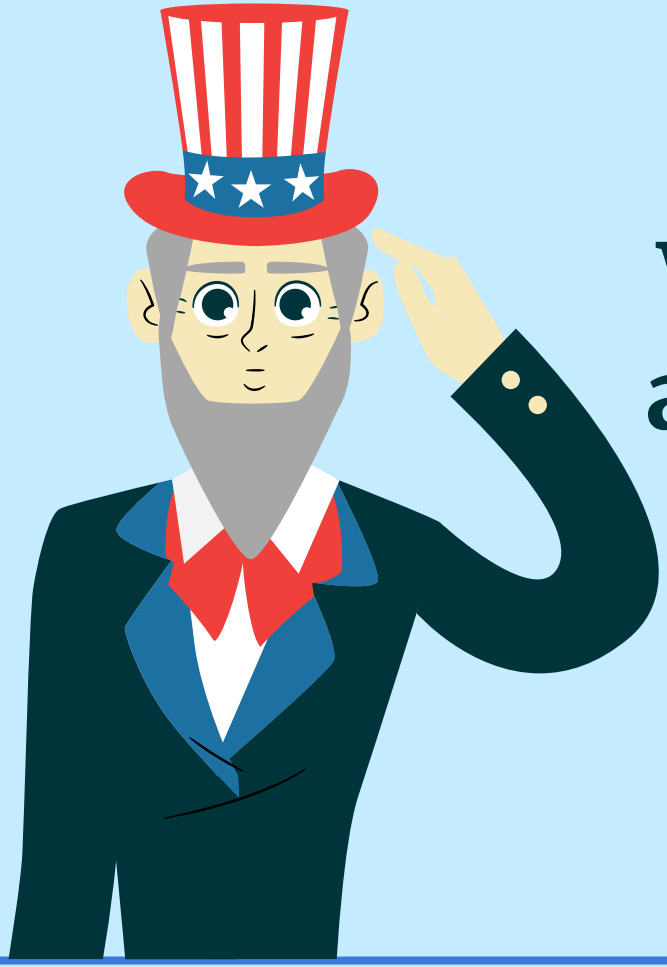
Matt Ranalletta





Why do we care about candidate tweet data?

Timeline

April 25, 2019
Biden declares candidacy

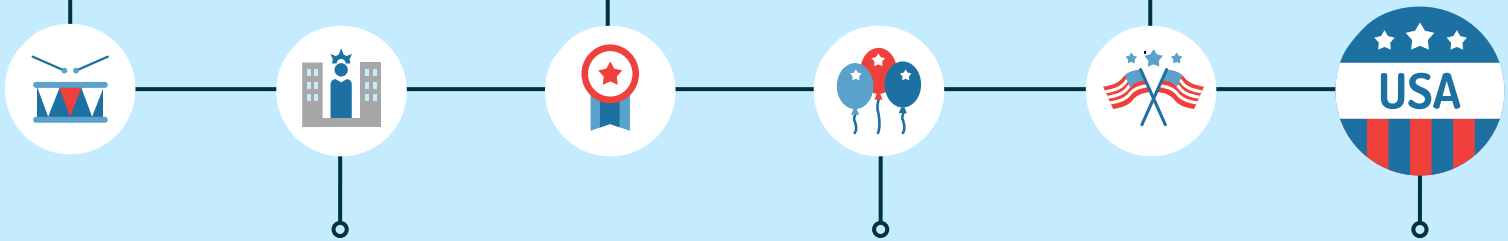
Feb. 3, 2020
Iowa Caucuses

April 8
Biden is presumptive nominee

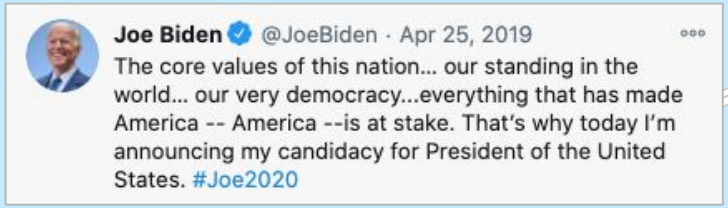
August 17
Democratic National Convention

September 29
First presidential debate

November 3
Election Day 2020



NLP Process



4,575 total tweets

Preprocessing Tweets

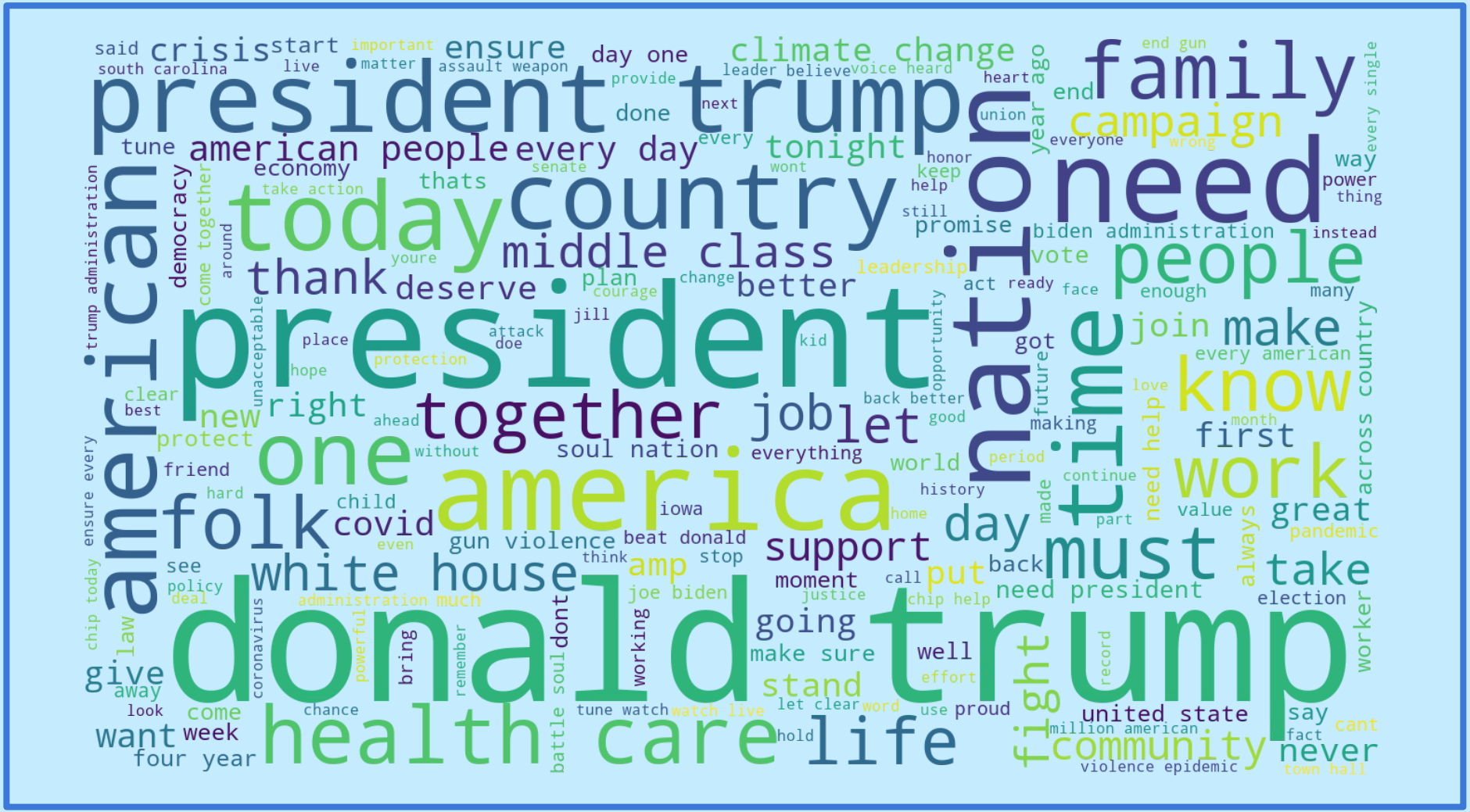
core value nation standing world democracy everything made america america stake thats today announcing candidacy president united state

Topic Modeling

NMF

Visualization

Matplotlib, Wordcloud, TSNE


president trump
president
donald trump
american
american people
country
nation
need
family
today
people
time
together
one
folk
health care
life
must
know
work
make
join
campaign
climate change
ensure
crisis
start
day one
tonight
middle class
thank
deserve
better
job
let
support
day
white house
covid
gun violence
beat donald
going
stand
fight
community
united state
never
take
great
first
make
join
every american
across country
every single
end gun
end
year ago
union
everyone
wrong
way
power
thing
instead
promise
biden administration
vote
leadership
act ready
face
enough
many
get
future
making
need help
love
month
period
continue
history
home
part
value
always
pandemic
back
need president
election
worker
record
say
cant
fact
town hall
million american
violence epidemic
use
proud
let clear
word
watch live
tune watch
hold
battle soul
dont
working
remember
bring
powerful
coronavirus
chance
come
look
away
give
law
chip today
ensure every
want
week
four year
see
policy
deal
administration much
joe biden
amp
stop
think
moment
justice
call
put
chip help
back
well
effort
make sure
hard
friend
child
even
without
soul nation
everything
world
iowa
ahead
protect
new
clear
best
hope
place
protection
attack
doe
jill
kid
back better
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opportunity
unacceptable
trump administration
democracy
come together
around
youre
plan
courage
change
thats
take action
economy
tune
american people
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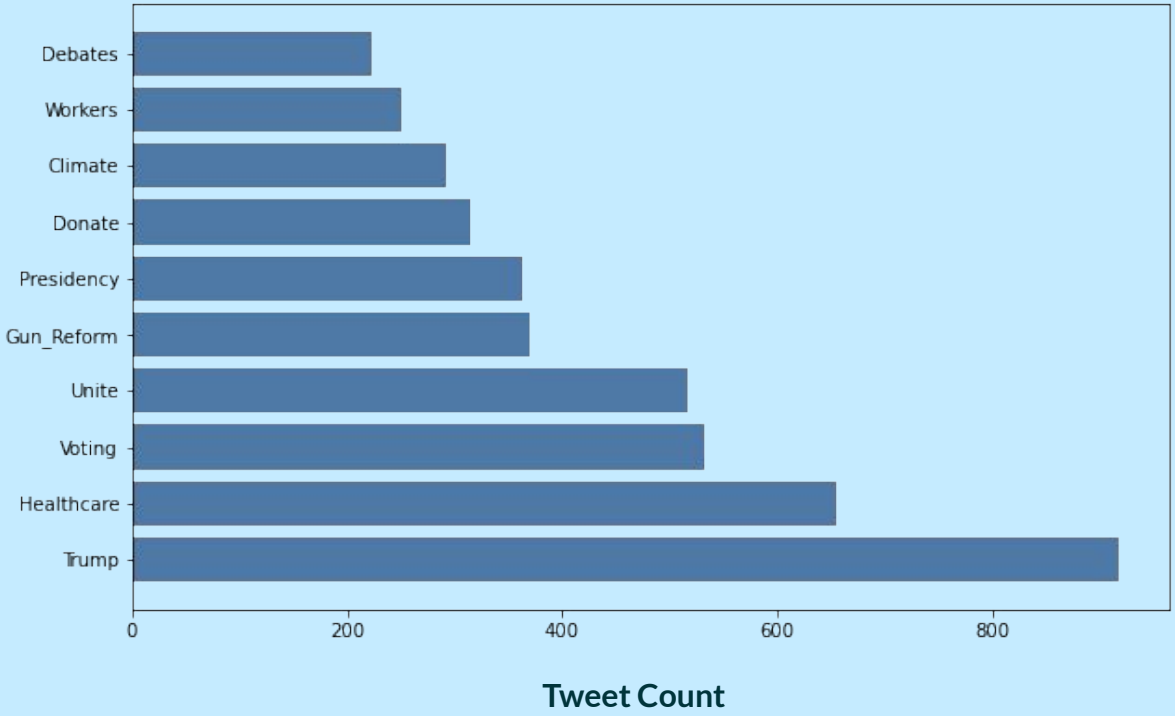
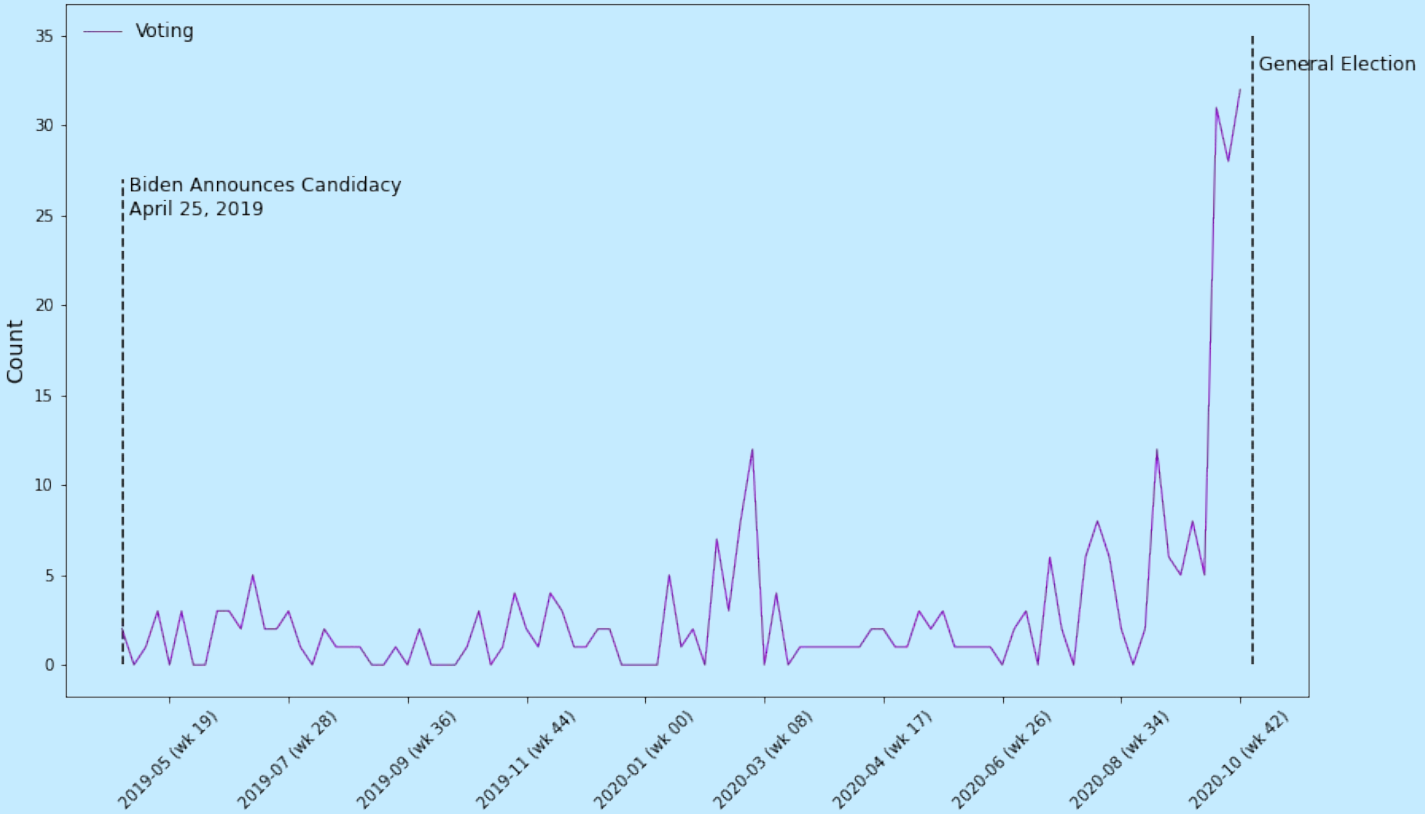
help
still
honor
every
next
done
provide
leader believe
voice heard
heart
assault weapon
matter
live
important
south carolina
said
end gun

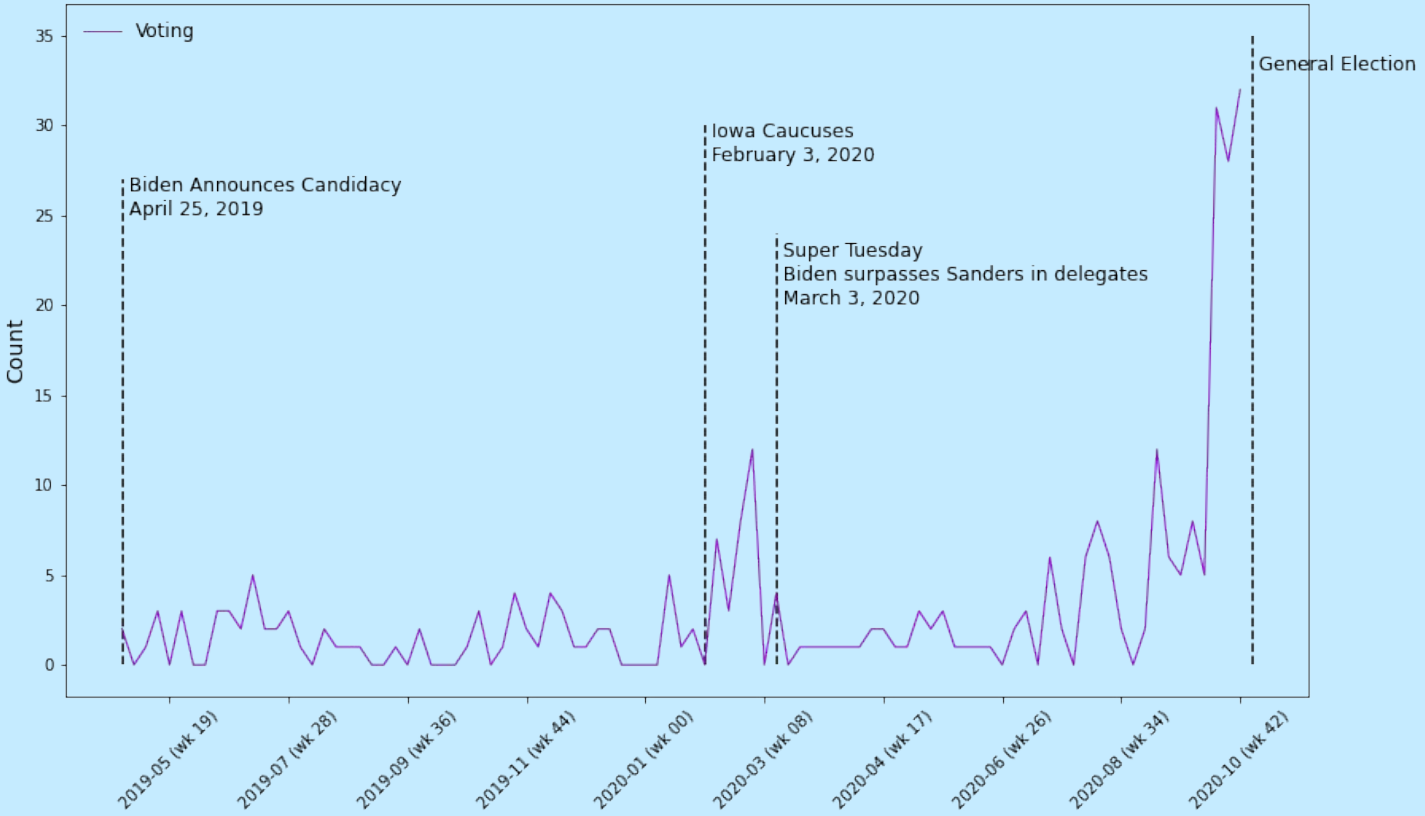
10 Main Topics and Frequency



Tweets About Voting



Tweets About Voting



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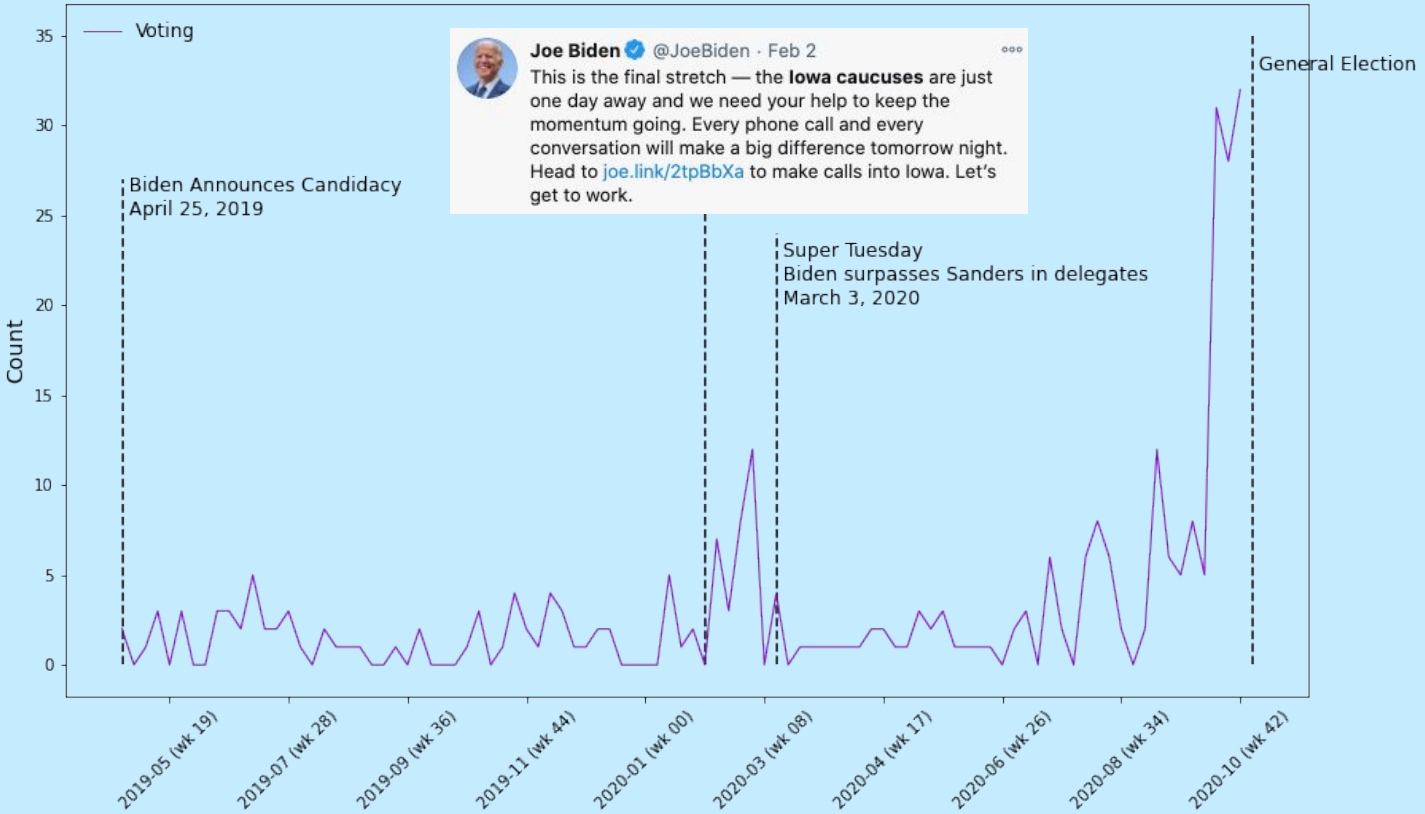
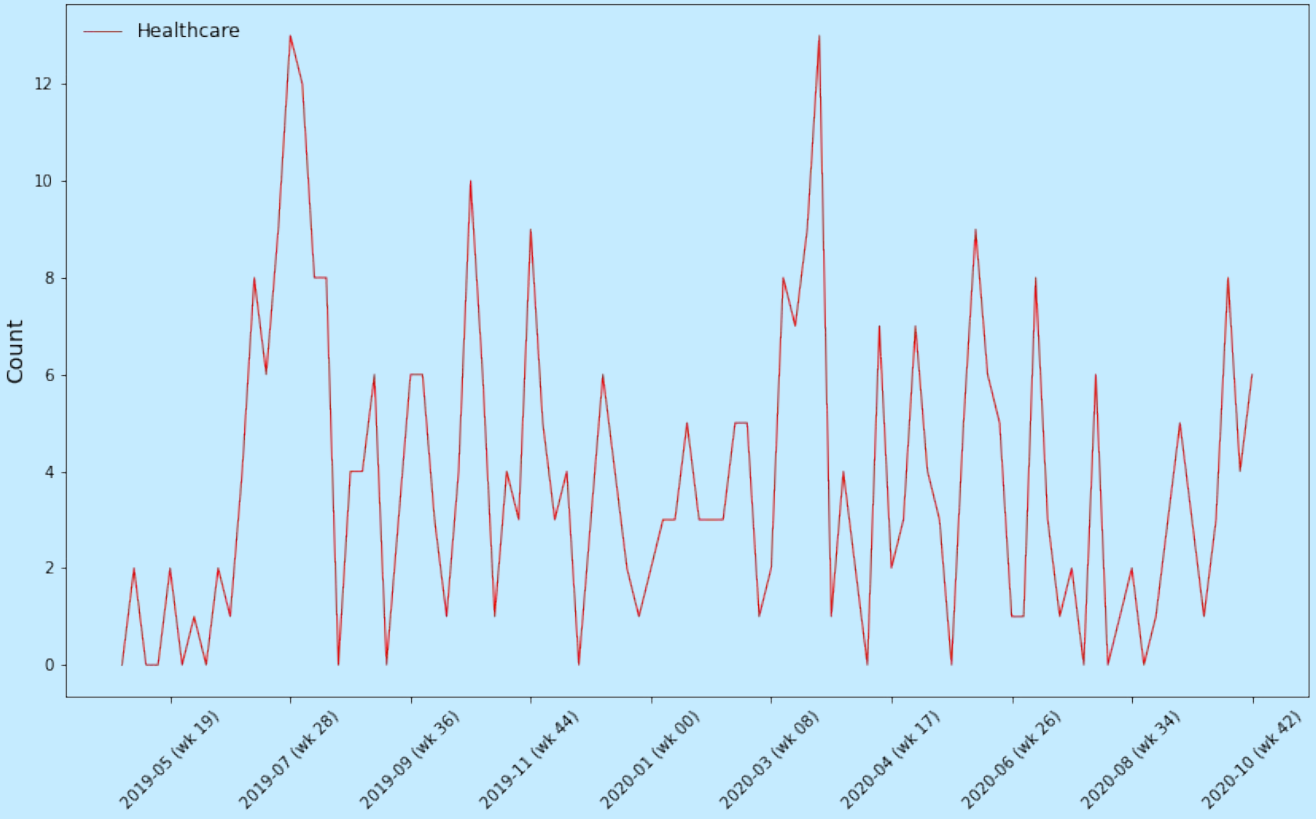


Tweets About Healthcare



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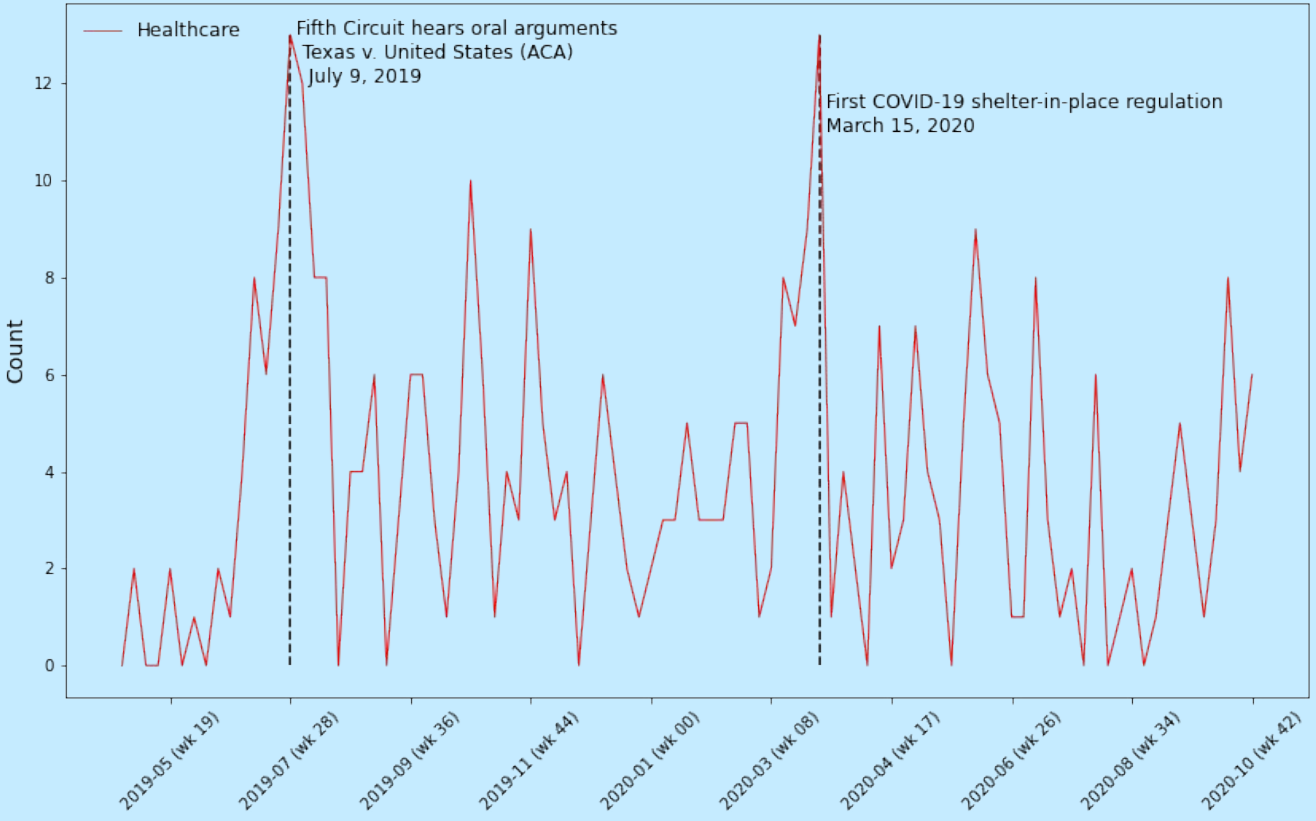
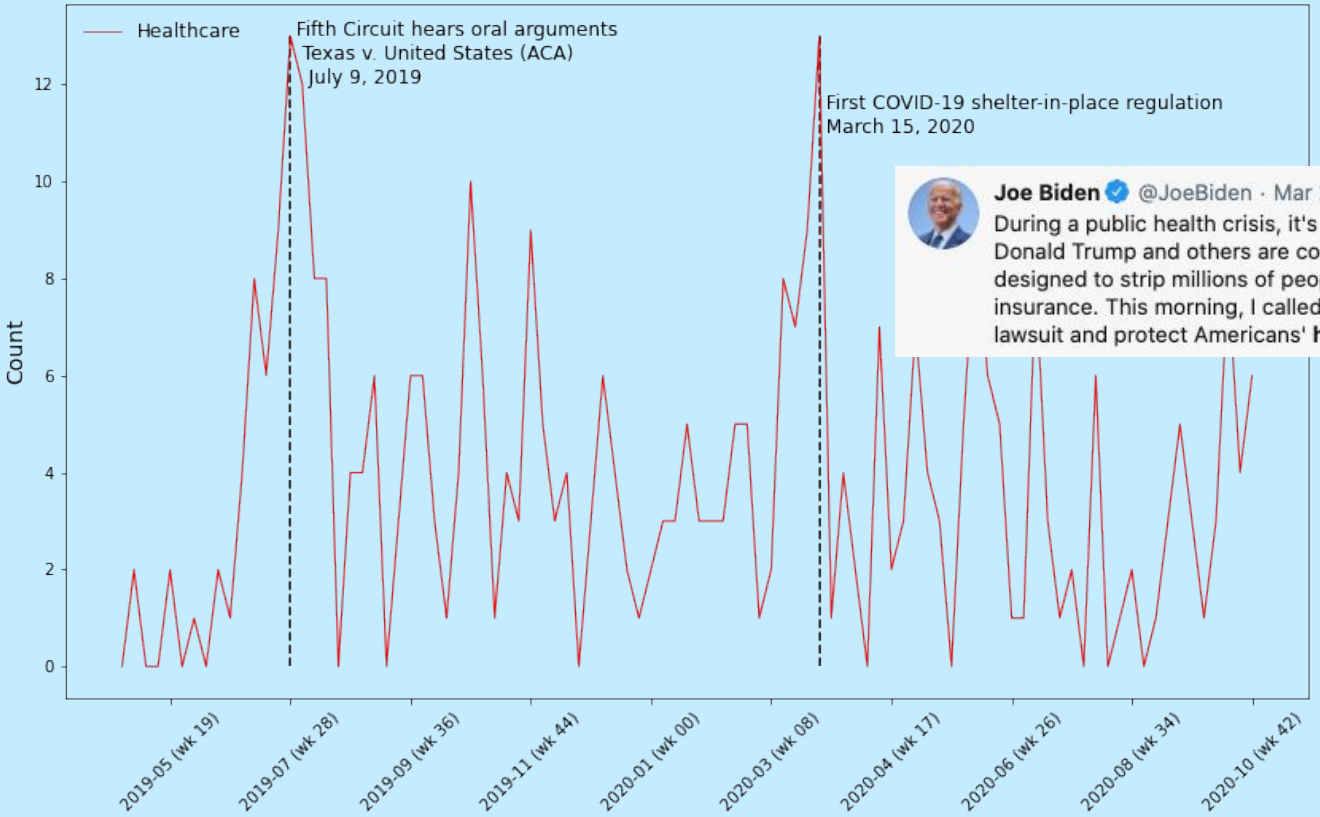


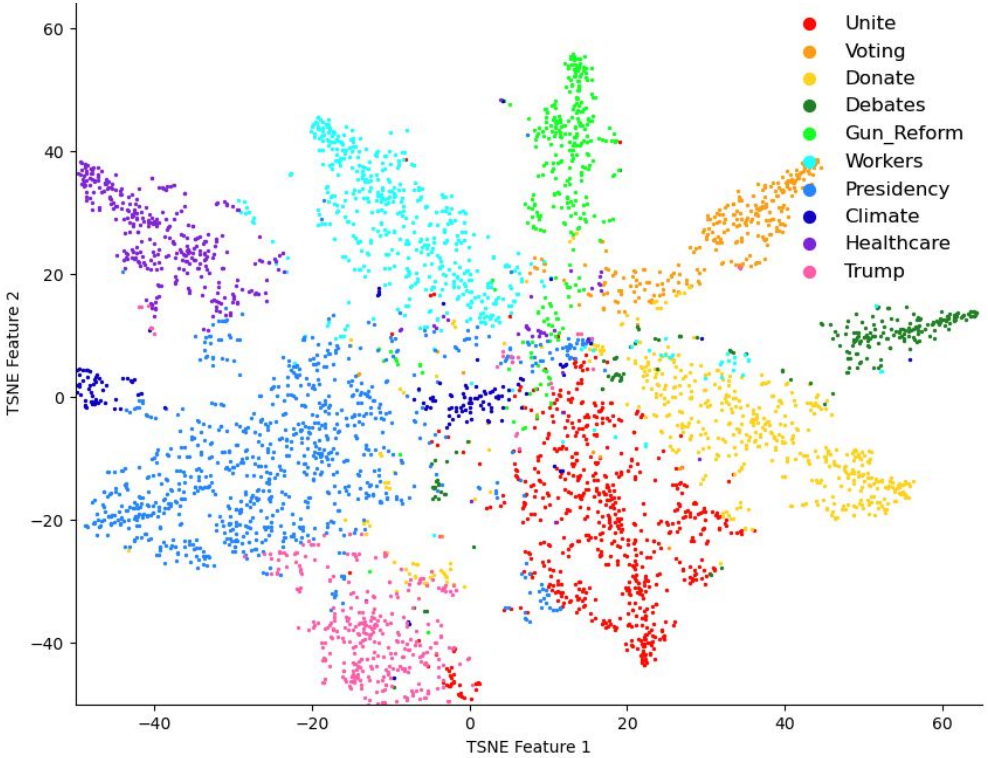
Tweets About Healthcare



Joe Biden @JoeBiden · Mar 23

During a public health crisis, it's unconscionable that Donald Trump and others are continuing a lawsuit designed to strip millions of people of their health insurance. This morning, I called on them to drop the lawsuit and protect Americans' **health care**.

NMF + TSNE Topic Modeling



Future Work

Likes, Replies & Retweets

Based on Topics

Tweets as President

Policy Updates

Sentiment Analysis

Compare with other politicians

Thank you!

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