

# 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 changin..

## 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](https://github.com/michelleliu103/w205_finalproject)

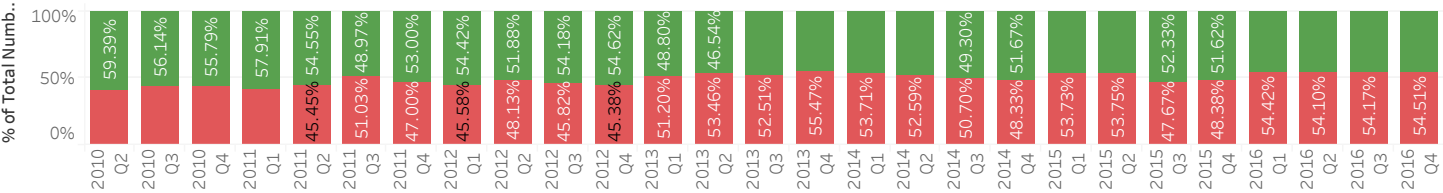
The dashboard is last refreshed on 4/22/2017

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Favorable  
Unfavorable

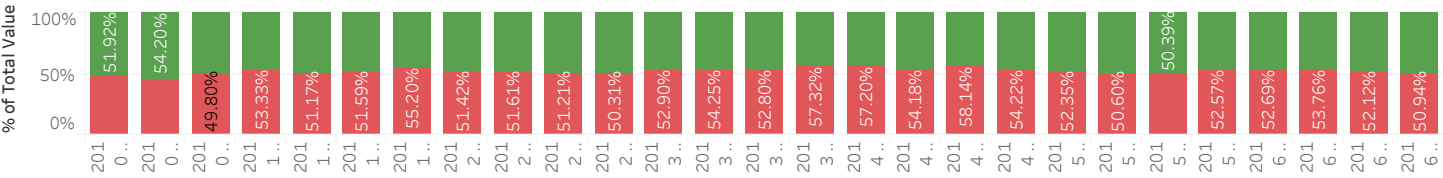
Japerk



Textanalysis



KPP Poll



Avg Monthly Score for Each

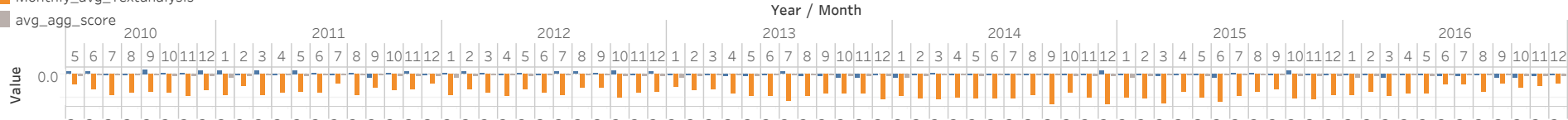
The correlation between Japerk and Poll is:  
-0.03102  
The correlation between Textanalysis and Poll is:  
0.01875

Year	Month	Monthly..	Monthly..	avg_agg..
2010	5	0.0411	-0.2331	-0.0476
	6	0.0571	-0.3154	-0.0229
	7	0.0069	-0.4526	-0.0184
	8	-0.0046	-0.4091	-0.0268
	9	0.1143	-0.3840	-0.0157
	10	0.0297	-0.4000	-0.0529
	11	0.0297	-0.4869	-0.0499
	12	0.0663	-0.3474	-0.0481
	1	0.0731	-0.4571	-0.0817
	2	0.0114	-0.2629	-0.0383
	3	0.0777	-0.4411	-0.0243
	4	0.0137	-0.3954	-0.0225
2011	5	0.0754	-0.3840	-0.0476
	6	0.0297	-0.3909	-0.0229
	7	0.0091	-0.1943	-0.0184
	8	0.0389	-0.4640	-0.0268
	9	-0.0777	-0.3131	-0.0157
	10	0.0320	-0.3474	-0.0529
	11	0.0297	-0.4869	-0.0499
	12	0.0663	-0.3474	-0.0481
	1	0.0731	-0.4571	-0.0817
	2	0.0114	-0.2629	-0.0383
	3	0.0777	-0.4411	-0.0243
	4	0.0137	-0.3954	-0.0225

## Measure Names

Monthly\_avg\_Japerk  
Monthly\_avg\_Textanalysis  
avg\_agg\_score

Avg Score Comparison



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Month, Year of Created At  
All

Favorites  
100 to 37,614

Japerk  
-1 1

## Top 30 Tweets by Favorites

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/EPhYxYIrvN](http://pic.twitter.com/EPhYxYIrvN)

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.

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

Obamacare with new stats and details. Reminder that the Obamacare fail isn't the website — it's the law itself: <http://www.bostonglobe.com/opinion/2013/1>

up the website! This stuff is hard! [1/25/obamacare-crisis-can-fixed-flaws-are-fundamental/HHPmJSEUFxqnkrZLDTX7IJ/story.html](http://1/25/obamacare-crisis-can-fixed-flaws-are-fundamental/HHPmJSEUFxqnkrZLDTX7IJ/story.html) ... It's time for a #FullRepeal ! #Ma

Obamacare creates shovel ready jobs - just look. Reup or enlist with us at <http://USFREEDOMARMY.COM> . Patriots welcome [pic.twitter.com/Q3GACuPUvL](http://pic.twitter.com/Q3GACuPUvL)

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.

## Trend Overtime

