An Alternate Approach to Predict Elections beyond the Poll

Nowak, Zachary (School: Governor's School at Innovation Park)
Saari, Ethan (School: Governor's School at Innovation Park)

Surveys are a preferred, but flawed, method of predicting election outcomes. 71% of polling during the last months of the 2016 Presidential campaign predicted candidate Clinton winning by an average margin of 5%. Survey results reflect a view at a point in time, but are often inaccurate and biases due to a lack of randomness as respondents disproportionally respond when asked about hot-button issues but engage much less when survey issues are less important to them. We examined whether trending insight from social media activity would better inform candidates when to initiate corrective action to increase the probability of victory. This method would have the advantage of daily assessment and would not require the pro-active engagement of survey respondents. We tested using data from the Weston v. Comstock 2018 congressional seat race in Virginia. For the five-month period pre-election, we applied a machine learning algorithm to analyze candidates' Twitter feeds. The algorithm analyzed sentiment, quantity of likes and the number of retweets. A daily weighted metric was created for each candidate and graphed on a corresponding timeline. The code than analyzed each line for negative slope-change in excess of a pre-determined target percentage over a rolling 72 hour period. The software identified periods of high change activity warranting further investigation. The machine learning algorithm was fine-tuned by examining multiple elections. While applied to election data in this project, a similar approach could be used to address wide-ranging concerns from potential stock market fluctuations or terrorist activity when the goal is not to definitely predict an election result but identify areas of relative weakness or strength as identified by trend line slope-changes.

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