

DACSS 758 Final Project Chloe Morgado

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Analyzing Sentiment and Topics in Donald Trump's Truth Social Posts: Insights into the 2024 Campaign Narrative

Introduction

The role of social media in shaping public opinion and influencing political campaigns has become a critical area of study in the contemporary digital landscape. Platforms like Twitter (X), Facebook, and Truth Social provide direct channels for political figures to communicate with their supporters, bypassing traditional media outlets. Among these platforms, Truth Social, a social media network founded by former U.S. President Donald Trump. This final project explores the sentiment and thematic trends in posts made by Donald Trump on Truth Social during the 2024 presidential campaign, offering insights into the narratives and strategies employed to resonate with his audience.

Donald Trump's use of social media has long been a focal point in discussion about digital politics. During his presidency, Trump's prolific Twitter activity served as a powerful tool for agenda-setting, rallying his base, and amplifying his policy priorities. Following his ban from Twitter in 2021, the launch of Truth Social Provided him with a new platform to communicate freely and without constraints. Truth Social represented not only an outlet for Trump's campaign messaging but also a broader ecosystem of political commentary that appeals to a specific ideological base. Analyzing the content of Trump's posts on this platform can offer valuable insights into the rhetorical and thematic strategies of his 2024 campaign.

Previous research has highlighted the importance of sentiment and thematic analysis in understanding political communication on social media. Sentiment analysis enables researchers to examine the emotional tone of political messages, revealing whether a candidate's rhetoric is predominantly positive, negative, or neutral. For example, a campaign may use positive sentiment to inspire hope or negative sentiment to attack opponents and mobilize anger. Similarly, topic modeling techniques provide a means to uncover recurring themes in political discourse, such as the economy, healthcare, or national security. These methods offer a comprehensive view of how candidates craft their messages to connect with voters and influence public opinion.

The 2024 Presidential Election is a particularly noteworthy due to the polarized political climate and the heightened significance of digital platforms. As Trump seeks to reclaim the presidency, his campaign must navigate a rapidly evolving media environment characterized by misinformation, algorithmic amplification, and echo chambers. Truth Social, as a platform tailored to Trump's following base, offers a unique window into how his campaign seeks to sustain and energize his core supporters while potentially expanding its appeal. By analyzing the sentiment and topics in Trump's Truth Social posts, the goal of this final project is to see how his campaign narrative aligns with broader political and cultural dynamics.

This research is significant for several reasons, as it contributes to the growing body of literature on digital politics by examining a relatively new and understudies platform. While much attention has been given to Twitter (X) and Facebook, Truth Social remains a niche yet influential space for political discourse, particularly within conservative circles. The research provides insights into the rhetorical strategies of a major political figure during a pivotal election cycle, offering a case study of how social media is leveraging

in modern campaign strategies. By asking questions about Truth Social in this project, it will address broader questions about the role of sentiment and themes in shaping political narratives, informing our understanding of how candidates use language to engage with their audiences.

Research Question and Hypothesis

How do sentiment and thematic content in Donald Trump's Truth Social posts evolve over time during the 2024 presidential campaign?

H1: The sentiment of Trump's post becomes more positive as the campaign progresses.

H2: The thematic content of Trump's posts shifts from general grievances to specific campaign issues over time.

By combining sentiment analysis and topic modeling, this final project identifies key trends in Trump's messaging, highlighting how his campaign rhetoric reflects strategic priorities and adapts to the political landscape. The findings of this research will contribute to a deeper understanding of the intersection between political communication and digital media, providing a basis for future studies and social media's impact on electoral outcomes.

Overview of Dataset

The dataset analyzed in this final project is a collection of posts from Donald Trump's Truth Social account, complied and made publicly available on Kaggle. Truth Social, launched in February 2022, serves as a platform for Trump to communicate directly with his followers, bypassing traditional media and other social media networks that have restricted his accounts. This dataset provides a unique opportunity to explore the content and themes of Trump's communication during the 2024 presidential campaign.

The dataset contains a total of 5,159 rows and 26 columns, with each row representing a single post. The key variables for this dataset include text, data, and the engagement metrics (e.g., amount of likes, reposts, and comments).

The dataset covers the time period from March 2024 to November 2024, which captures the evolution of Trump's messaging as the campaign progressed. While the dataset provides valuable insights, it is not without limitations. First, it only includes public posts, excluding any private communications or deleted content that may have contributed to Trump's campaign strategy. Second, the dataset may contain biases inherent to only Truth Social's audience, as the platform primarily caters to Trump's supporters, potentially skewing the tone and content of interactions. Despite these limitations, this dataset is well-suited for my final project, as it offers a solid foundation for analyzing sentiment and thematic trends in Trump's communication, shedding light on how his campaign strategy unfolded on this platform.

Discussion and Conclusion

This final project analyzed sentiment and thematic content in Donald Trump's Truth Social posts during his 2024 Presidential campaign, as it has offered insights into his communication strategies and their evolution over the course of the election campaign in 2024. The results from some of the analyses that I ran provide a comprehensive view of how Trump employed digital media to frame his narrative, engage supporters, and respond to political events.

The sentiment analysis revealed key patterns in Trump's communication strategy. Early in the campaign when this data was collected in March 2024, posts were characterized by a predominance of negative sentiment, focusing on critiques of opponents, the media, and broader societal grievances. This aligns with the research on the role of negative rhetoric in mobilizing a political base by leveraging anger and dissatisfaction. However, as the campaign progressed, a discernible shift toward more positive sentiment emerged, particularly during major rallies and policy announcements. This supports the hypothesis that candidates

adopt increasingly positive messaging as election day approaches, seeking to inspire hope and broaden their appeal.

Thematic analysis through topic modeling highlighted distinct recurring topics, including campaign issues, media criticism, support for Trump's policies, and critiques of media opponents. The thematic shifts were observed over time, with early posts emphasizing general grievances and later posts focusing on specific policy issues like immigration and the economy. These findings suggest a deliberate strategy of transitioning from broad, emotionally charged messaging to target policy-driven narratives as the campaign went on. This aligns with the agenda-setting theory, which posits that effective political communication prioritizes issues of high salience to voters.

The dataset revealed spikes in negative sentiment and thematic emphasis on controversial topics during periods of heightened political tension or controversy. Posts following significant campaign debates or external crises frequently displayed heightened negative sentiment, which underscored Trump's use of reactive and combative rhetoric to control the narrative and energize his base. This specific finding highlights the adaptability of Trump's messaging to the dynamics of the campaign environment.

While Truth Social provided a unique platform for direct engagement with Trump's core supporters, its niche audience raises questions about the broader reach and impact of this strategy. The platform's echo chamber effect likely amplified the resonance of Trump's messaging among his base but may have limited its effectiveness in reaching undecided voters or moderating influences.

Despite these insights, this final project is not without limitations. The dataset's exclusivity to Truth Social, a platform with a predominantly conservative user base, inherently limits the generalization of the findings to the broader electorate. The analysis excluded private posts or deleted content, which could provide further context for Trump's campaign strategy. In conclusion, this project contributes to the growing body of literature on digital politics and campaign communication, providing a detailed case study of Donald Trump's strategic use of Truth Social.

Data Analysis

```
library(tidyverse)
```

```
## -- Attaching core tidyverse packages ----- tidyverse 2.0.0 --
## v dplyr      1.1.4      v readr      2.1.5
## v forcats    1.0.0      v stringr   1.5.1
## v ggplot2    3.5.1      v tibble    3.2.1
## v lubridate  1.9.3      v tidyr     1.3.1
## v purrr      1.0.2
## -- Conflicts ----- tidyverse_conflicts() --
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()     masks stats::lag()
## i Use the conflicted package (<http://conflicted.r-lib.org/>) to force all conflicts to become errors
```

```
library(stringr)
library(readr)
library(dplyr)
library(tidytext)
library(ggplot2)
```

```
truthsocial_data <- read_csv("/Users/chloemorgado/Downloads/trump_truths_dataset.csv")

head(truthsocial_data)
```

```

##      account_name  account_handle verified_badge      post_date
## 1 Donald J. Trump realDonaldTrump      TRUE 2024-11-08 18:05:00
## 2 Donald J. Trump realDonaldTrump      TRUE 2024-11-08 05:56:00
## 3 Donald J. Trump realDonaldTrump      TRUE 2024-11-08 05:56:00
## 4 Donald J. Trump realDonaldTrump      TRUE 2024-11-08 05:56:00
## 5 Donald J. Trump realDonaldTrump      TRUE 2024-11-08 05:55:00
## 6 Donald J. Trump realDonaldTrump      TRUE 2024-11-08 05:38:00
##
##      profile_link
## 1 https://truthsocial.com/@realDonaldTrump
## 2 https://truthsocial.com/@realDonaldTrump
## 3 https://truthsocial.com/@realDonaldTrump
## 4 https://truthsocial.com/@realDonaldTrump
## 5 https://truthsocial.com/@realDonaldTrump
## 6 https://truthsocial.com/@realDonaldTrump
##
## 1 https://static-assets-1.truthsocial.com/tmtg:prime-ts-assets/accounts/avatars/107/780/257/626/128/
## 2 https://static-assets-1.truthsocial.com/tmtg:prime-ts-assets/accounts/avatars/107/780/257/626/128/
## 3 https://static-assets-1.truthsocial.com/tmtg:prime-ts-assets/accounts/avatars/107/780/257/626/128/
## 4 https://static-assets-1.truthsocial.com/tmtg:prime-ts-assets/accounts/avatars/107/780/257/626/128/
## 5 https://static-assets-1.truthsocial.com/tmtg:prime-ts-assets/accounts/avatars/107/780/257/626/128/
## 6 https://static-assets-1.truthsocial.com/tmtg:prime-ts-assets/accounts/avatars/107/780/257/626/128/
##
##      post_url
## 1 https://truthsocial.com/@realDonaldTrump/posts/113447949058695478
## 2 https://truthsocial.com/@realDonaldTrump/posts/113445082841591891
## 3 https://truthsocial.com/@realDonaldTrump/posts/113445082077033170
## 4 https://truthsocial.com/@realDonaldTrump/posts/113445081351044914
## 5 https://truthsocial.com/@realDonaldTrump/posts/113445080541599647
## 6 https://truthsocial.com/@realDonaldTrump/posts/113445013055885711
##
## 1 There are fake, untrue, and probably illegal rumors and/or statements made by, perhaps, market man
## 2
## 3
## 4
## 5
## 6
##      replies shares likes video_urls.0
## 1      429   1,41k 5,01k      NA
## 2    4,29k   9,58k 46,2k      NA
## 3    1,11k   6,64k 32,2k      NA
## 4    2,85k  13,3k 63,5k      NA
## 5      623   4,31k 21,8k      NA
## 6    2,64k   9,22k 38,3k      NA
##
## 1
## 2 https://static-assets-1.truthsocial.com/tmtg:prime-ts-assets/media_attachments/files/113/445/082/8
## 3 https://static-assets-1.truthsocial.com/tmtg:prime-ts-assets/media_attachments/files/113/445/082/0
## 4 https://static-assets-1.truthsocial.com/tmtg:prime-ts-assets/media_attachments/files/113/445/081/3
## 5 https://static-assets-1.truthsocial.com/tmtg:prime-ts-assets/media_attachments/files/113/445/080/5
## 6 https://static-assets-1.truthsocial.com/tmtg:prime-ts-assets/media_attachments/files/113/445/013/0
##      video_urls.0.url video_urls.0.quality video_urls.1.url video_urls.1.quality
## 1
## 2
## 3
## 4

```

```
## 5
## 6
##   video_urls.2.url video_urls.2.quality image_urls.1 image_urls.2 image_urls.3
## 1
## 2
## 3
## 4
## 5
## 6
##   video_urls.3.url video_urls.3.quality video_urls.4.url video_urls.4.quality
## 1
## 2
## 3
## 4
## 5
## 6
```

```
str(truthsocial_data)
```

```
## 'data.frame':   5159 obs. of  26 variables:
## $ account_name      : chr  "Donald J. Trump" "Donald J. Trump" "Donald J. Trump" "Donald J. Trump
## $ account_handle    : chr  "realDonaldTrump" "realDonaldTrump" "realDonaldTrump" "realDonaldTrump
## $ verified_badge    : logi  TRUE TRUE TRUE TRUE TRUE TRUE ...
## $ post_date         : chr  "2024-11-08 18:05:00" "2024-11-08 05:56:00" "2024-11-08 05:56:00" "2024
## $ profile_link      : chr  "https://truthsocial.com/@realDonaldTrump" "https://truthsocial.com/@r
## $ avatar_url        : chr  "https://static-assets-1.truthsocial.com/tmtg:prime-ts-assets/accounts
## $ post_url          : chr  "https://truthsocial.com/@realDonaldTrump/posts/113447949058695478" "h
## $ status_text       : chr  "There are fake, untrue, and probably illegal rumors and/or statements
## $ replies           : chr  "429" "4,29k" "1,11k" "2,85k" ...
## $ shares            : chr  "1,41k" "9,58k" "6,64k" "13,3k" ...
## $ likes             : chr  "5,01k" "46,2k" "32,2k" "63,5k" ...
## $ video_urls.0      : logi  NA NA NA NA NA NA ...
## $ image_urls.0      : chr  "" "https://static-assets-1.truthsocial.com/tmtg:prime-ts-assets/media
## $ video_urls.0.url   : chr  "" "" "" "" ...
## $ video_urls.0.quality: chr  "" "" "" "" ...
## $ video_urls.1.url   : chr  "" "" "" "" ...
## $ video_urls.1.quality: chr  "" "" "" "" ...
## $ video_urls.2.url   : chr  "" "" "" "" ...
## $ video_urls.2.quality: chr  "" "" "" "" ...
## $ image_urls.1      : chr  "" "" "" "" ...
## $ image_urls.2      : chr  "" "" "" "" ...
## $ image_urls.3      : chr  "" "" "" "" ...
## $ video_urls.3.url   : chr  "" "" "" "" ...
## $ video_urls.3.quality: chr  "" "" "" "" ...
## $ video_urls.4.url   : chr  "" "" "" "" ...
## $ video_urls.4.quality: chr  "" "" "" "" ...
```

```
truth_tidy_data <- truthsocial_data %>%
  filter(!is.na(status_text)) %>%
  unnest_tokens(word, status_text) %>%
  anti_join(stop_words) %>%
  filter(!word %in% c("https", "t.co", "amp")) %>%
  filter(!str_detect(word, "^\\d"))
```

```
## Joining with 'by = join_by(word)'
```

```
head(truth_tidy_data)
```

```
##      account_name account_handle verified_badge      post_date
## 1 Donald J. Trump realDonaldTrump      TRUE 2024-11-08 18:05:00
## 2 Donald J. Trump realDonaldTrump      TRUE 2024-11-08 18:05:00
## 3 Donald J. Trump realDonaldTrump      TRUE 2024-11-08 18:05:00
## 4 Donald J. Trump realDonaldTrump      TRUE 2024-11-08 18:05:00
## 5 Donald J. Trump realDonaldTrump      TRUE 2024-11-08 18:05:00
## 6 Donald J. Trump realDonaldTrump      TRUE 2024-11-08 18:05:00
##
##              profile_link
## 1 https://truthsocial.com/@realDonaldTrump
## 2 https://truthsocial.com/@realDonaldTrump
## 3 https://truthsocial.com/@realDonaldTrump
## 4 https://truthsocial.com/@realDonaldTrump
## 5 https://truthsocial.com/@realDonaldTrump
## 6 https://truthsocial.com/@realDonaldTrump
##
## 1 https://static-assets-1.truthsocial.com/tmtg:prime-ts-assets/accounts/avatars/107/780/257/626/128/
## 2 https://static-assets-1.truthsocial.com/tmtg:prime-ts-assets/accounts/avatars/107/780/257/626/128/
## 3 https://static-assets-1.truthsocial.com/tmtg:prime-ts-assets/accounts/avatars/107/780/257/626/128/
## 4 https://static-assets-1.truthsocial.com/tmtg:prime-ts-assets/accounts/avatars/107/780/257/626/128/
## 5 https://static-assets-1.truthsocial.com/tmtg:prime-ts-assets/accounts/avatars/107/780/257/626/128/
## 6 https://static-assets-1.truthsocial.com/tmtg:prime-ts-assets/accounts/avatars/107/780/257/626/128/
##
##              post_url replies
## 1 https://truthsocial.com/@realDonaldTrump/posts/113447949058695478      429
## 2 https://truthsocial.com/@realDonaldTrump/posts/113447949058695478      429
## 3 https://truthsocial.com/@realDonaldTrump/posts/113447949058695478      429
## 4 https://truthsocial.com/@realDonaldTrump/posts/113447949058695478      429
## 5 https://truthsocial.com/@realDonaldTrump/posts/113447949058695478      429
## 6 https://truthsocial.com/@realDonaldTrump/posts/113447949058695478      429
##      shares likes video_urls.0 image_urls.0 video_urls.0.url video_urls.0.quality
## 1   1,41k 5,01k      NA
## 2   1,41k 5,01k      NA
## 3   1,41k 5,01k      NA
## 4   1,41k 5,01k      NA
## 5   1,41k 5,01k      NA
## 6   1,41k 5,01k      NA
##      video_urls.1.url video_urls.1.quality video_urls.2.url video_urls.2.quality
## 1
## 2
## 3
## 4
## 5
## 6
##      image_urls.1 image_urls.2 image_urls.3 video_urls.3.url video_urls.3.quality
## 1
## 2
## 3
## 4
## 5
## 6
##      video_urls.4.url video_urls.4.quality      word
```

```
## 1                                fake
## 2                                untrue
## 3                                illegal
## 4                                rumors
## 5                                statements
## 6                                market
```

```
library(tidyr)

truth_sentiment_data <- truth_tidy_data %>%
  inner_join(get_sentiments("bing")) %>%
  count(post_date, sentiment, sort = TRUE) %>%
  spread(sentiment, n, fill = 0) %>%
  mutate(sentiment_score = positive - negative)
```

```
## Joining with 'by = join_by(word)'
```

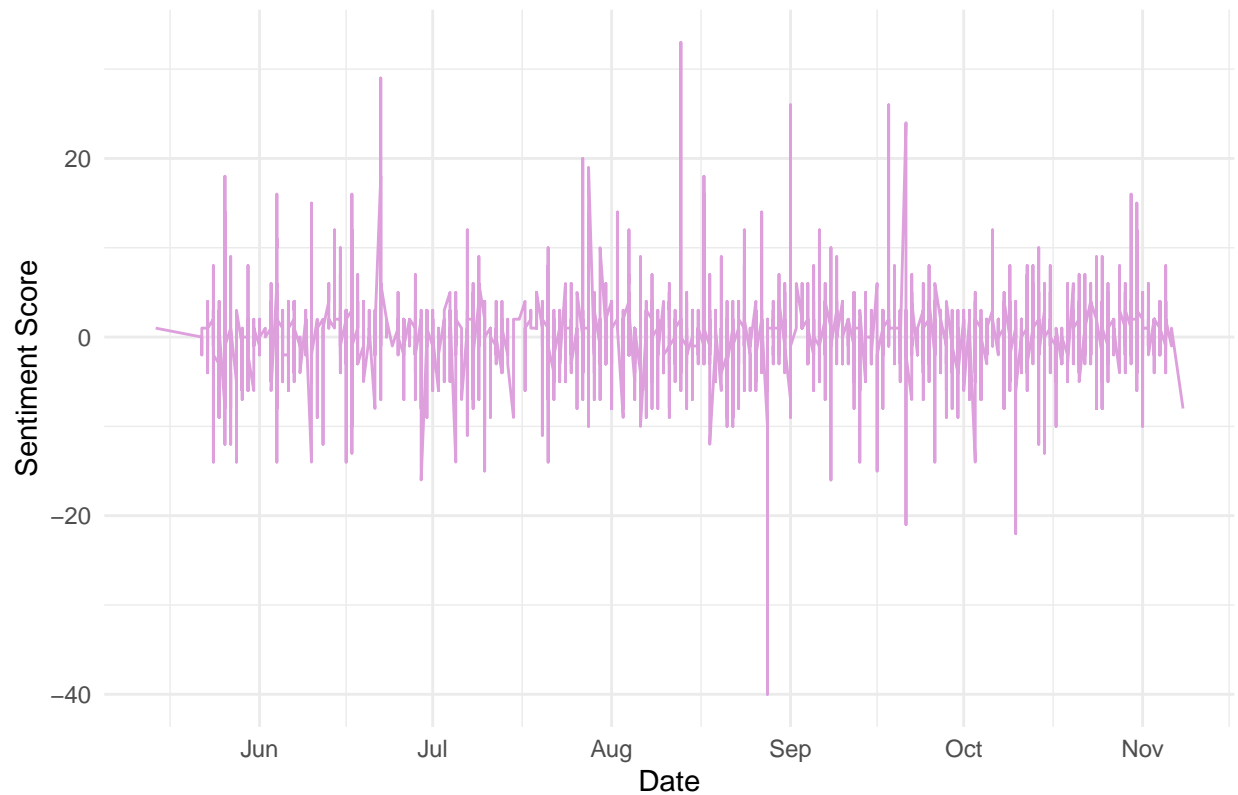
```
head(truth_sentiment_data)
```

```
##           post_date negative positive sentiment_score
## 1 2024-05-14 01:52:00         1         2             1
## 2 2024-05-22 00:02:00         2         2             0
## 3 2024-05-22 04:20:00         3         1            -2
## 4 2024-05-22 05:16:00         2         3             1
## 5 2024-05-23 06:04:00         0         1             1
## 6 2024-05-23 06:41:00         2         1            -1
```

```
library(ggplot2)

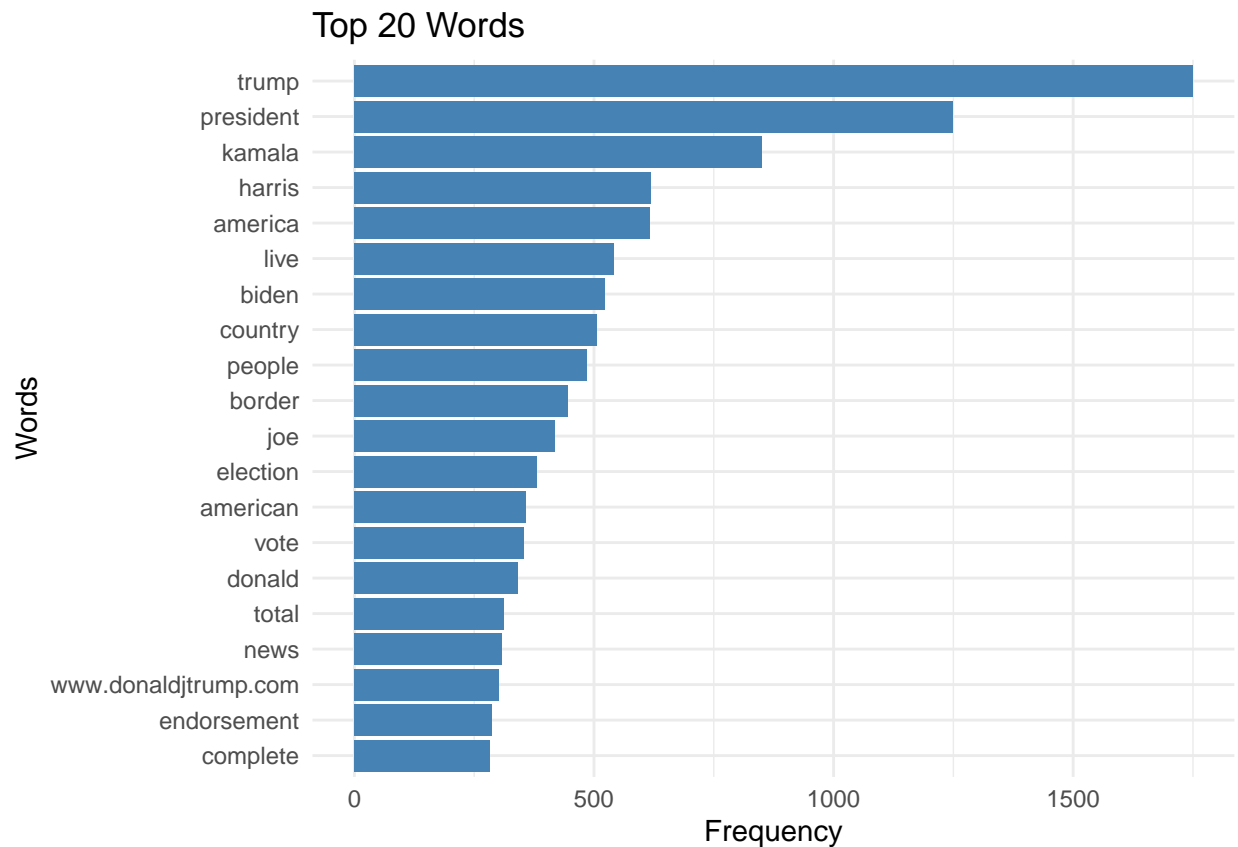
ggplot(truth_sentiment_data, aes(x = as.Date(post_date), y = sentiment_score)) +
  geom_line(color = "plum") +
  labs(title = "Sentiment Over Time",
       x = "Date",
       y = "Sentiment Score") +
  theme_minimal()
```

Sentiment Over Time



```
truth_word_counts <- truth_tidy_data %>%  
  count(word, sort = TRUE)  
  
truth_word_counts %>%  
  top_n(20) %>%  
  ggplot(aes(x = reorder(word, n), y = n)) +  
  geom_bar(stat = "identity", fill = "steelblue") +  
  coord_flip() +  
  labs(title = "Top 20 Words",  
        x = "Words",  
        y = "Frequency") +  
  theme_minimal()
```

```
## Selecting by n
```

```
library(topicmodels)
library(forcats)

truth_dtm <- truth_tidy_data %>%
  count(document = row_number(), word) %>%
  cast_dtm(document, word, n)

truth_lda_model <- LDA(truth_dtm, k = 5, control = list(seed = 123))

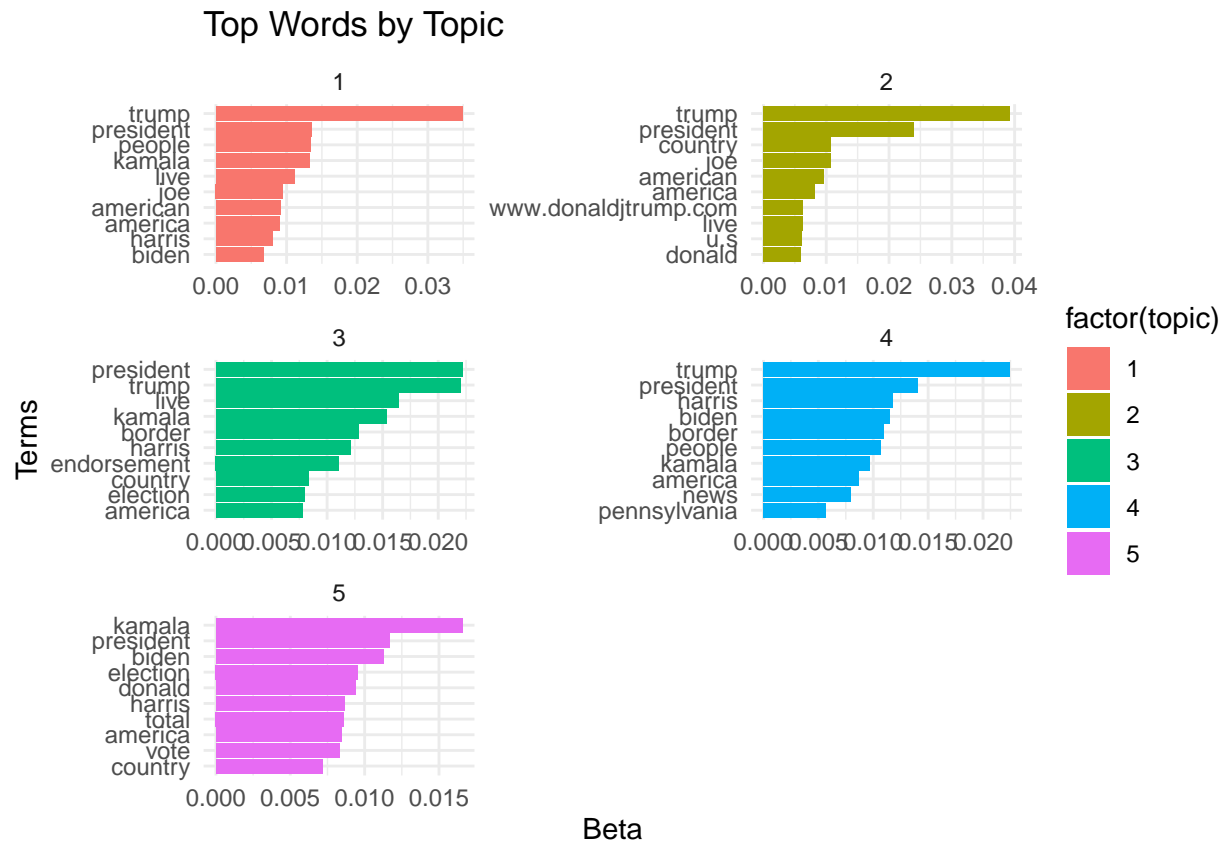
truth_lda_topics <- tidy(truth_lda_model, matrix = "beta")

truth_topic_labels <- c(
  "1" = "Campaign Issues",
  "2" = "Media Criticism",
  "3" = "Supporters",
  "4" = "Economy",
  "5" = "Opponents"
)

truth_top_terms <- truth_lda_topics %>%
  group_by(topic) %>%
  top_n(10, beta) %>%
  ungroup() %>%
  arrange(topic, -beta)

truth_top_terms %>%
```

```
ggplot(aes(x = reorder_within(term, beta, topic), y = beta, fill = factor(topic))) +
  geom_bar(stat = "identity") +
  facet_wrap(~ topic, scales = "free", ncol = 2) +
  coord_flip() +
  scale_x_reordered() +
  labs(title = "Top Words by Topic",
       x = "Terms",
       y = "Beta") +
  theme_minimal()
```



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