Impact of Abortion Rights on US Midterm Elections 2022

Ami Chauhan
State University of New York at Binghamton University
Binghamton, New York, USA
achauha4@binghamton.edu

Kirtika Jawerilal
State University of New York at Binghamton University
Binghamton, New York, USA
kjaweri1@binghamton.edu

Prarthna Mohanraj
State University of New York at Binghamton University
Binghamton, New York, USA
pmohanr1@binghamton.edu

Suryavardhan Thummala
State University of New York at Binghamton University
Binghamton, New York, USA
sthumma1@binghamton.edu

Ravi Teja Tadiboina
State University of New York at Binghamton University
Binghamton, New York, USA
rtadibo1@binghamton.edu

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. This decision proved to be a landmark one for the nation. 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 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 YouTube to analyze the impact of abortion rights on the midterm elections being held.

ACM Reference format:

Ami Chauhan, Kirtika Jawerilal, Prarthna Mohanraj, Suryavardhan Thummala and Ravi Teja Tadiboina. 2022. IMPACT OF ABORTION RIGHTS ON US MIDTERM ELECTIONS 2022. In *Proceedings of ACM Woodstock conference (WOODSTOCK'18). ACM, New York, NY, USA, 2 pages.* https://doi.org/10.1145/1234567890

*Article Title Footnote needs to be captured as Title Note
†Author Footnote to be captured as Author Note

WOODSTOCK'18, June 2018, El Paso, Texas USA

1 DASHBOARD

We created a simple dashboard app to visualize our data collected over the past few weeks. The dashboard web app is built using the [2]Flask web-framework in Python, with the web design aspects implemented using HTML and JavaScript.

The plots for the app are designed using Chart.js[1], a JavaScript library for plotting. The data is accessed using the pymongo[3] library for flask framework as our data is stored in the [4]mongo database. The "Tech With Tim" channel on YouTube helped us implement most of our flask code[5].

1.1 Features

The dashboard app provides the user with two options to visualize:

- Popular hashtags: The dashboard app takes a keyword as input from the user and then fetches and displays the top 5, most popular twitter hashtags used that are related to the keyword.
- Data count by date: The dashboard app takes a date-range(start date, end date) and displays the number of tweets/ comments collected from the respective social media networks. The users can choose among the three data sources to display the data from.

1.2 Instructions to Run

1. From the directory containing the file 'app.py', run the command python3 app.py . This should start the app.

2. Using the address: "127.0.0.1" and the port: "5000" we can access the app running, on the browser, that is "127.0.0.1:5000".

3. Once the app loads, it can be used to get the popular hashtags or tweet/comment count for a date-range.

2 WORKING

The home page of our dashboard is an "About" page. This page contains information about our project. We have implemented two analyses with our data: date count by date and popular hashtags. There are two ways to perform each analysis. Either the user can use the navigation bar with both options at the top of the page or the buttons under "Implementation." This page also contains information on how conclusive the sentiment of people is on social media toward abortion rights.

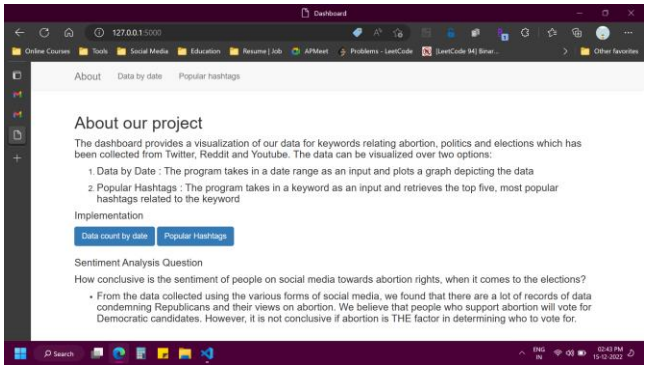

Figure 1: Home page of dashboard

Date by Data: Selecting the "Data count by date" or "Data by date" option allows the user to choose among the sources of data (Twitter, Reddit, or YouTube) and a date range. The number of tweets or comments collected everyday in the given date-range is displayed in a line graph. If no data is found, then the message "No data found for the entered dates" is displayed on the dashboard.

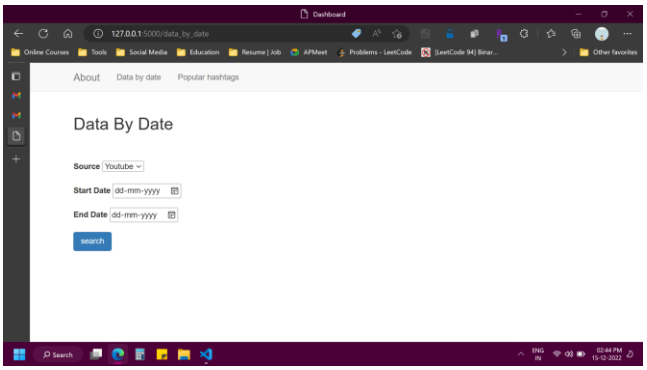

Figure 2: Page to get data by date range

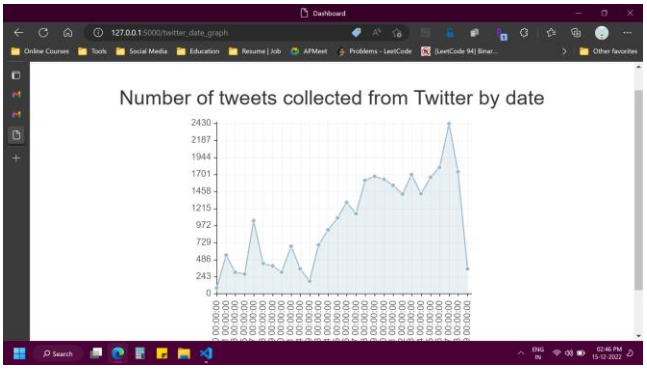

Figure 3: Graph showing the results of data search by date for Twitter

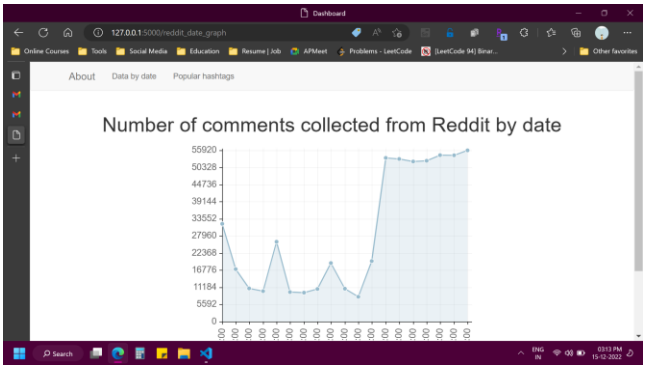

Figure 4: Graph showing the results of data search by date for Reddit

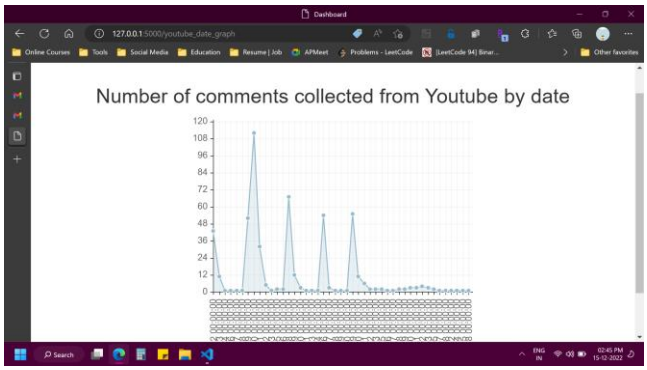

Figure 5: Graph showing the results of data search by date for YouTube

Popular Hashtags: Selecting the "Popular hashtags" option on the navigation bar or under "Implementation" allows the user to enter a keyword. Data is filtered for the tweets related to the keywords, all the hashtags in those tweets are collected, and the top 5 related hashtags are retrieved. The data is visualized using a bar graph. If no data is found, then the message "No hashtags found" is displayed on the dashboard.

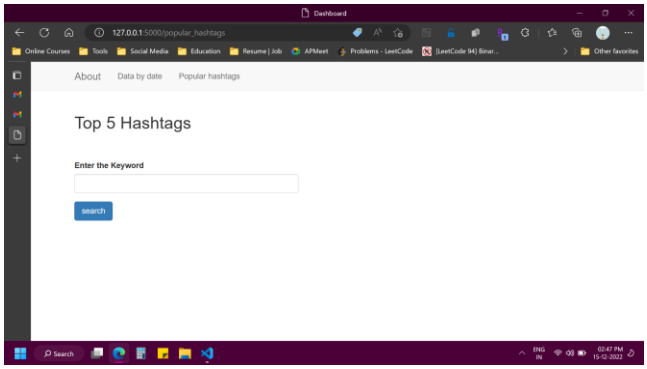

Figure 6: Page to search for hashtags

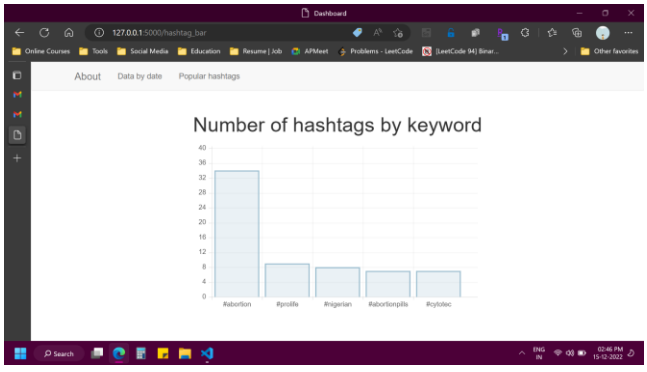

Figure 7: Graph showing the results of hashtags search using "abortion" as keyword

By performing the analyses, we were able to answer how conclusive is the sentiment of people on social media towards abortion rights, when it comes to the elections. We found that there are a lot of records of data condemning Republicans and their views on abortion. We believe that people who support abortion will vote for the Democratic candidates. However, it is not conclusive if abortion is THE factor in determining who to vote for.

3 LIMITATIONS

The application may not work for all kinds of edge conditions. Specifically for Reddit, the data collection is huge. Thus, the app takes a very long time to load. We believe the data fetching for the application needs modification since many of the data fields of the collected data are irrelevant in application perspective.

ACKNOWLEDGMENTS

We would like to thank our Professor, Jeremy Blackburn, for his assistance with this project. We are very grateful for the feedback, support, and learning opportunities he has provided.

REFERENCES

[1] 2013. Chartjs. Retrieved December 9, 2022 from https://www.chartjs.org

[2] 2020. Flask. Retrieved December 9, 2022 from https://flask.palletsprojects.com/en/1.1x/

[3] 2010. Pymongo. Retrieved December 9, 2022 from https://flask-pymongo.readthedocs.io/en/latest/

[4] 2007. Mongodb. Retrieved December 9, 2022 from https://docs.mongodb.com

[5] 2020. Flask YouTube. Retrieved December 9, 2022 from https://www.youtube.com/watch?v=mqhxxeeTbu0&list=PLzMcBGfZo4-n4vJJybUVV3Un_NFS5E0gX