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Trump Twitter Analysis

MIS 284N: Group Project

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Problem Statement

How can Future politicians position themselves well on Social Media?

Can they learn from Trump's mistakes?

Approach

Scraping

- Current: 6000 user tweets (2022)
- Archive: 56000 Trump tweets (2009-2021)

Pre-processing

- Removal of links, emojis, punctuation, stopwords
- Word tokenization, lemmatization

EDA

- Frequency analysis (**Word Cloud**)
- Lift Analysis (**MDS**)
- Sentiment Analysis

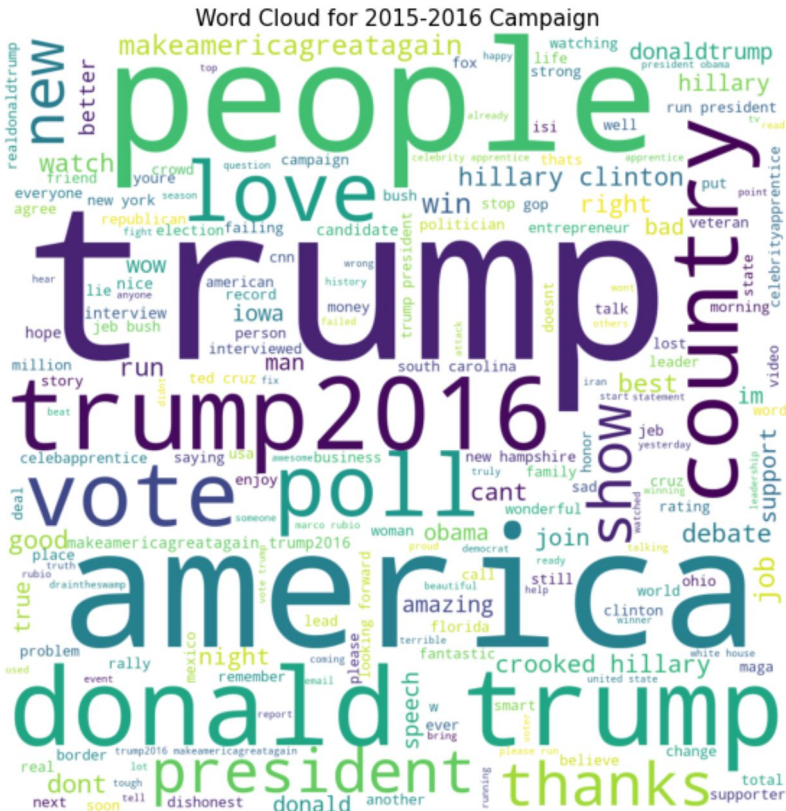
Topic Modelling

- Coherence Plots
- LDA
- pyLDAvisVisualization

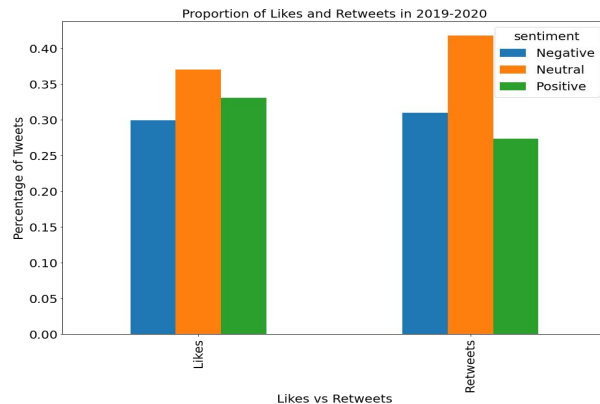
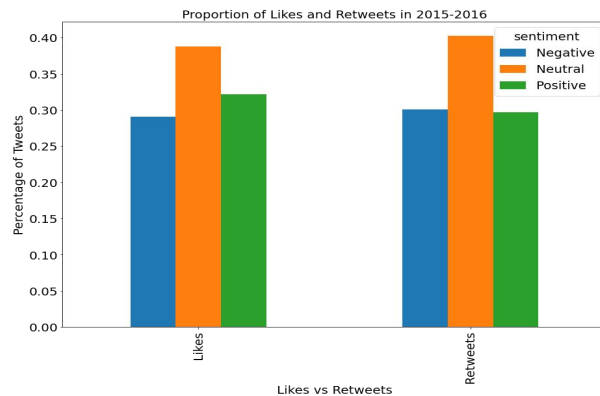
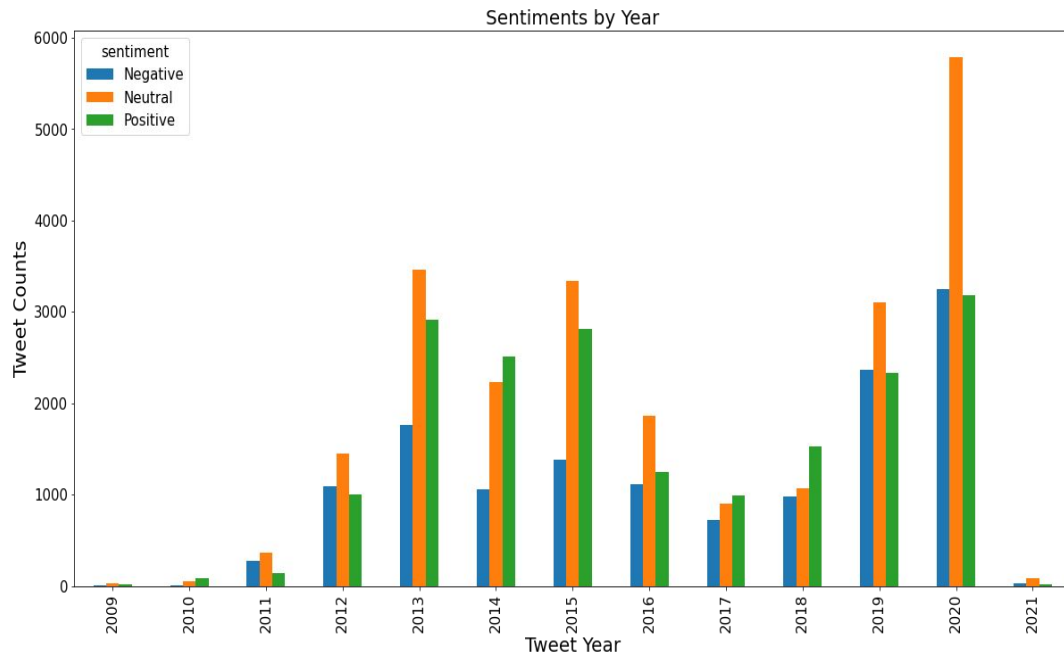
Recommendations

- Topics to stay away from
- Topics to talk about
- Good Social Media Behaviour

Word Frequency Analysis

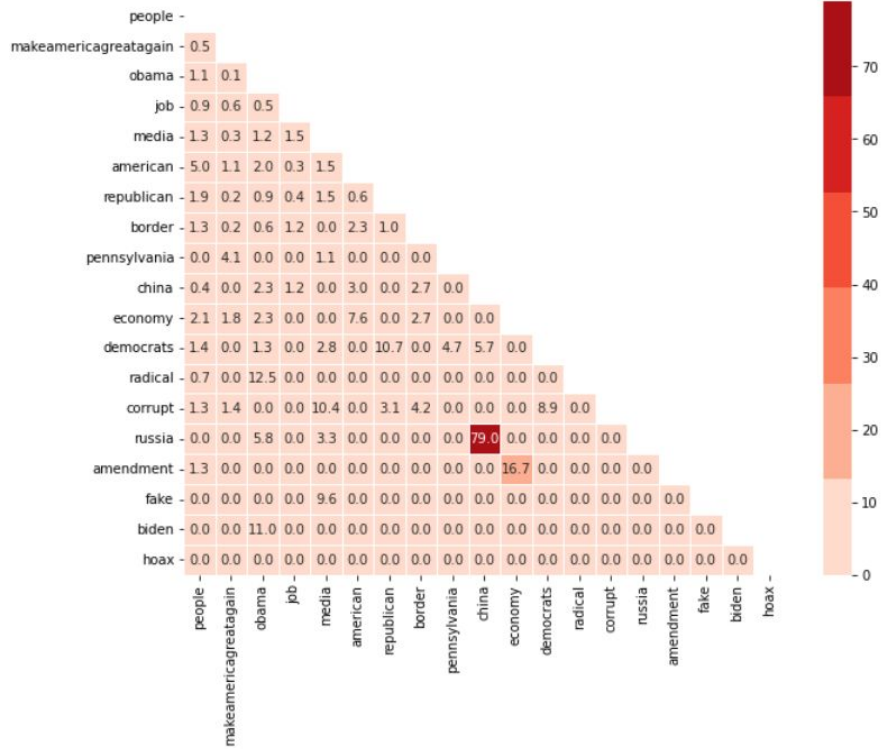


Sentiment Analysis

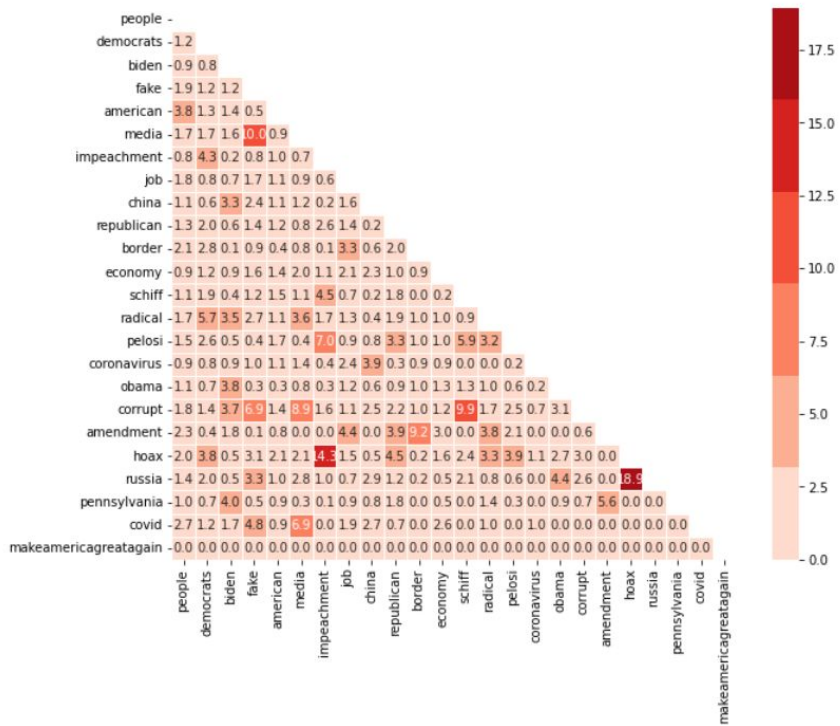


Lift Analysis

Year 2015-2016



Year 2019-2020



Topic Modeling (LDA+Gensim)

Coherence Scores for different Number of Topics



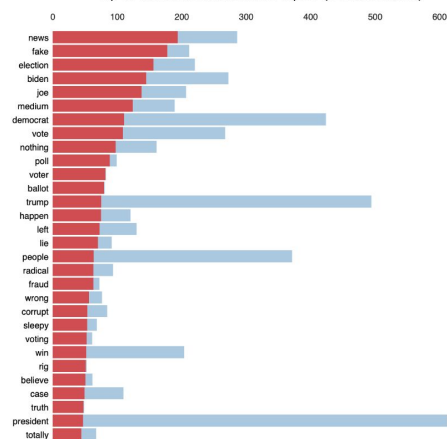
Selected Topic: Previous Topic Next Topic Clear Topic

Intertopic Distance Map (via multidimensional scaling)



Slide to adjust relevance metric:⁽²⁾
 $\lambda = 1$ 0.0 0.2 0.4 0.6 0.8 1.0

Top-30 Most Relevant Terms for Topic 1 (12.1% of tokens)



Overall term frequency

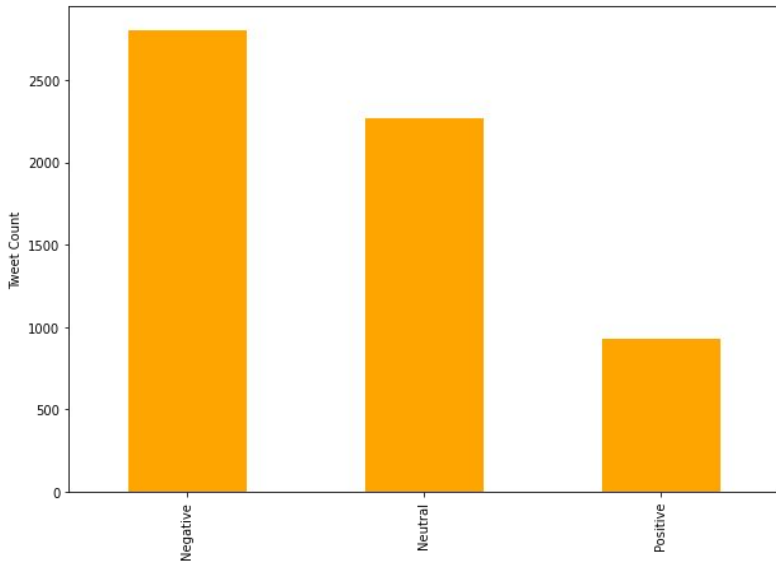
Estimated term frequency within the selected topic

1. saliency(term w) = frequency(w) * [sum_i p(t_i | w) * log(p(t_i | w)/p(t_i))] for topics t; see Chuang et. al (2012)

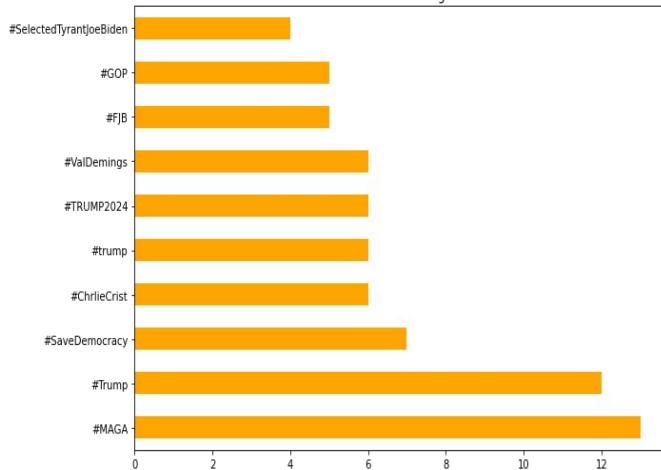
2. relevance(term w | topic t) = $\lambda * p(w | t) + (1 - \lambda) * p(w | \text{all topics})$; see Sievert & Shirley (2014)

2022 User Tweets Analysis

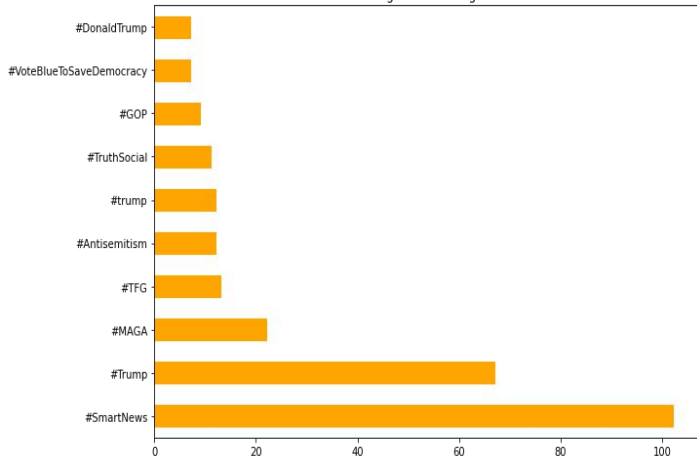
Sentiment of Current Times



Positive Hashtags



Negative Hashtags



Recommendations

Trump hardly talked about MAGA in 2019, his greatest strength

Trump got too personal with his insults

Trump should be inclusive of all population & be relevant to current issues

Trump talked too much about himself

Not focusing on the bigger picture in Economy and Coronavirus cost Trump the elections in 2020.