Overview

- Social Media can “predict the present/future”
  - Success stories
- Electoral Predictions with Social Media
  - Successful Predictions
- Can Twitter predict US Elections?
  - Elsewhere: Can Google Trends predict US Elections?
- How To Predict Elections using Social Media

Social Media can “predict the future” (?!)

Predicting the Future With Social Media

From Tweets to Polls: Linking Text Sentiment to Public Opinion Time Series

Predicting Elections with Twitter: What 140 Characters Reveal about Political Sentiment

The Party is Over Here: Structure and Content in the 2010 Election

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Abstract

In this work we study the use of Twitter during the 2010 midterm election in the US, the data includes about 5.5M tweets, collected using the Twitter API.

To Predict (according to Merriam-Webster)

\textbf{predict} \hfill verb \hfill \verb\prefix{\textup{\textmd{\textup{\textit{\textbf{p}red\textit{\textbf{c}t}}}}}}\hfill \verb\prefix{\textup{\textmd{\textup{\textit{\textbf{p}red\textit{\textbf{c}t}}}}}}\hfill \\
	ransitive verb

\begin{itemize}
  \item to declare or indicate in advance; especially to foretell on the basis of observation, experience, or scientific reason
\end{itemize}
Successful Electoral Predictions

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Successful Would-be Predictions

- Methods Used:
  - Raw volume of Tweets
  - Sentiment Analysis of Tweets

- Data Used:
  - 2009 German Elections Tweets
  - 2008 US Presidential Elections Tweets

- Our Data:
  - 2010 Special Senatorial Elections (MA) Tweets
  - 2010 Senatorial Elections (CO, NV, CA, KY, DE) Tweets

Can Twitter Volume Predict?

- Twitter volume (would have) predicted correctly 50% of the high-visibility US Congressional races

Can Tweet Sentiment Predict?

- Sentiment analysis (would have) predicted correctly 50% of the high-visibility US Congressional races

- But was it sensing the sentiment correctly?
“What if you had used some other methods?”

- We did not invent the methods we used, we just evaluated them on data other than those they were designed for.
- We started off expecting to predict successfully (In fact, we were “predicting” at times ;-) )

- But we learned a lot from these experiments:

  How to Predict Using Social Media

How To Predict

- A method of prediction should be an algorithm.
- Data from Social Media are fundamentally different than Data from Natural Phenomena.
  - People will change their behavior the next time around
  - Spammers & Activists will try to take advantage e.g. “Twitter Bomb” and “Prefab Tweeter Factory”

From Obscurity to Prominence in Minutes:
Political Speech and Real-Time Search
ON THE PREDICTABILITY OF THE U.S. ELECTIONS
THROUGH SEARCH VOLUME ACTIVITY
Vocal Minority versus Silent Majority:
Discovering the Opinions of the Long Tail

How To Predict

- A method of prediction should be an algorithm.
- Data from Social Media are fundamentally different than Data from Natural Phenomena.
- Form a testable theory on why and when it predicts.
  - Go past the OMG! Factor
  - Avoid the self-deception syndrome
How To Predict

- A method of prediction should be an algorithm.
- Data from Social Media are fundamentally different than Data from Natural Phenomena.
- Form a testable theory on why and when it predicts.
- (maybe) Learn from the professional pollsters.
  - Tweet ≠ User
  - User ≠ Eligible Voter
  - Eligible Voter ≠ Voter

Thank you!