Winning the Message Battle:

A Twitter Case Study

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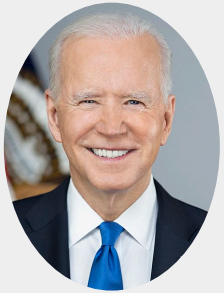
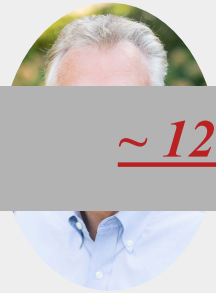
December 2021 | METIS

2020 vs. 2021 Election Results

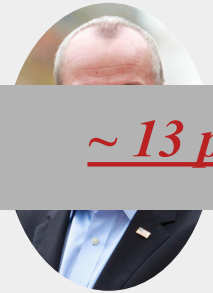


Joe Biden (D)
Votes in VA: 2,413,568 *(54.1% - D+10)*
Votes in NJ: 2,608,335 *(57.3% - D+16)*

Donald Trump (R)
Votes in VA: 1,962,430 *(44.0%)*
Votes in NJ: 1,883,274 *(41.4%)*



~ 12 pt swing towards Republicans in Virginia



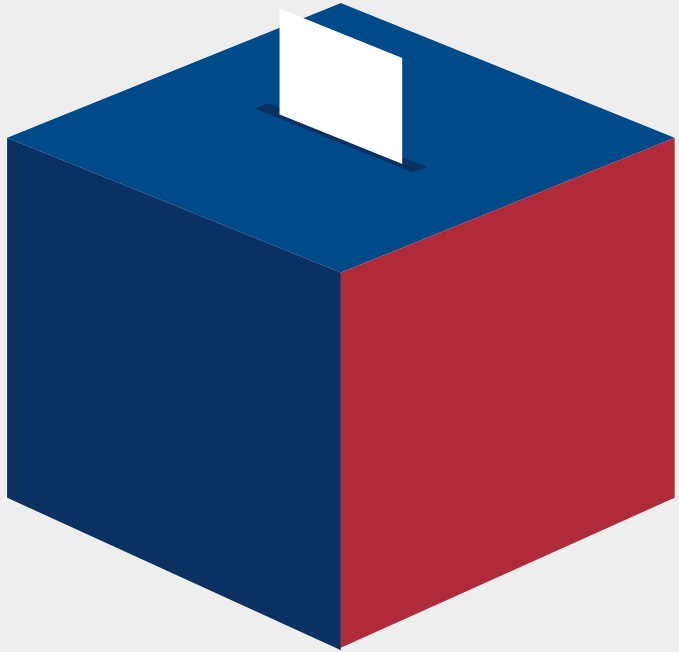
~ 13 pt swing towards Republicans in New Jersey

Guiding Question:

What is driving the swing toward Republicans in the electorate and how can Democratic candidates counteract this swing in their messaging?

Project Objective

- ★ Explore the social media messaging strategies of the candidates in the VA and NJ Gubernatorial Elections in 2021
- ★ Areas of Interest:
  - What issues are the candidates focusing on?
  - Is the candidate primarily using positive or negative messaging strategies?
    - E.g. positive message about their own candidacy vs. negative message about their opponent
  - Do the social media networks of the candidates overlap, and if so how much?



Data

- Queried the Twitter API for the user timelines of each candidate from January 1, 2021-November 3, 2021 (election day)
- Results: 4 datasets with ~1500-3500 unique tweets each.

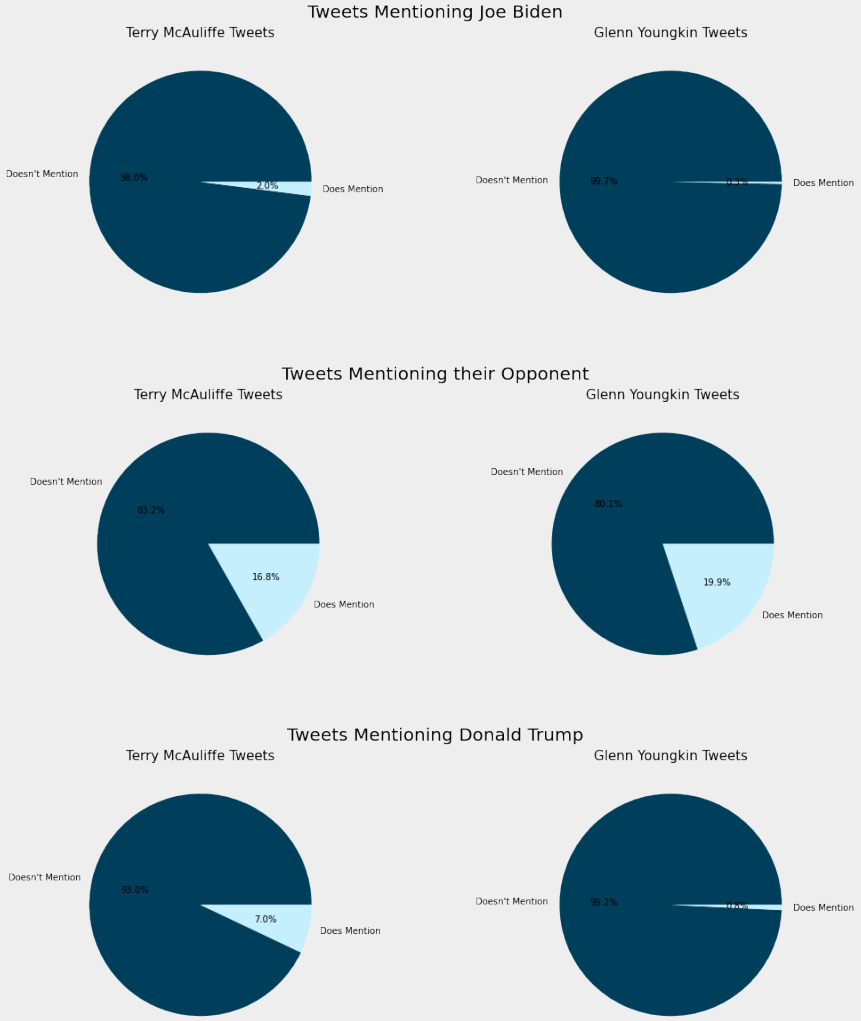
- *Attempted to query the API for all tweets related to the VA and NJ elections within the last year, but limited by API permissions*

Tools and Libraries

- Tweepy and Twitter API
- SpaCy/SpaCyTextBlob and NLTK for language processing and sentiment analysis
- sklearn for topic modeling and engagement regressions
- matplotlib, seaborn for visualization

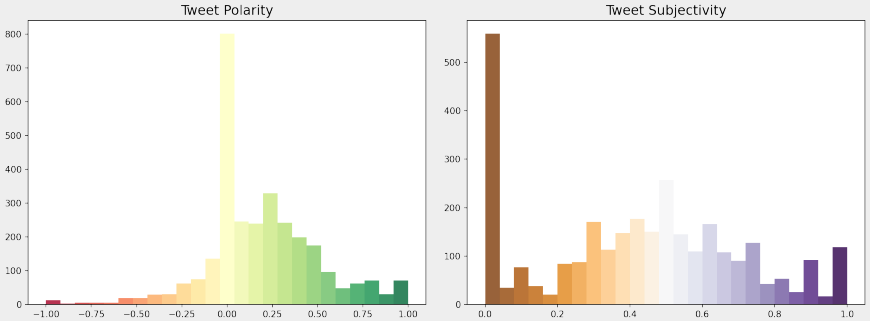
Insights from Virginia

- Terry McAuliffe mentioned Trump in his messaging more than any other candidate, in particular his opponent
- McAuliffe and

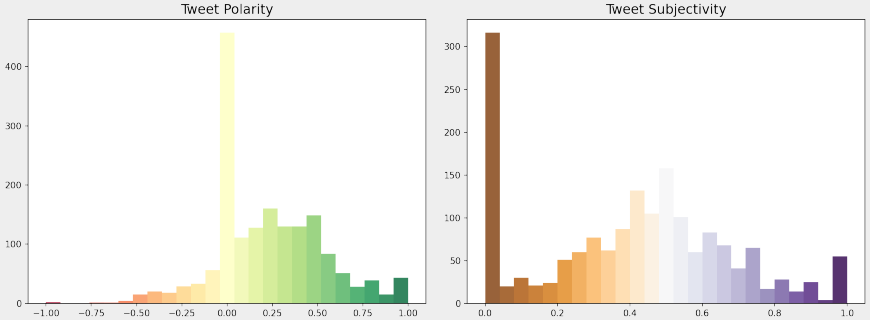


Insights from Virginia

Sentiment of Tweets from Terry McAuliffe (D - VA)

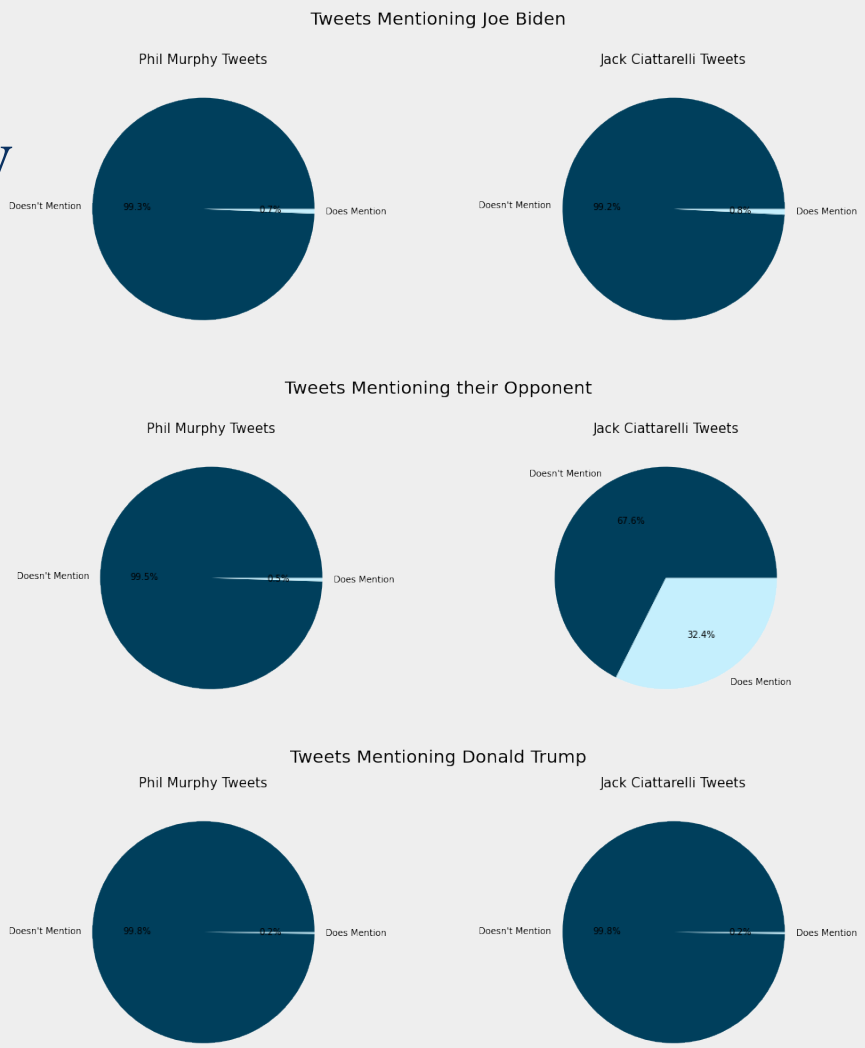


Sentiment of Tweets from Glenn Youngkin (R - VA)



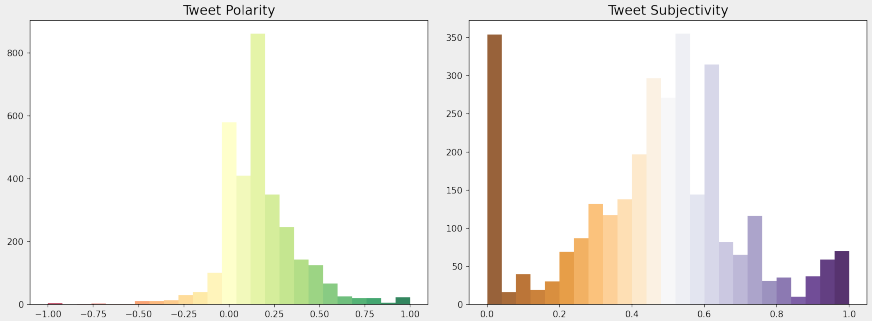
Insights from New Jersey

- Ciattarelli mentioned his opponent significantly more than vice versa
- Both Murphy and Ciattarelli mentioned Trump/Biden a trivial amount

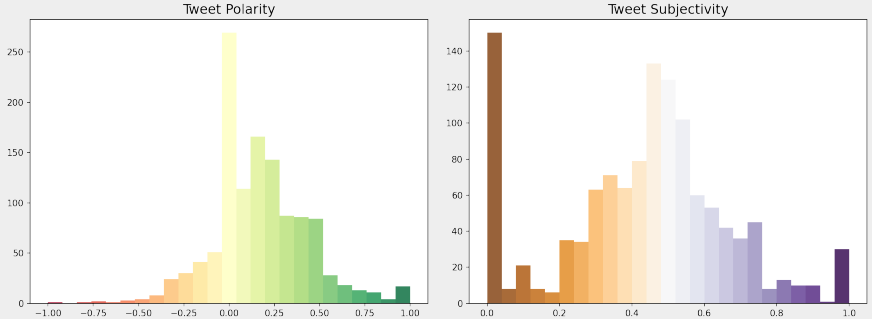


Insights from New Jersey

Sentiment of Tweets from Phil Murphy (D - NJ)



Sentiment of Tweets from Jack Ciattarelli (R - NJ)



Candidate Interactions

McAuliffe		Youngkin		Murphy		Ciattarelli	
User Interaction	# of Interactions	User Interaction	# of Interactions	User Interaction	# of Interactions	User Interaction	# of Interactions
HalaAyala	101	TeamYoungkin	161	FirstLadyNJ	138	PhilMurphyNJ	65
DSMcAuliffe	84	JasonMiyaresVA	85	POTUS	100	GovMurphy	57
GovernorVA	79	C_RMartinez	67	NewJerseyEDA	75	NJDianeAllen	35
POTUS	71	TerryMcAuliffe	62	ReadyNJ	69	NJGOP	34
MarkHerringVA	65	WinsomeSears	46	NewJerseyOAG	60	wildstein	22
ElaineLuriaVA	42	alisciaandrews	27	NJDeptofHealth	47	SaveJersey	21
RalphNortham	40	MattWolking	20	NJGov	42	declanoscanlon	18
EFillerCorn	37	tedcruz	17	NWS_MountHolly	41	1210WPHT	16
JennMcClellanVA	36	macaulayporter	15	fema	39	StamiLW	13
vademocrats	36	devin_omalley	14	LtGovOliver	35	ActualAlexZ	12
C_Herring	33	VA_GOP	13	NJTRANSIT	33	FoxNews	12
JoeBiden	33	hughhewitt	13	NJSP	32	GOPGovs	12
GlennYoungkin	30	JohnMcGuire4VA	12	NewJerseyDEP	26	NikkiHaley	12
LevarStoney	29	BrandonMichon	11	NJBPU	25	TonyPerryNJ	11
bluevirginia	27	BCFPresident	10	NJDCA	25	77WABCradio	10

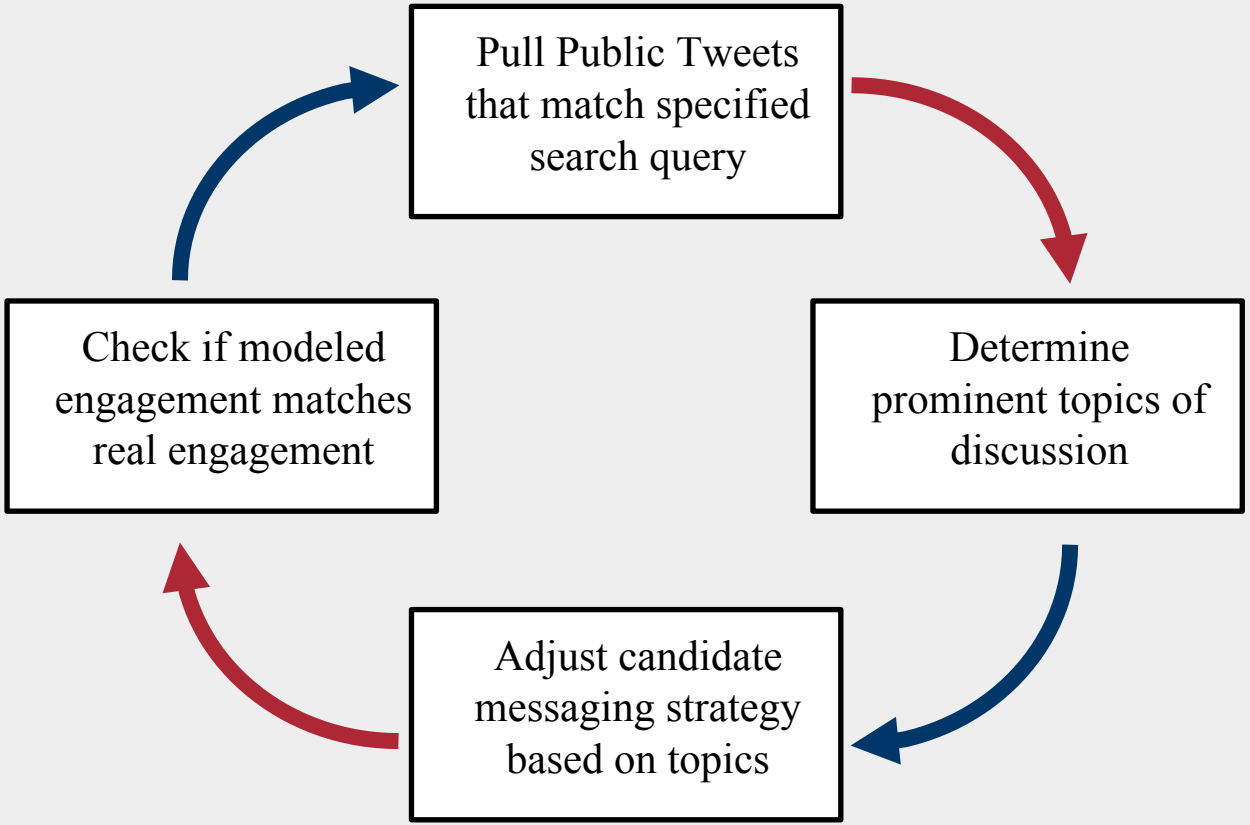
Only Phil Murphy (D – NJ) did not have his opponent in his top 15 interactions.

There is **NO** overlap in the top interactions among the candidates.

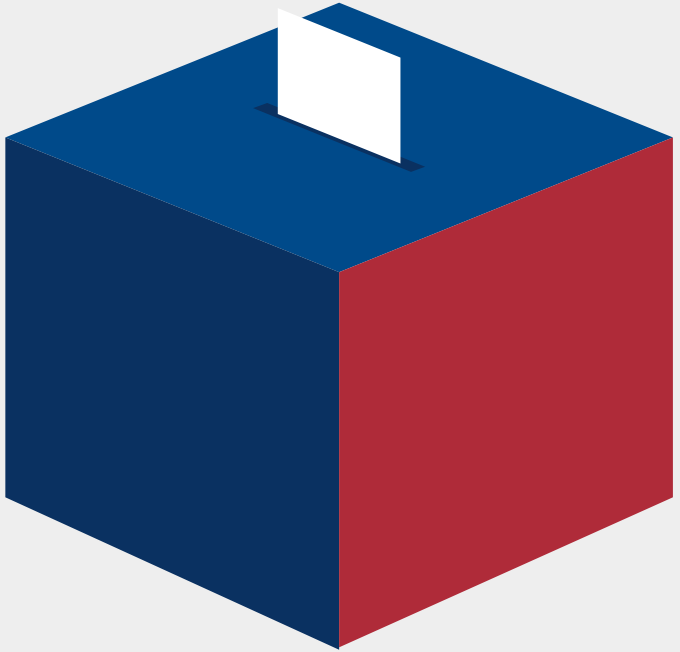
Engagement Modeling

Who Benefits from this type of Analysis?

- Campaigns!
  - Integrate workflow into overall messaging strategy



THANKS!



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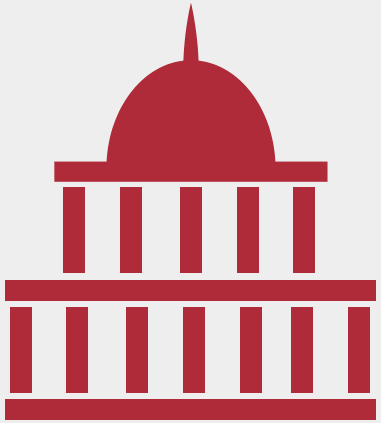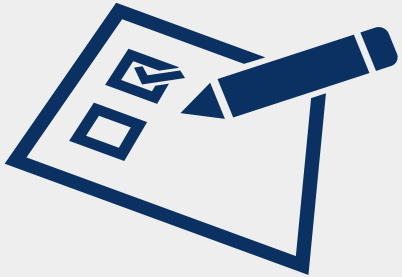
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