

Real Time Classification of Political Tendency of Twitter Spanish Users based on Sentiment Analysis

Authors : Marc Solé, Francesc Giné, Magda Valls, Nina Bijedic

Abstract : What people say on social media has turned into a rich source of information to understand social behavior. Specifically, the growing use of Twitter social media for political communication has arisen high opportunities to know the opinion of large numbers of politically active individuals in real time and predict the global political tendencies of a specific country. It has led to an increasing body of research on this topic. The majority of these studies have been focused on polarized political contexts characterized by only two alternatives. Unlike them, this paper tackles the challenge of forecasting Spanish political trends, characterized by multiple political parties, by means of analyzing the Twitters Users political tendency. According to this, a new strategy, named Tweets Analysis Strategy (TAS), is proposed. This is based on analyzing the users tweets by means of discovering its sentiment (positive, negative or neutral) and classifying them according to the political party they support. From this individual political tendency, the global political prediction for each political party is calculated. In order to do this, two different strategies for analyzing the sentiment analysis are proposed: one is based on Positive and Negative words Matching (PNM) and the second one is based on a Neural Networks Strategy (NNS). The complete TAS strategy has been performed in a Big-Data environment. The experimental results presented in this paper reveal that NNS strategy performs much better than PNM strategy to analyze the tweet sentiment. In addition, this research analyzes the viability of the TAS strategy to obtain the global trend in a political context make up by multiple parties with an error lower than 23%.

Keywords : political tendency, prediction, sentiment analysis, Twitter

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