

Impact of Abortion Rights on US Midterm Elections 2022

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ABSTRACT

Abortion has always been a controversy around the world. In 1973, the U.S. Supreme Court determined the verdict of the case of Roe vs. Wade which proved to be a landmark decision for the nation. Jane Roe filed a case against Henry Wade in 1970 challenging a Texas law which made abortion illegal except for saving a woman's life by a doctor's order. Roe claimed that the states laws were unconstitutionally vague and took away her right of personal privacy. The U.S. Supreme Court ruled that the decision whether to continue or terminate a pregnancy depends on the individual, not the government. However in June 2022, the Supreme Court reversed the decision of Roe vs. Wade and declared that there is no longer a federal constitutional right to an abortion. In the light of these recent events, it seems that this issue will have a high impact on the midterm elections of the United States.

In this project, we intend to gain an overview of the general public and their thoughts on this particular issue and how it will affect the midterm elections being held in November of this year. Social media is the best option to gather data for this. We will collect data from various forms of social media such as Twitter, Reddit, and

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YouTube to analyze the impact of abortion rights on the midterm elections being held.

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1 DATA SOURCE

Data will be collected from three sources:

Twitter:

- To collect data, we will be using Twitter's sample stream API.
- Public tweets can be streamed from the platform in real time using this API.
- The data needed will be obtained using multiple hashtags such as:
 - #midterms
 - #abortion
 - #roevwade
 - #midtermelections
 - #GOP
 - #DEMS

Reddit:

- To collect data, we will be using Reddit's search API.

- Data is in the form of Reddits and subreddits.
- This data will then be queried by filtering it.

YouTube:

- Data can be accessed using Google Client API (google library).
- Data is in the form of videos and comments that are uploaded/posted.

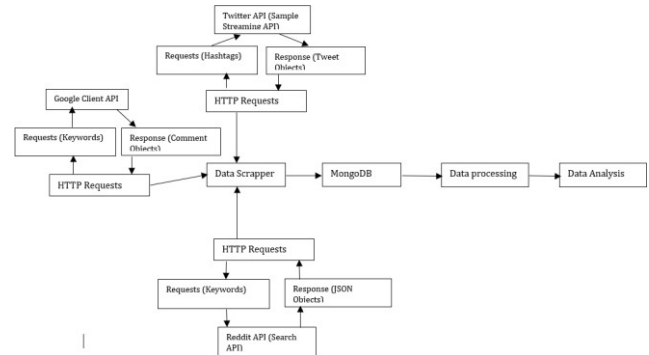


Figure 1: Data collection flow chart

2 DATA COLLECTION

2.1 Twitter

There is a large amount of data present in Twitter. Similarly, Twitter has a number of APIs which can be used to retrieve and analyze Twitter data.

Twitter API consists of a set of programmatic endpoints which can be used to understand or build the conversation on Twitter. With the use of a persistent HTTP GET connection, the streaming endpoint delivers tweet objects.

2.2 Reddit

Using Reddit's Search API, data will be collected that is related to our keywords. It will be present in the form of reddit and subreddits. JSON objects are returned by Reddit's APIs as a response to requests. The fields in the JSON objects can be filtered to get the required data.

2.3 YouTube

Google Client API is used to extract posts from YouTube. This allows easy and flexible access to Google's APIs. There are two types of access present: simple and authorized. A build() function will have to be used to use either one of the accesses. We will take the videos posted on YouTube and analyze the comments.

3 DATA ANALYSIS

We will store the data collected in a database, MongoDB. Data will first undergo pre-processing and cleaning. We intend to perform a lexicon based analysis (aspect-based sentimental analysis) over the data. Data will be analyzed for its polarity and then categorized: positive tweets as pro-government and negative tweets as anti-government. We will attempt to predict the results of these elections using the difference in counts for the two categories.

4 DATA APPROXIMATION AND ESTIMATION

Twitter Search API processes 180 tweets or retweets for every 15 minute window per user. If we collect data throughout the whole day, we should be able to collect 17k tweets/retweets per day. Reddit Search API processes 60 reddit or subreddits per minute. If we collect data throughout the whole day, we should be able to collect 86k reddit/subreddits per day. We can collect up to 10,000 units of data per day using the Google Client API for YouTube. Combining all the data from the various sources, we aim to make a solid prediction on the impact of abortion rights on the US midterm elections.

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