Mapping Trump's Presidency through Twitter

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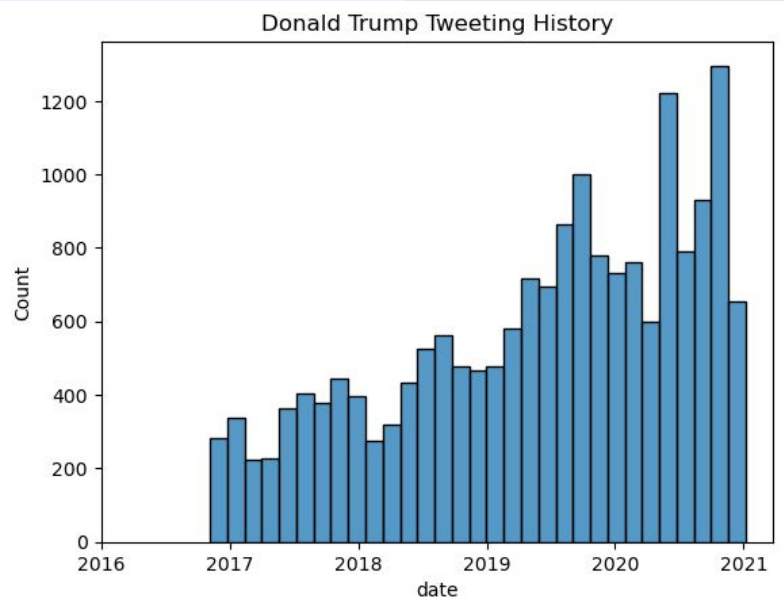
Literature + Research Question

- Donald Trump is infamous for his political career and his Twitter platform during election campaign and presidency
- Various studies have analyzed Trump's tweets to better understand his unpredictable policy attitudes
    - (Stolee & Caton, 2018) (Rasul et al., 2025)
- What themes and topics appear in Trump's Twitter corpus, and how does his attitude towards these topics change throughout the duration of his presidency?
- Machine Learning and Deep Learning classification task

Data

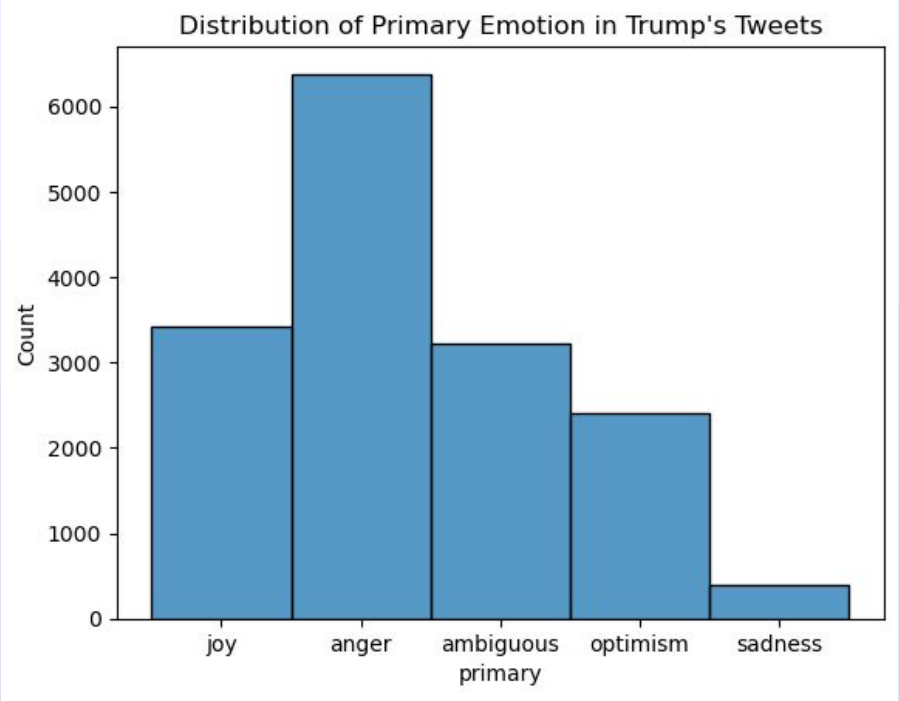
- The Trump Archive: thetrumparchive.com
  - (Udupa et al., 2022)
- GitHub: https://github.com/bpb27/tta-elastic
- Quick Glance:
  - Size: 15,836 Tweets
    - removed: RTs
  - Time Frame: Nov 5 2016-Jan 7 2021
  - Deleted/Flagged:
    - isDeleted: 519, 3.28%
    - isFlagged: 209, 1.29%

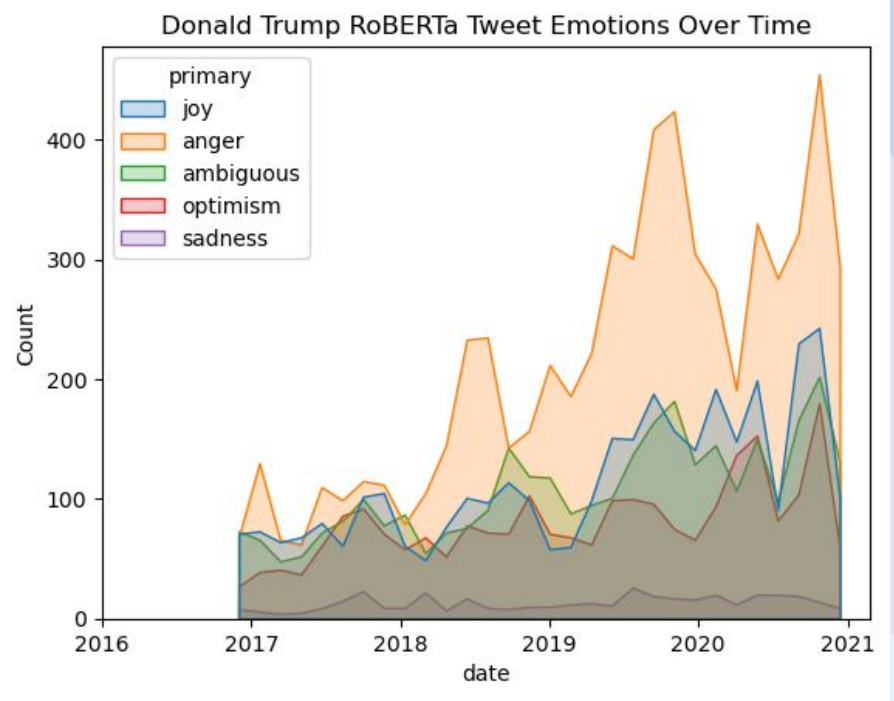


Methods

- RoBERTa
  - Pre-Trained
  - Threshold = 0.6
- BERTopic
  - Embedding
    - SentenceTransformer('all-MiniLM-L6-v2')
  - Dimension Reduction
    - UMAP(n_neighbors=[3, 5, 10], n_components=[2, 3], min_distance=[0.5, 1.0])
  - Clustering
    - HDBScan(min_cluster_size=100)

RoBERTa - Model Overview





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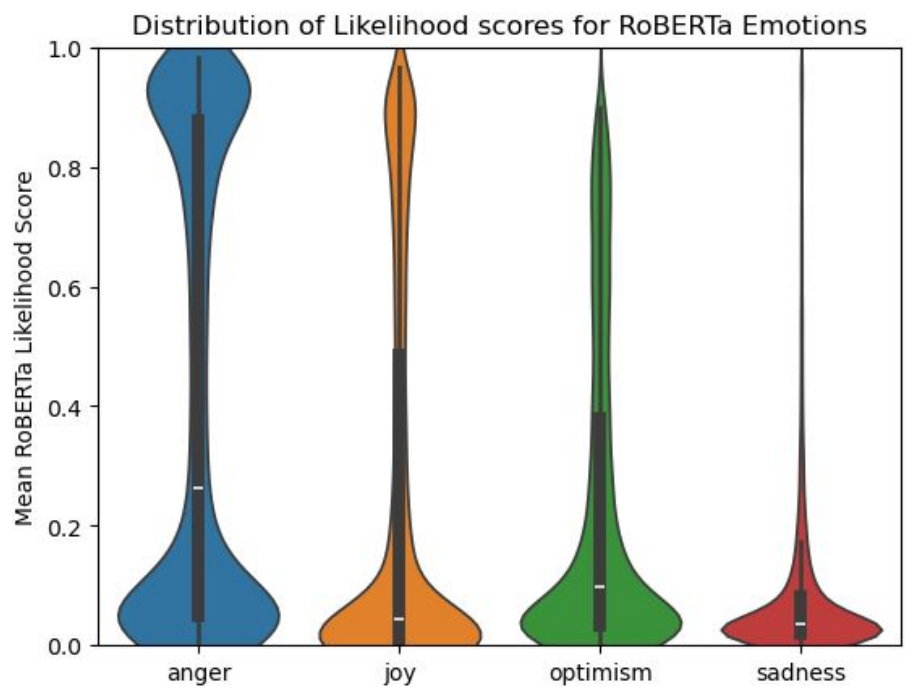

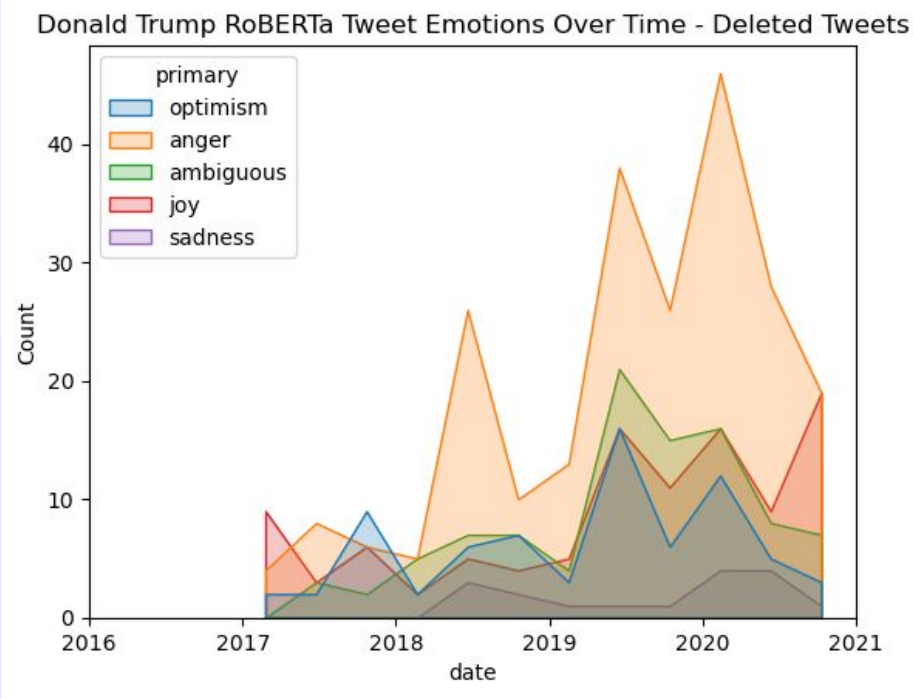

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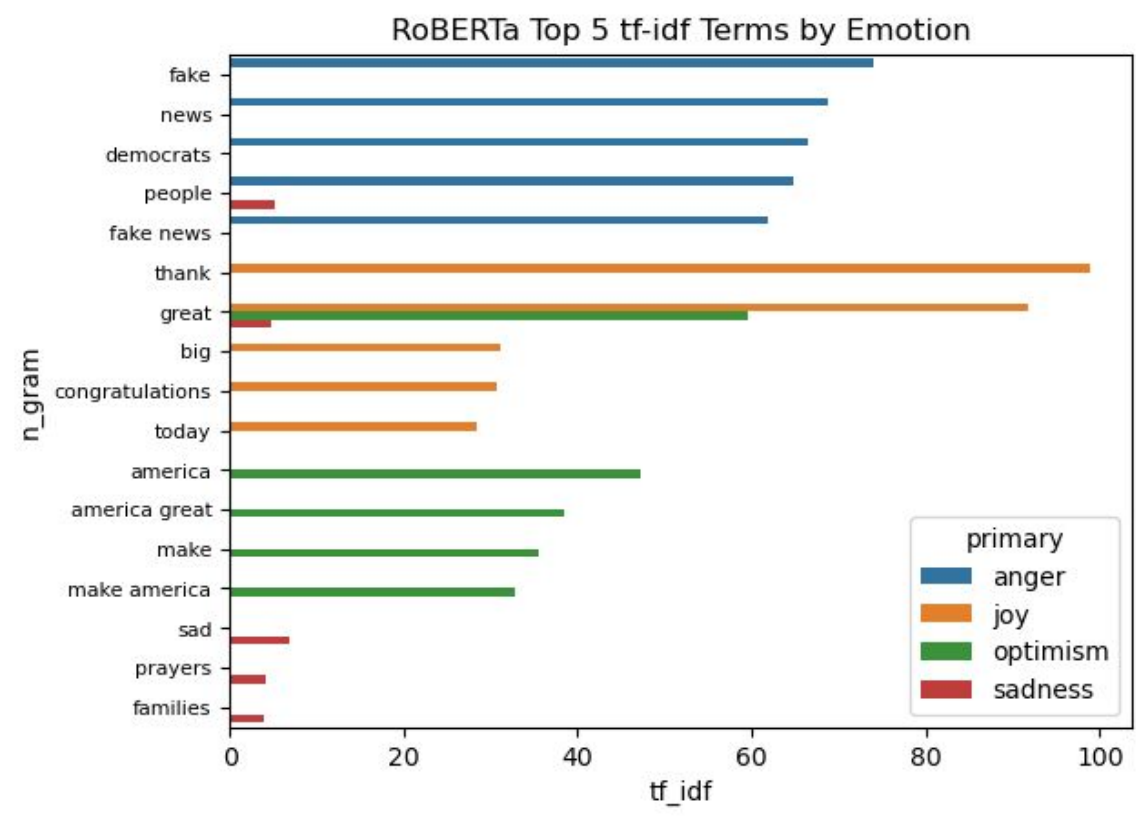
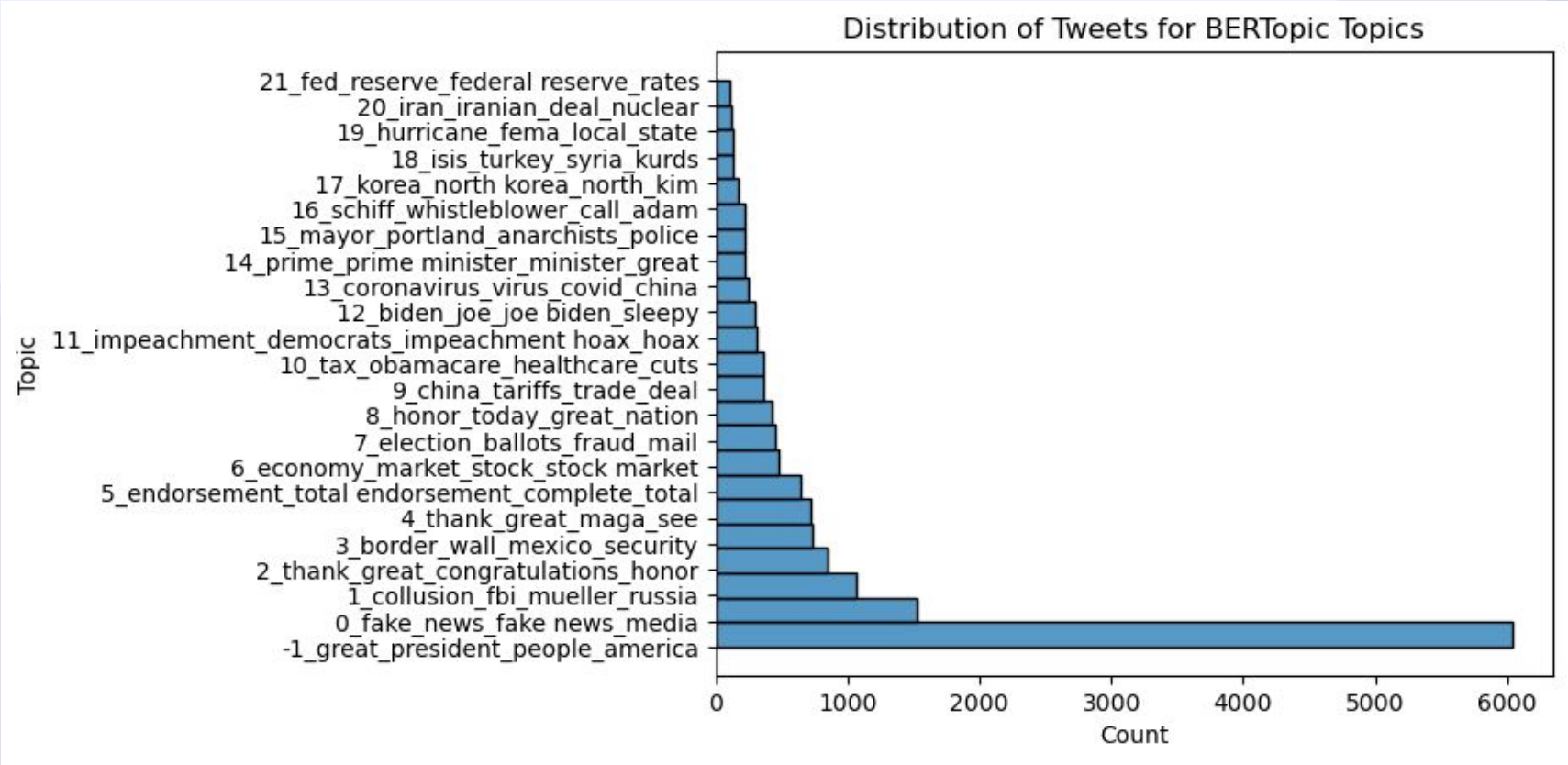
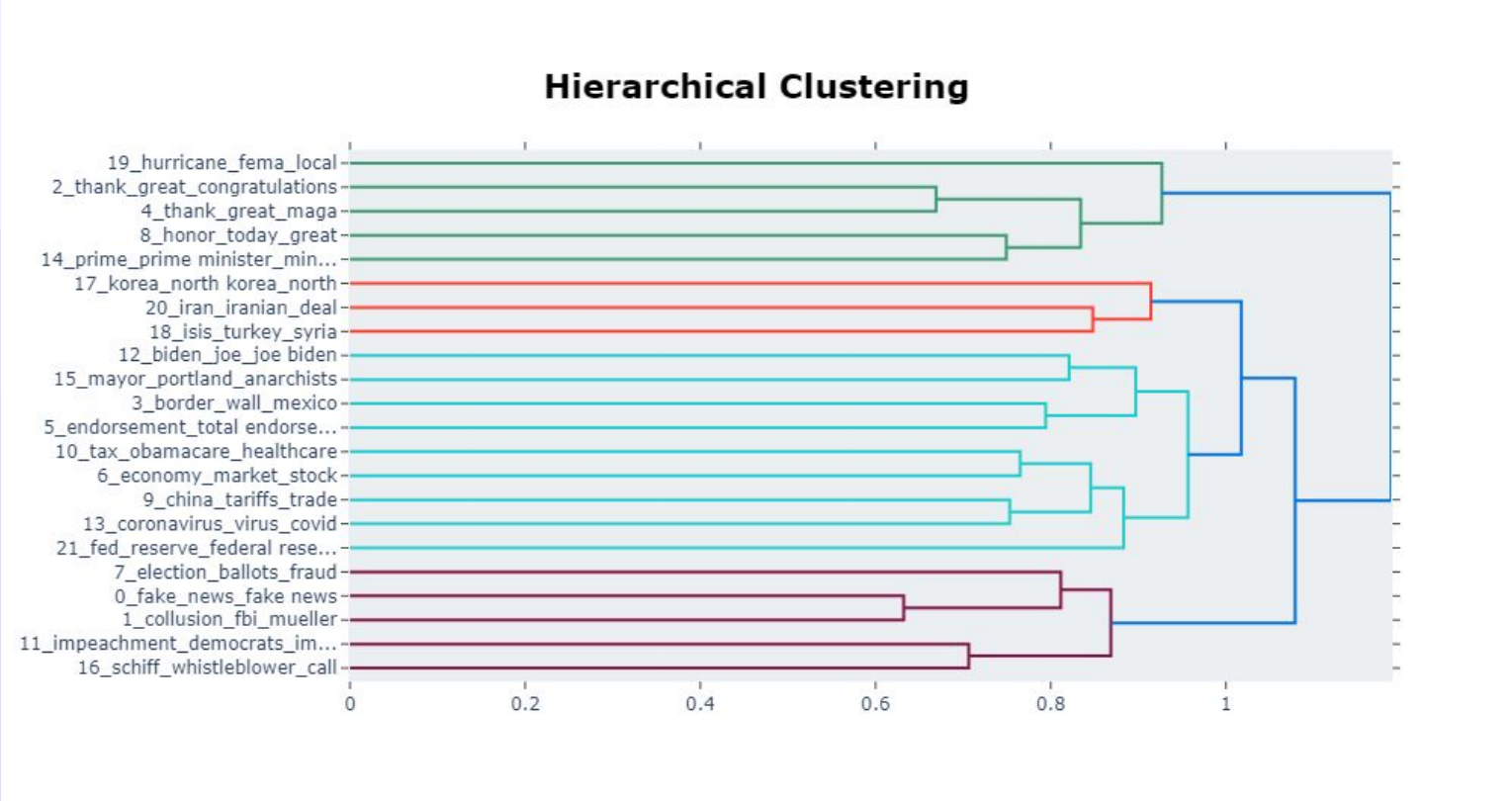


BERTopic - Model Overview

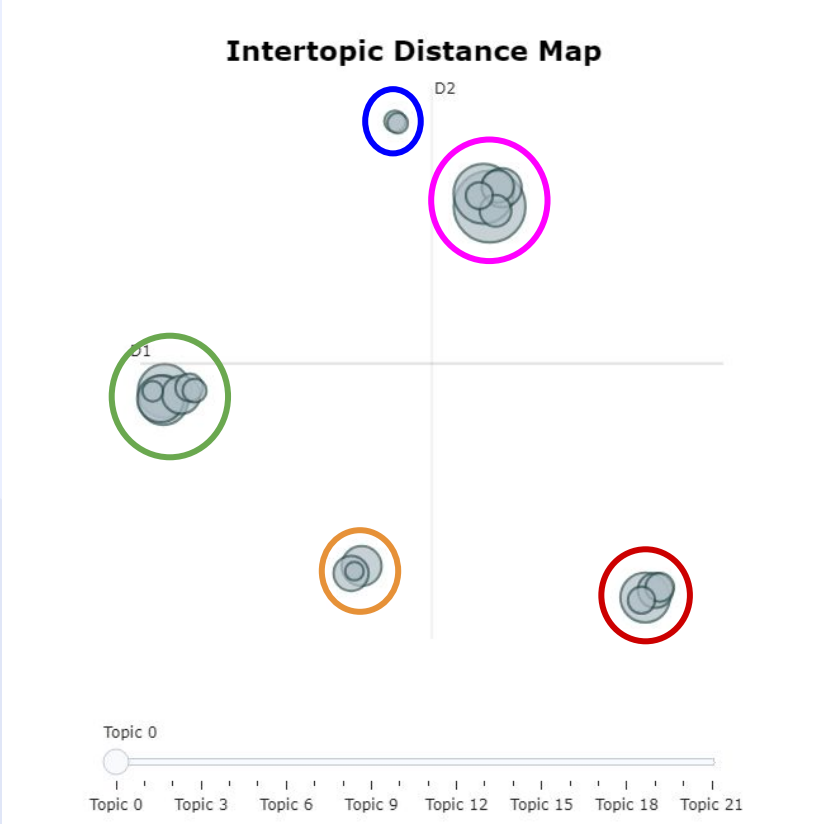


BERTopic - Model Overview

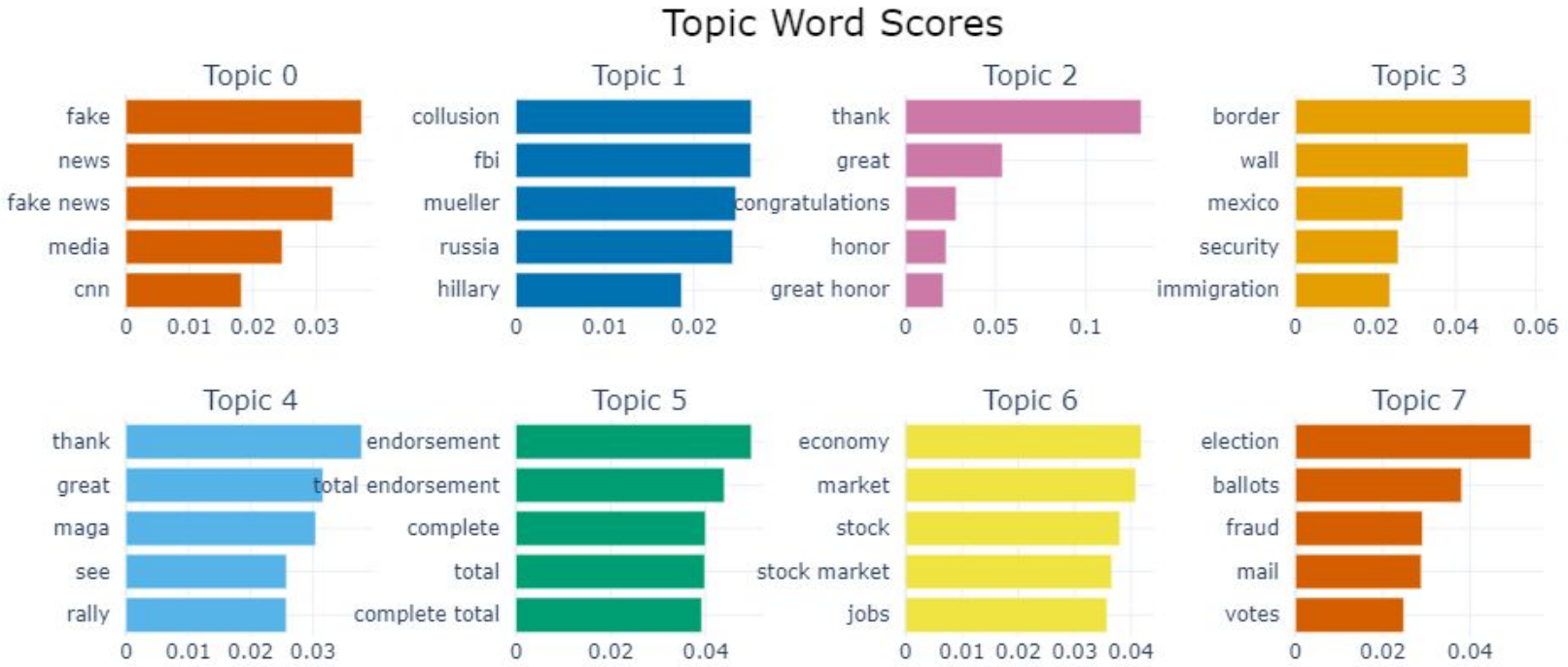


BERTopic – Model Overview

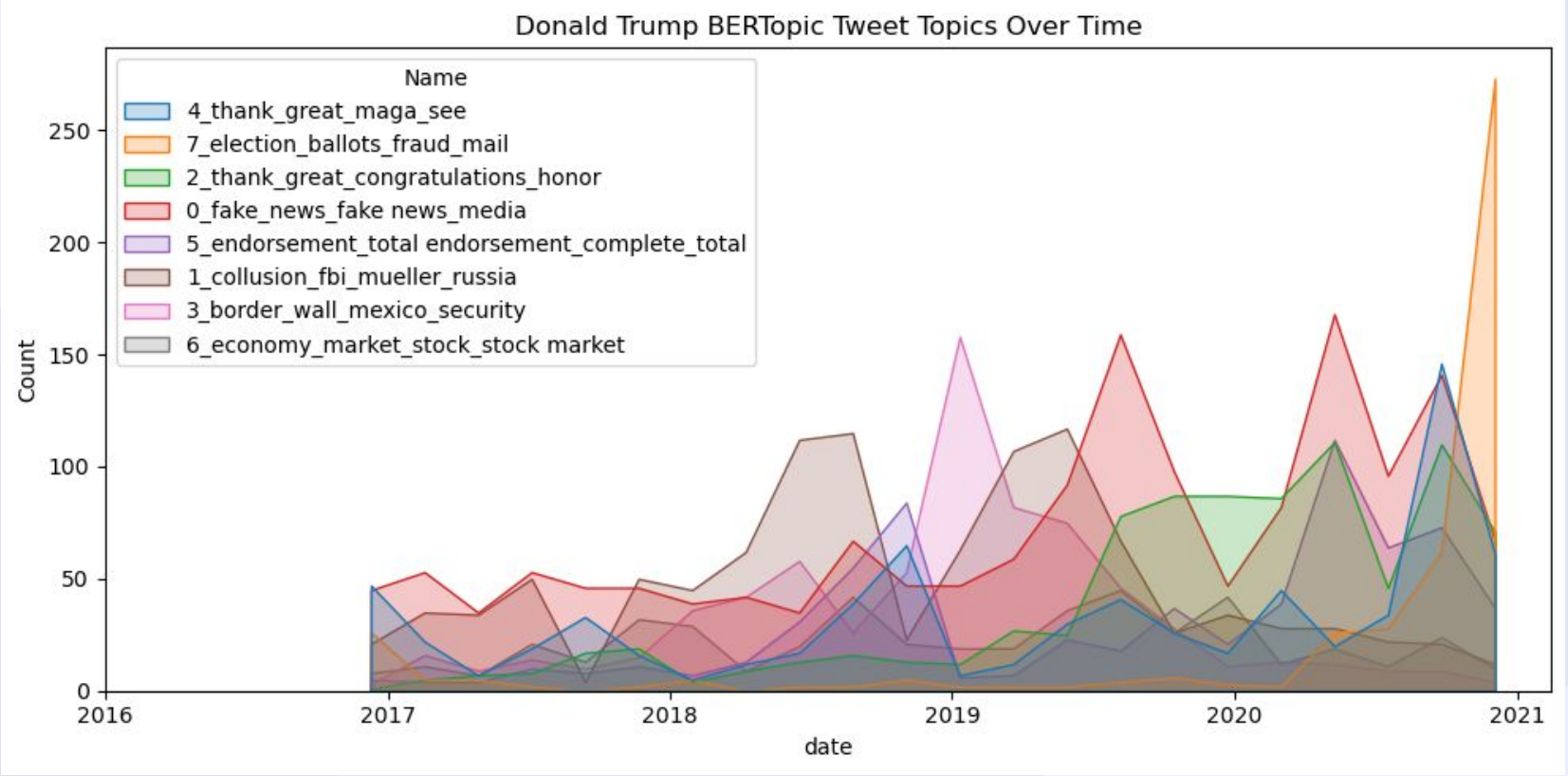
- Middle East (2)
  - “Iran”, “ISIS”, “Turkey”, “Syria”
- Political Opponents (6)
  - “Biden”, “Schiff”, “impeachment”, “fake news”, “election”, “FBI”
- Broadly Endorsing (7)
  - “MAGA”, “thank”, “prime minister”, “honor”, “north korea”, “endorse”
- Economy (3)
  - “economy”, “market”, “China”, “trade,” “fed”, “federal reserve”
- Policy Issues (4)
  - “coronavirus”, “border”, “wall”, “tax”, “obamacare”, “police”



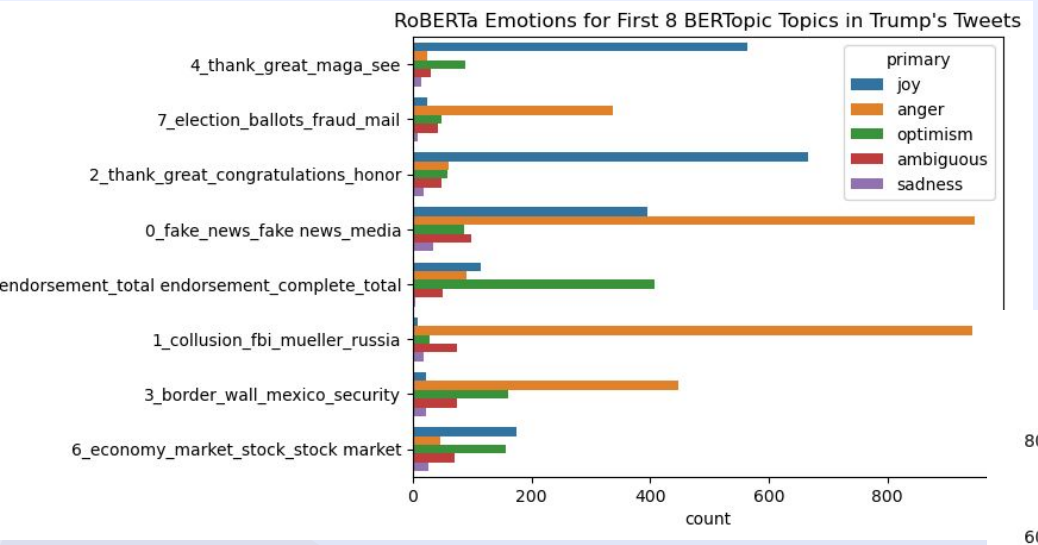
BERTopic - Model Overview

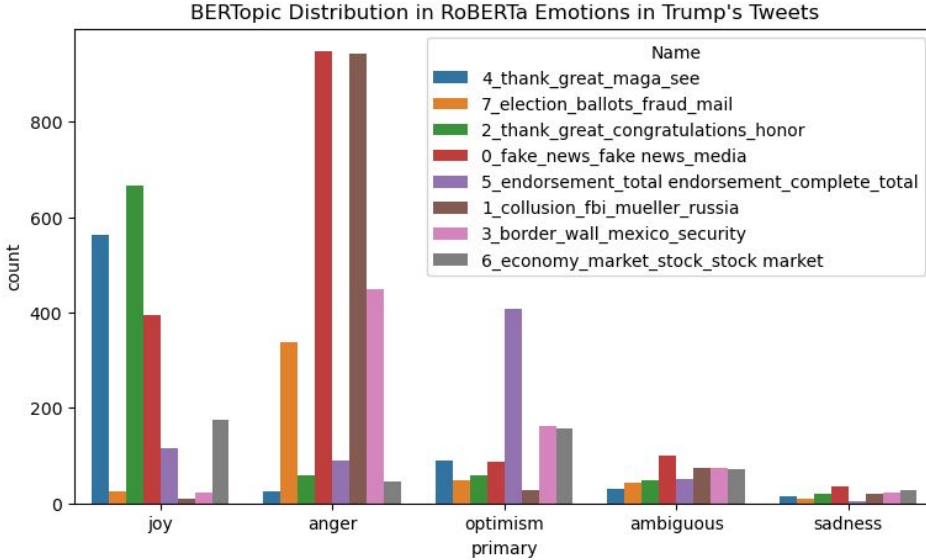


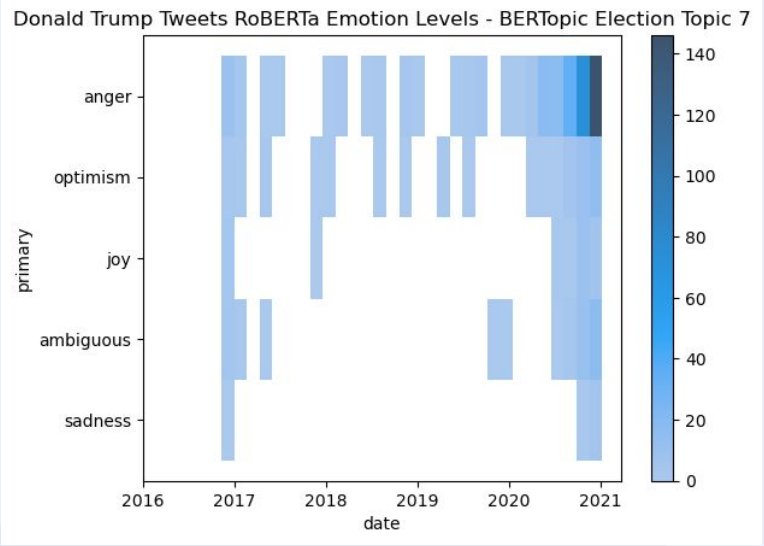
BERTopic - Model Overview

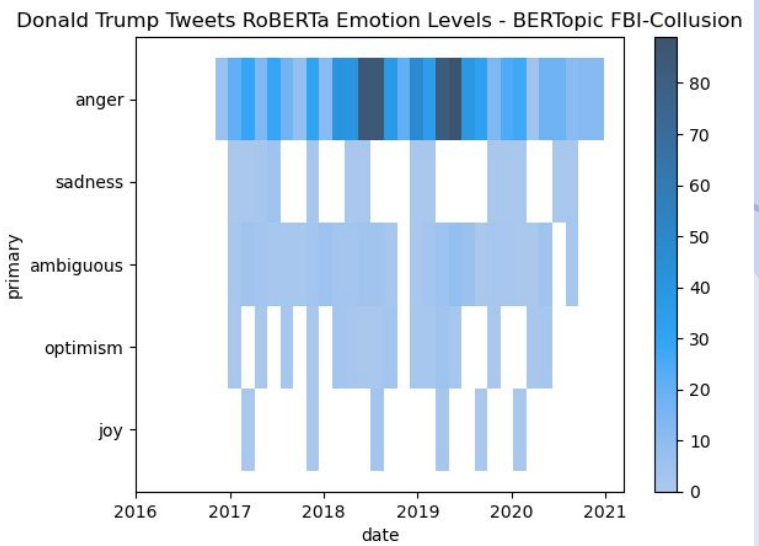


Joint Analysis






Donald Trump Tweets RoBERTa Emotion Levels - BERTopic Election Topic 7
anger
optimism
joy
ambiguous
sadness
primary
2016
2017
2018
2019
2020
2021
date
140
120
100
80
60
40
20
0


Donald Trump Tweets RoBERTa Emotion Levels - BERTopic FBI-Collusion
anger
sadness
ambiguous
optimism
joy
primary
2016
2017
2018
2019
2020
2021
date
80
70
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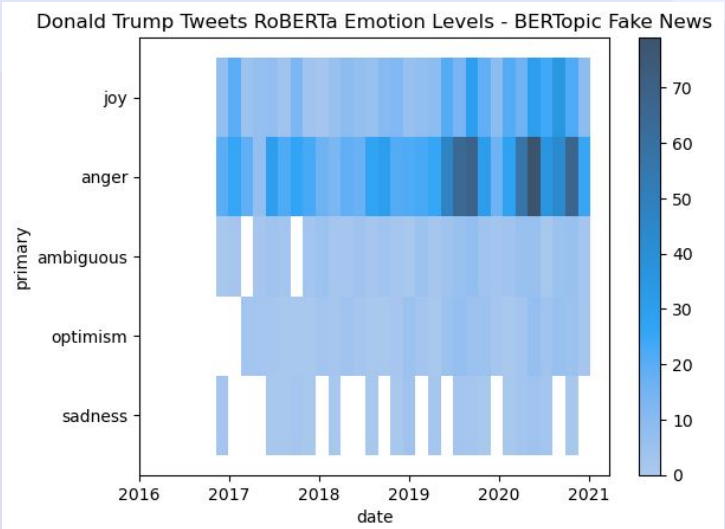
Donald Trump Tweets RoBERTa Emotion Levels - BERTopic Fake News
joy
anger
ambiguous
optimism
sadness
primary
2016
2017
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2021
date
70
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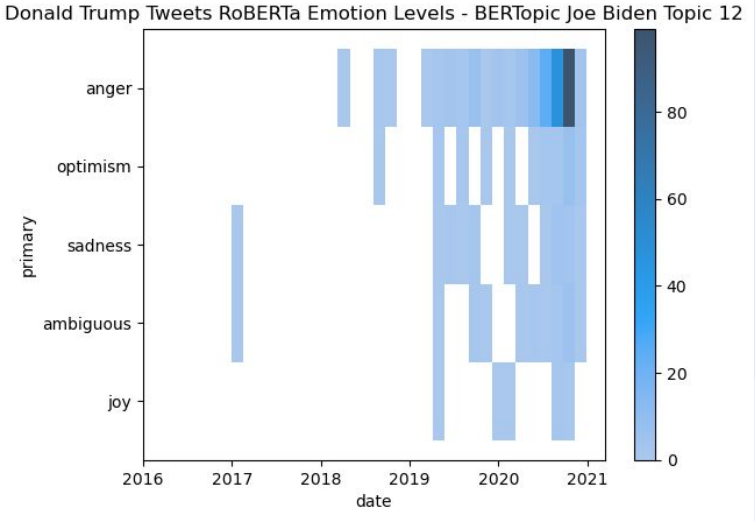
Donald Trump Tweets RoBERTa Emotion Levels - BERTopic Joe Biden Topic 12
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optimism
sadness
ambiguous
joy
primary
2016
2017
2018
2019
2020
2021
date
80
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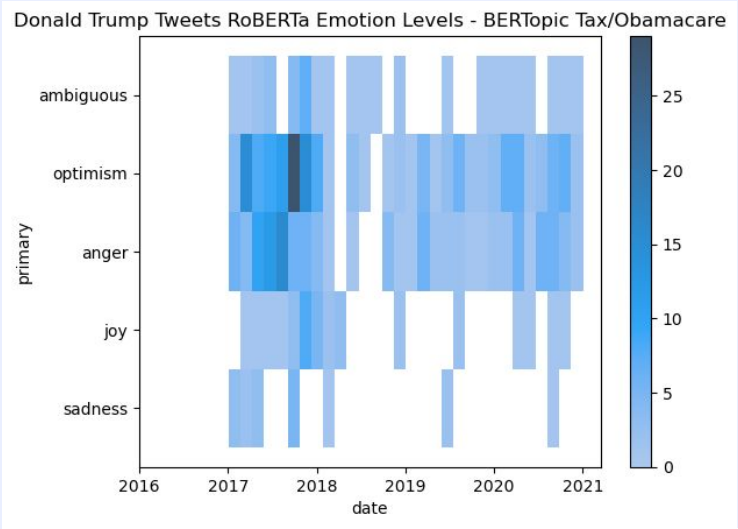
Donald Trump Tweets RoBERTa Emotion Levels - BERTopic Tax/Obamacare
ambiguous
optimism
anger
joy
sadness
primary
2016
2017
2018
2019
2020
2021
date
25
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15
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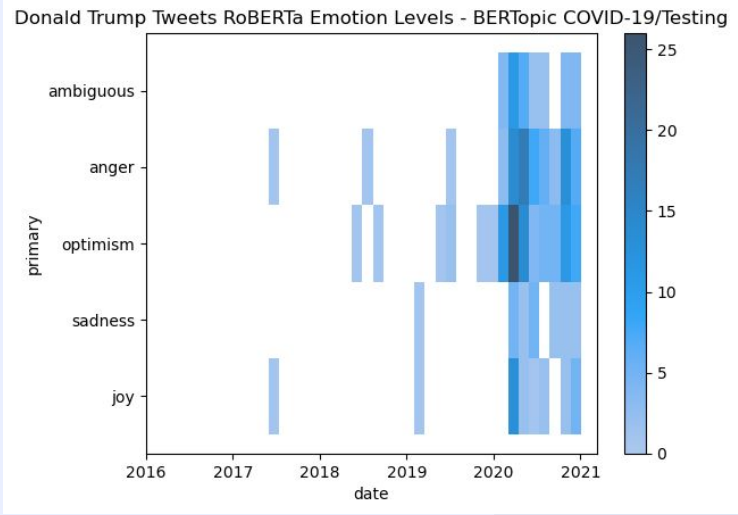
Donald Trump Tweets RoBERTa Emotion Levels - BERTopic COVID-19/Testing
ambiguous
anger
optimism
sadness
joy
primary
2016
2017
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2020
2021
date
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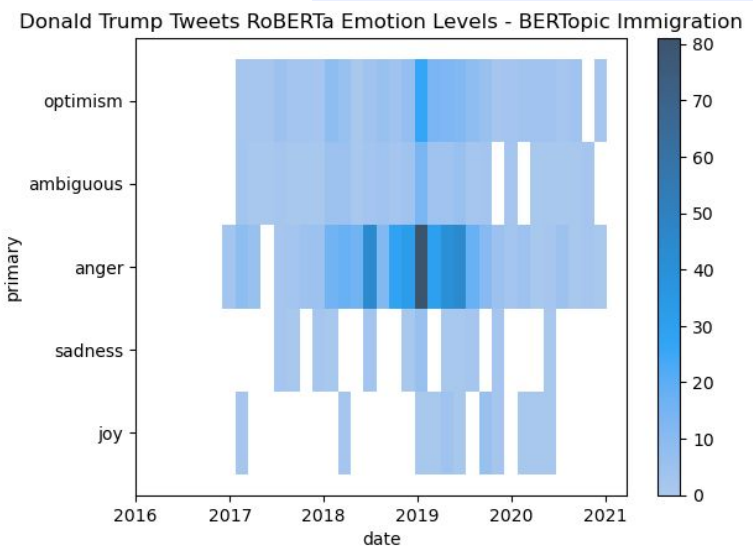
Donald Trump Tweets RoBERTa Emotion Levels - BERTopic Immigration
optimism
ambiguous
anger
sadness
joy
primary
2016
2017
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2021
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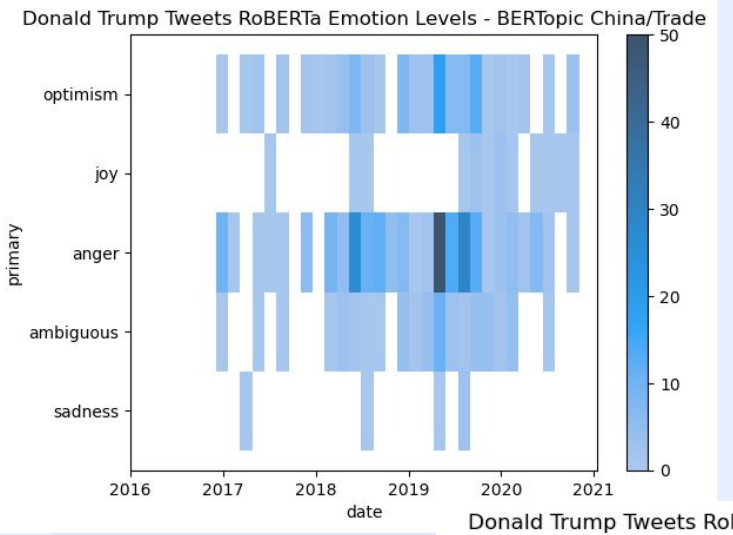
Donald Trump Tweets RoBERTa Emotion Levels - BERTopic China/Trade
optimism
joy
anger
ambiguous
sadness
primary
2016
2017
2018
2019
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2021
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30
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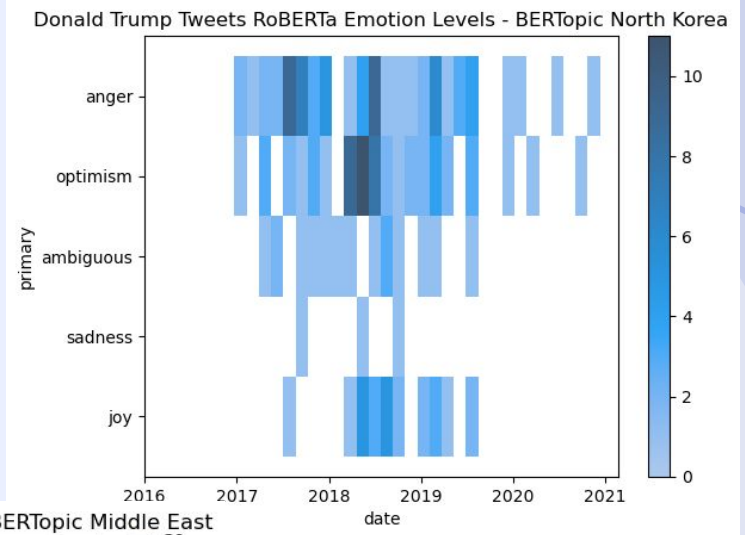
Donald Trump Tweets RoBERTa Emotion Levels - BERTopic North Korea
anger
optimism
ambiguous
sadness
joy
primary
2016
2017
2018
2019
2020
2021
date
10
8
6
4
2
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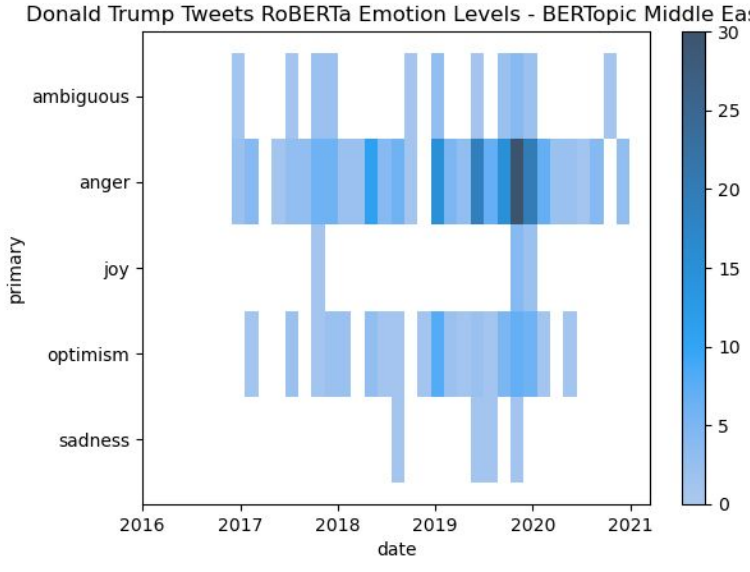
Donald Trump Tweets RoBERTa Emotion Levels - BERTopic Middle East
ambiguous
anger
joy
optimism
sadness
primary
2016
2017
2018
2019
2020
2021
date
30
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20
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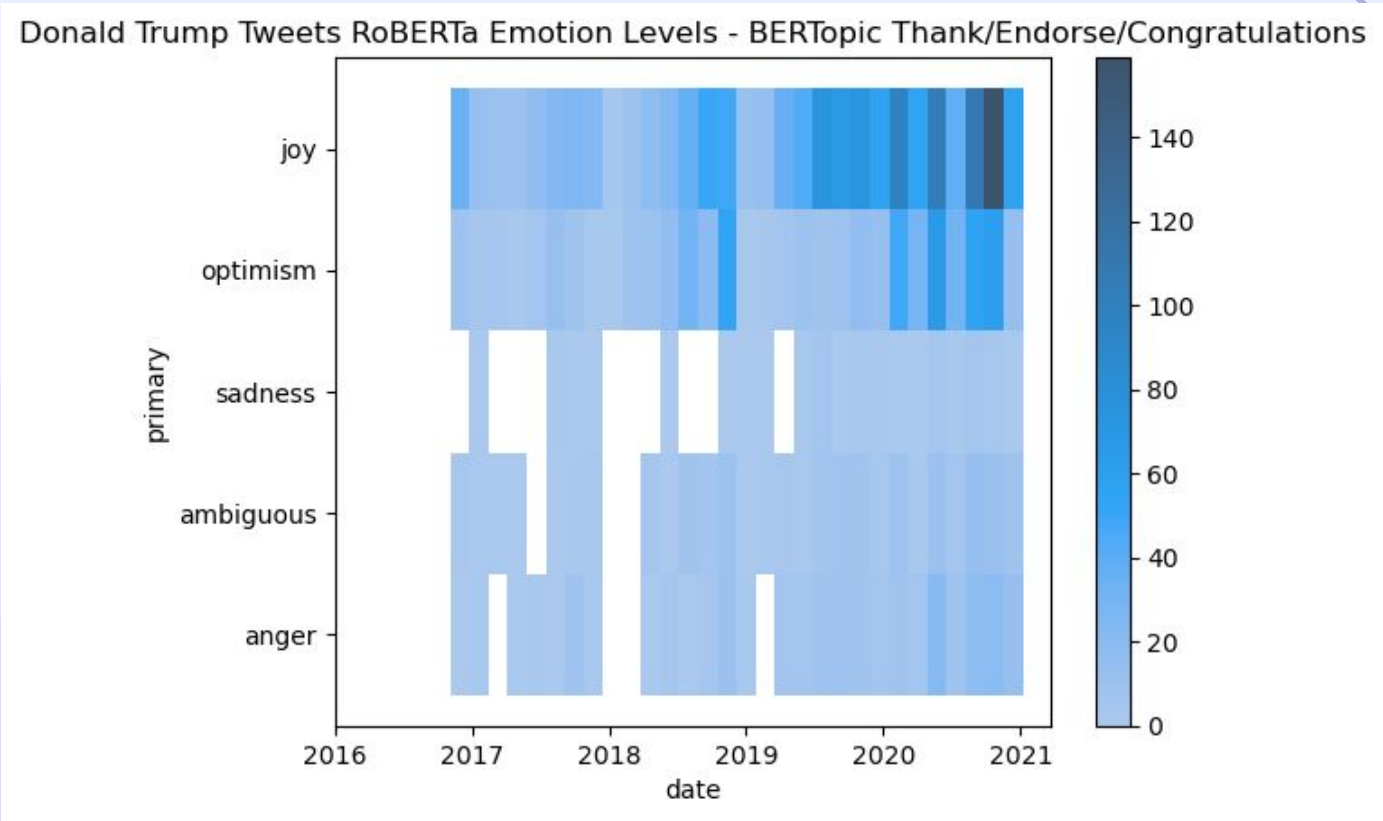

Donald Trump Tweets RoBERTa Emotion Levels - BERTopic Thank/Endorse/Congratulations
joy
optimism
sadness
ambiguous
anger
primary
2016
2017
2018
2019
2020
2021
date
140
120
100
80
60
40
20
0

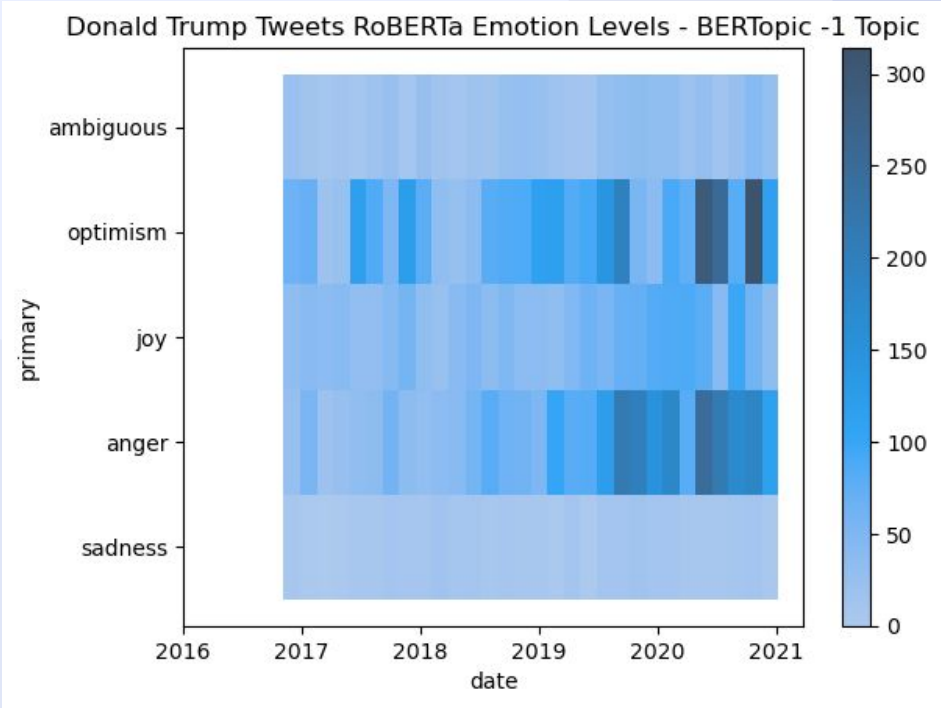
Evaluation/Sanity Check

Examine -1 Bertopic Category

Representative Docs:
['MAKE AMERICA GREAT AGAIN!',
'MAKE AMERICA GREAT AGAIN!',
'MAKE AMERICA GREAT AGAIN!']

Optimism:
“HAPPY NEW YEAR TO EVERYONE, INCLUDING THE HATERS AND THE FAKE NEWS MEDIA! 2019 WILL BE A FANTASTIC YEAR FOR THOSE NOT SUFFERING FROM TRUMP DERANGEMENT SYNDROME. JUST CALM DOWN AND ENJOY THE RIDE, GREAT THINGS ARE HAPPENING FOR OUR COUNTRY!”

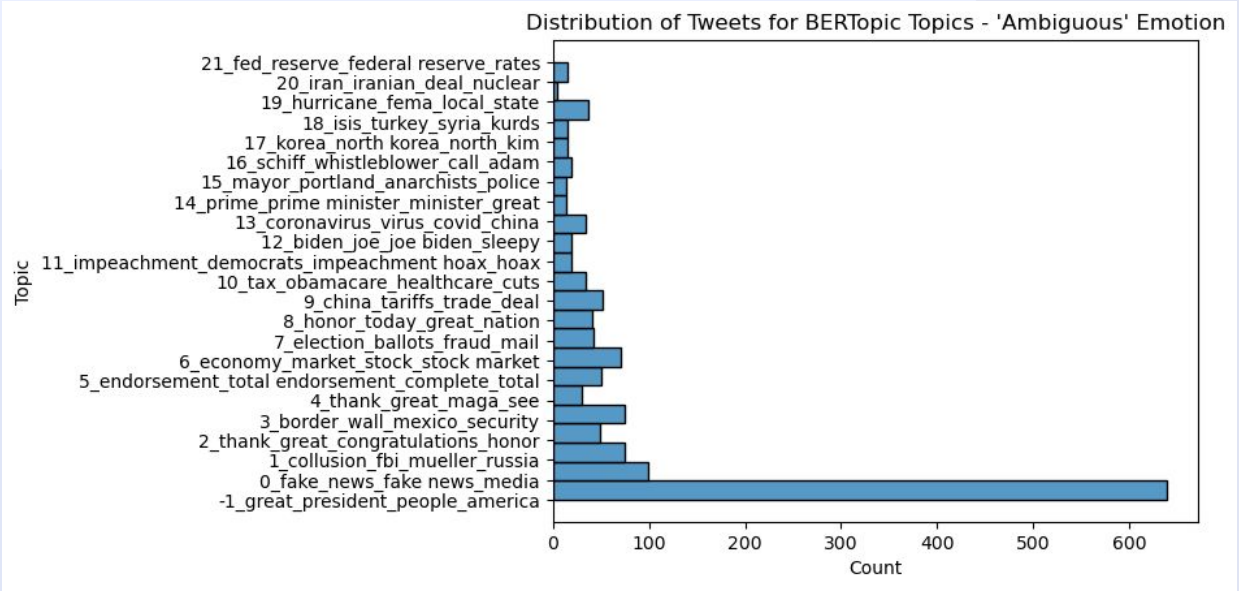
Anger:
“Border Security and the Wall “thing” and Shutdown is not where Nancy Pelosi wanted to start her tenure as Speaker! Let’s make a deal?”



Evaluation/Sanity Check

Examine 'ambiguous' emotion tweets:

Tf-idf extraction:
"great": 48.3147
"trump": 30.0699
"thank": 29.9056
"president": 27.3570
"big": 23.7223



Evaluation/Sanity Check

Examine “counterintuitive” Tweets: ‘COVID-19’ tweets pre-2020

- "Who can figure out the true meaning of ""covfefe"" ??? Enjoy!"
- Great news today: My Administration just secured a historic donation of HIV prevention drugs from Gilead to help expand access to PrEP for the uninsured and those at risk. Will help us achieve our goal of ending the HIV epidemic in America! https://t.co/wux5QasWgW
- Scott Gottlieb, who has done an absolutely terrific job as Commissioner of the FDA, plans to leave government service sometime next month....
- With the #RightToTry Law I signed today, patients with life threatening illnesses will finally have access to experimental treatments that could improve or even cure their conditions. These are experimental treatments and products that have shown great promise... https://t.co/FlUwhpUpoL

Evaluation/Sanity Check

Examine “counterintuitive” Tweets: ‘joy’/’optimism’ Biden Tweets

Representative Docs:
['Joe Biden is a corrupt politician—the Biden family is looking more & more like a crime family. They took millions of $$ from the Chinese Communists, while Vice President Biden shipped Michigan jobs to China. If Biden wins, China Wins. When we win, Michigan wins, and AMERICA wins! https://t.co/YpnjH8838X',
'Congratulations to Sleepy Joe Biden!',
'Sleepy Joe Biden! https://t.co/oZtytImXqq']

- A must read. Impossible for Biden to have overcome these, and even greater, odds! https://t.co/cmYFY0va6p
- Suburban Women are trending strongly to our campaign because they want SAFETY, SECURITY, and love the fact that I terminated the REGULATION that would destroy their neighborhood and with it, the American Dream. Biden would bring the REGULATION back in a MUCH stronger form!!!
- If @MittRomney spent the same energy fighting Barack Obama as he does fighting Donald Trump, he could have won the race (maybe)! https://t.co/p5imhMJqS1

Evaluation/Sanity Check

Examine “counterintuitive” Tweets: ‘anger’/’sadness’ Congratulations/Endorse/Rally Tweets

Topic 2, 4, 5 together

- Landed in Wisconsin. BIG CROWD. On my way!
- Darrell is great. He has my Complete and Total Endorsement. He will Never let you down. WARRIOR!!!! https://t.co/FB0KIHKssM
- No thanks! https://t.co/wEyrvoKWr1
- The BIG Protest Rally in Washington, D.C., will take place at 11.00 A.M. on January 6th. Locational details to follow. StopTheSteal!

Takeaway

Domestic Policy:

- Immigration: momentum peaks in start of 2019
- Tax/Healthcare Reform: momentum largely in the first year of term
- COVID-19: largely optimistic and angry

Foreign Policy:

- North Korea/Nuclear: momentum starts mid-2017, peaks mid-2018
- China/Trade Policy: momentum starts in 2018, peaks in mid-2019
- Middle East: momentum starts early 2019, peaks late 2019

Scandal/Opposition:

- Fake News: present throughout term, peaks in mid-2019 and mid-2020
- FBI/Collusion: peaks mid-2018 and mid-2019
- Election Fraud: momentum starts late 2020, peaks early 2021

Takeaway

Overall:

- Tweet frequency increased over term
- Initial distribution of Tweet emotion was relatively even, eventually anger outpaces all other emotions

Model Performance:

- Short Tweets hard to analyze and vectorize
- Reveals unexpected connection across topics:
  - COVID-19, HIV
  - Joe Biden, Barack Obama
  - Rallies, Endorsements

Thank You

Works Cited

Stolee G, Caton S. Twitter, Trump, and the Base: A Shift to a New Form of Presidential Talk? Signs and Society. 2018;6(1):147-165. doi:10.1086/694755

A. Udupa, K. N. Adarsh, A. Aravinda, N. H. Godihal and N. Kayarvizhy, "An Exploratory Analysis of GSDMM and BERTopic on Short Text Topic Modelling," 2022 Fourth International Conference on Cognitive Computing and Information Processing (CCIP), Bengaluru, India, 2022, pp. 1-9, doi: 10.1109/CCIP57447.2022.10058687

Rasul, M. E., Halversen, A., & Smith, J. (2025). “When you’re a star, they let you do it”: Trump, Twitter, and moral disengagement. Communication and the Public, 0(0). https://doi.org/10.1177/20570473251314521