

TRUMP AND PRESIDENTS

By: Parthiv Borgohain, Anthony Moreno,
Jason Nania, Nicole Pham-Nguyen, Kyle
Tobia

PROBLEM STATEMENT

Perform analyses to identify differences in former President Trump's speeches compared to other presidents, i.e. how was he distinct from other presidents?

SOURCES AND PRE-PROCESSING

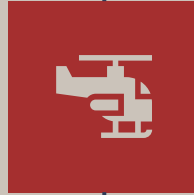
SOURCE:

Presidential Speech Archive
from the Miller Center at
UVA



SCRAPE:

Scraped and pulled 1033
speeches, ~21 speeches
per president



NO STOPWORDS:

Removed stopwords such
as "a", "is", "the"



TOKENIZE:

Tokenized in order to
perform sentiment
analysis



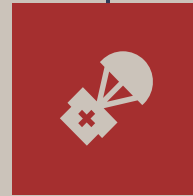
FREQUENCY COUNT:

Most common words:
states, united, people, one,
government



SUBSET:

Selecting only most
recent 5 presidents for
topic modeling



SIMILARITY ANALYSIS

Performing a SpaCy NLP similarity analysis using large pre-trained word vectors to compare former president Trump's speeches with speeches from all other presidents yielded the following takeaways:

- The president whose speeches are closest to Trump's is Joe Biden
- The president whose speeches are furthest to Trump's is John Quincy Adams
- Looking at the most common words between Trump and Biden, we see similar words like 'country', 'world', 'people', and 'time'
- Adams uses words that are much less common in contemporary speeches, like 'upon', 'intercourse', 'principles', and 'shall'

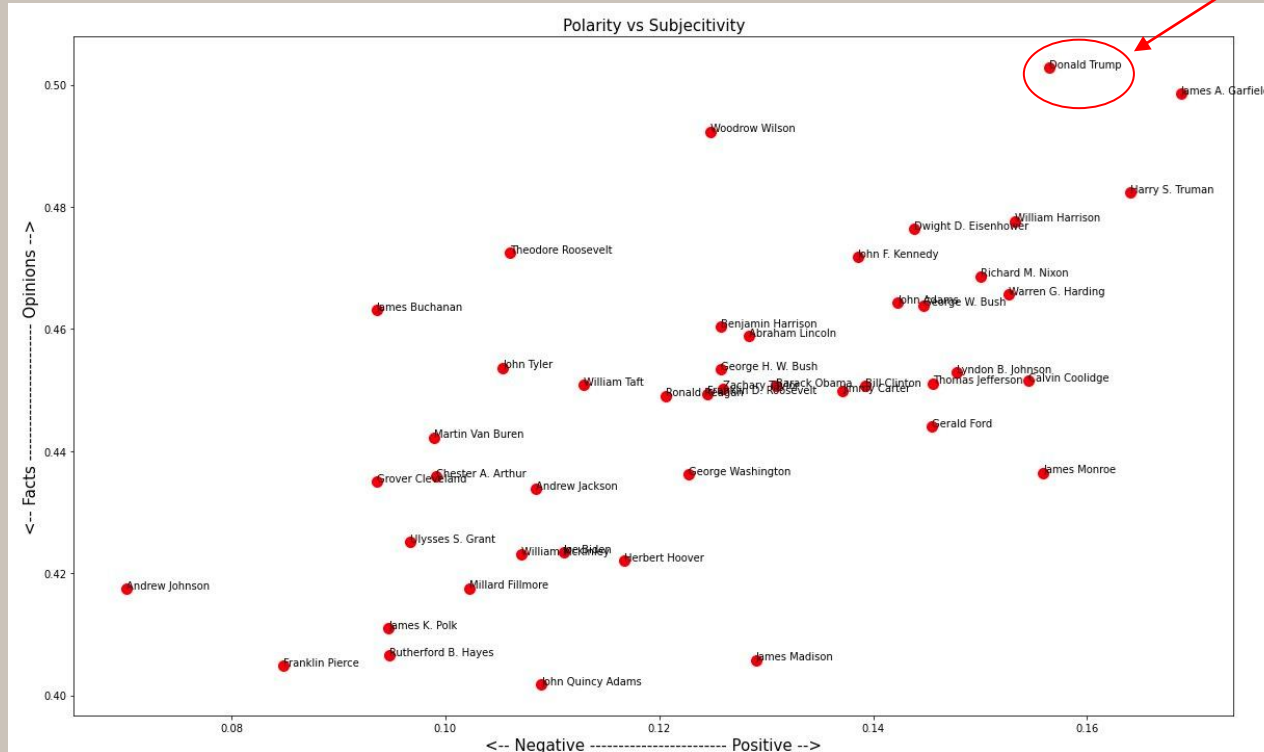
Word2vec Similarity	
name	
Joe Biden	0.919882
Bill Clinton	0.912962
Barack Obama	0.911419
George H. W. Bush	0.904127
Ronald Reagan	0.900859

Word2vec Similarity	
name	
John Quincy Adams	0.787308
Millard Fillmore	0.789754
Rutherford B. Hayes	0.794424
Franklin Pierce	0.794430
James Madison	0.795795

LIFT ANALYSIS

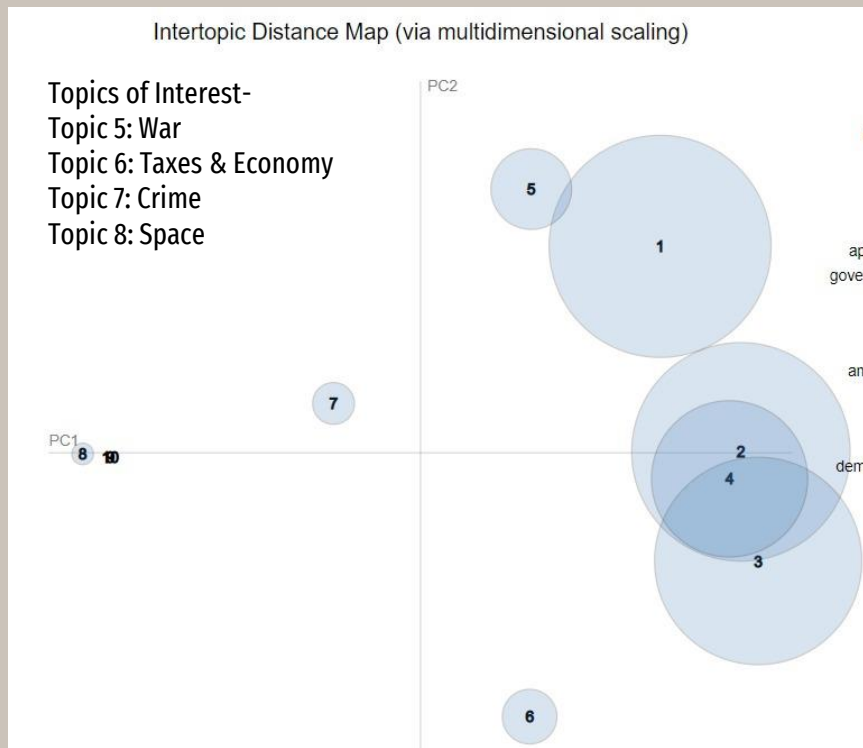
	gas	immigration	election	crime	glory
President					
Joe Biden	3.156608	2.071524	1.047667	0.826731	0.810196
Donald Trump	2.495923	3.275899	2.278067	1.470812	2.242171
Barack Obama	4.561299	3.521591	1.691983	0.843265	0.8264
George W. Bush	1.719947	2.708916	0.570844	1.081109	0.0
Bill Clinton	1.719947	0.902972	0.570844	4.144253	0.0
George H. W. Bush	3.499718	0.0	0.967954	1.833185	1.796522
Ronald Reagan	1.788745	0.0	1.113147	1.522562	1.147778
Jimmy Carter	4.268595	0.0	1.011951	0.958256	1.252121
Gerald Ford	4.79128	0.0	1.590209	1.505831	0.0
Richard M. Nixon	0.583286	0.0	1.742316	1.527655	1.197681
Lyndon B. Johnson	0.377904	0.330666	1.567812	0.890773	0.387981
John F. Kennedy	0.3049	0.0	0.809561	0.479128	0.626061
Dwight D. Eisenhower	0.0	0.0	0.742098	0.0	2.295556
Harry S. Truman	0.0	0.0	1.640426	0.0	0.0
Franklin D. Roosevelt	1.09515	0.0	0.726953	0.286825	1.124354

POLARITY VS. SUBJECTIVITY PLOT

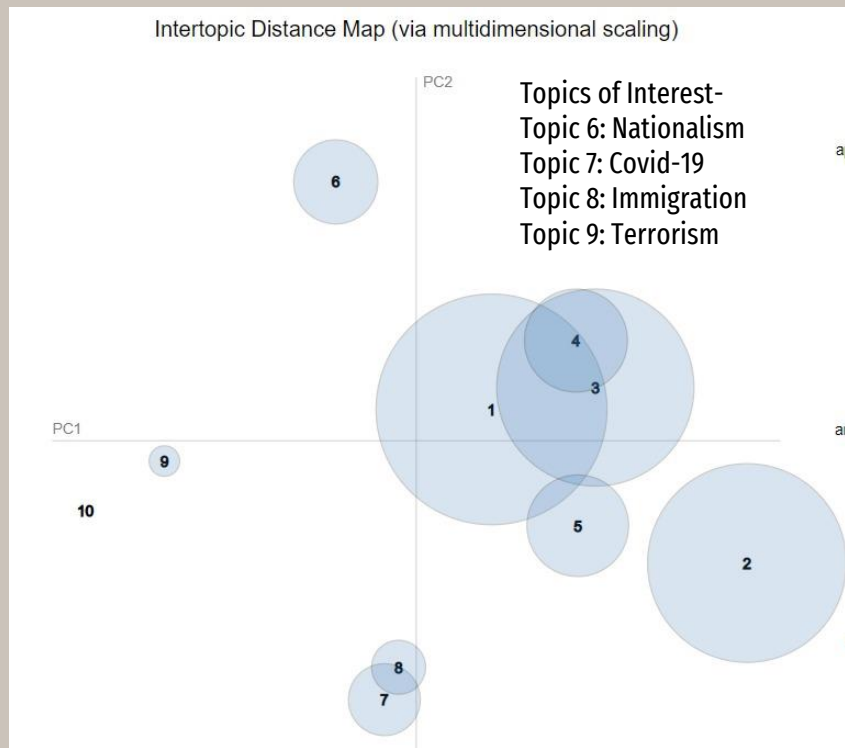


TOPIC MODELLING

Joe Biden to Bill Clinton



Donald Trump



INSIGHTS

- **Similarity Analysis:** Shows that modern speeches are more alike and older speeches are more alike
 - Trump talks about the same topics compared to his 3 predecessors and the current president
 - There is little to no difference across party lines with regard to speech similarity, rather the factor that determines speech similarity the most are the topics or issues of the time
- **Lift Matrix:** Trump's speeches show a lot of information for these specific opinionated topics compared to his peers
- **Polarity vs. Subjectivity Plot:** Shows that modern presidents are centered for polarity vs. subjectivity
 - Trump is an outlier in both polarity and subjectivity
- **Topic Modelling:**
 - Past 5 former topics: war, taxes and economy, crime, and space
 - Trump's topics: nationalism, COVID-19, immigration, terrorism

THANK YOU!

QUESTIONS?

