

Correlating Poll Results with Twitter on Obamacare

Tingwen Bao, Jay Cordes, Alex Jamar, Michelle Liu

Background:

Since it was passed in March 2010, Obamacare has remained a controversial topic. The public opinion has remained deeply divided on this health reform law even now, 7 years after it was introduced. In this project, we would like to develop a data infrastructure to hold both ACA poll results from Kaiser and Twitter posts, and analyze the correlation between the result of public polls and sentiment on Twitter. The data infrastructure will also be updated in batch so that people can track the trends in the future.

There are several major sources that conduct polls on Obamacare regularly. We chose poll results tracking by KFF.org (Kaiser Family Foundation) because the results could be easily downloaded with relatively good granularity. In addition, since KFF.org is also doing a lot of other healthcare related polls regularly, choosing it will allow this tool to be further used to track other popular healthcare topics.

We chose to compare poll results with Twitter because it is one of the leading social networks. Twitter is an online news and social networking platform where users globally post and interact with messages. Created in 2006, Twitter has since gained worldwide popularity and has more than 319 million users as of 2016. As one of the leading social networks, Twitter proved to be the largest source of breaking news on the day of the 2016 U.S. presidential election. Twitter claims that the real-time, public orientation of its social network makes it a reliable barometer of the public's constantly changing moods and interests...

Objectives:

Both Twitter posts and the Kaiser health tracking poll allow us to explore the relative popularity of certain topics in healthcare. This project aims to find the correlation between ACA poll results and its public sentiment on Twitter over time. We chose to use Obamacare, a controversial topic for the past few years, to build a database and analytical infrastructure as an example to illustrate the findings. Since Twitter has emerged as a real-time barometer of public opinion, sentiment analysis on tweets regarding Obamacare will indicate the popularity of the law at a given time. The goal of this project is to see if there is a correlation between the poll results and the related tweets.

Reference:

This dashboard is for MIDS W205 2017 Spring Final Project.

The data pull and data processing pipeline are stored in Github Repo:

https://github.com/michelleliu103/w205_finalproject

The dashboard is last refreshed on 4/22/2017

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Conclusion

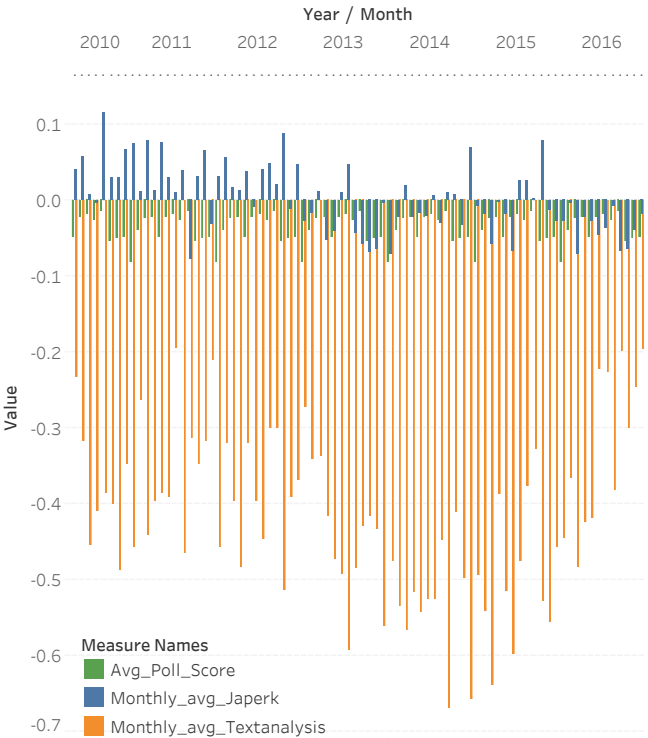
The correlation between Japerk and Poll is: -0.03102

The correlation between Textanalysis and Poll is: 0.01875

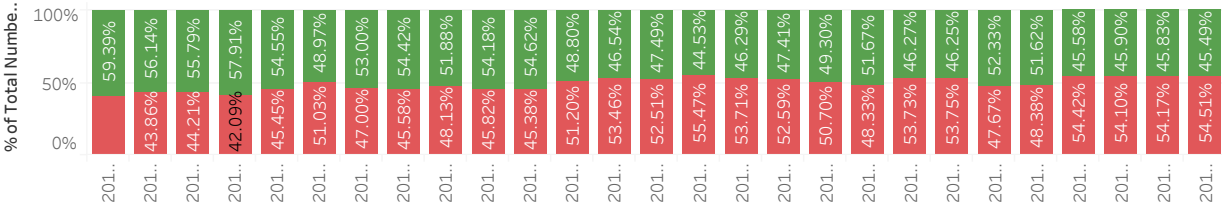
There was no significant correlation between sentiment analysis score and poll results

Favorable
Unfavorable

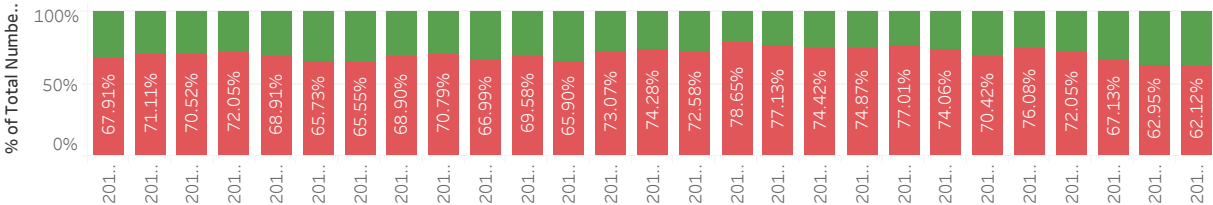
Avg Score Comparison



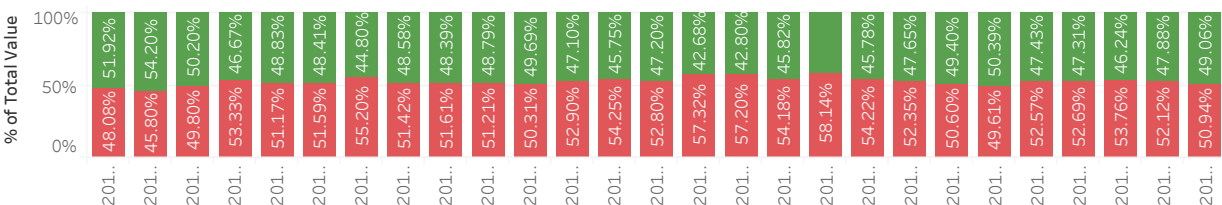
Japerk



Textanalysis



KPP Poll



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Month, Year of Created At
All

Favorites
100 to 37,614

Japerk
-1 1

Tweets by Favorites

Good to be back. Thoughts on the show? Suggestions? Tomorrow we'll have an interesting story on Obamacare with new stats and details.
ke they had a half billion dollars and 3 years to set up the website! This stuff is hard! Hey #MAGA folks, y'all looking forward to your first post- Obamacare hospital bill? pic.twitter.com/DrPJij89E9
The whole point of Obamacare was to have it collapse. That's what's happening. Then we get single payer, government run health care. Bad.
Obamacare creates shovel ready jobs - just look. Reup or enlist with us at <http://USFREEDOMARMY.COM> . Patriots welcome pic.twitter.com/Q3GACuPUvL
Reminder that the Obamacare fail isn't the website — it's the law itself: <http://www.bostonglobe.com/opinion/2013/1/25/obamacare-crisis-can-fixed-flaws-are-fundamental/HHPmJSEUFxqnkrZLDTX7IJ/story.html> ... It's time for a #FullRepeal ! #Ma

Hey y'all don't forget to watch the ACA 's tonight 8/7c on FOX and see my performance! I am up first! #wishmeluck

Oops I obviously meant I've been spending the last few weeks fighting to defund Planned Parenthood but I'm happy to defund Obamacare too.

Opinion: The GOP's Obamacare replacement would be a major improvement <http://www.forbes.com/sites/sallypiper/2016/06/27/the-gops-obamacare-replacement-better-than-good/#50c112985341> ... pic.twitter.com/EPHxYIrvN
It wasn't until Obamacare that I've grasped how grotesquely bad the US health care situation can be, from a Canadian POV, for US friends
Gov. @ScottWalker : We need to repeal Obamacare <http://cnn.it/1TytZd3> | Watch live: <http://cnn.it/go> <http://cnn.it/1Gi4Aec>

Trend Over Time

