Effect of Personality Traits on Classification of Political Orientation

Authors : Vesile Evrim, Aliyu Awwal

Abstract : Today as in the other domains, there are an enormous number of political transcripts available in the Web which is waiting to be mined and used for various purposes such as statistics and recommendations. Therefore, automatically determining the political orientation on these transcripts becomes crucial. The methodologies used by machine learning algorithms to do the automatic classification are based on different features such as Linguistic. Considering the ideology differences between Liberals and Conservatives, in this paper, the effect of Personality Traits on political orientation classification is studied. This is done by considering the correlation between LIWC features and the BIG Five Personality Traits. Several experiments are conducted on Convote U.S. Congressional-Speech dataset with seven benchmark classification algorithms. The different methodologies are applied on selecting different feature sets that constituted by 8 to 64 varying number of features. While Neuroticism is obtained to be the most differentiating personality trait on classification of political polarity, when its top 10 representative features are combined with several classification algorithms, it outperformed the results presented in previous research.

Keywords : politics, personality traits, LIWC, machine learning

Conference Title : ICMLA 2015 : International Conference on Machine Learning and Applications

Conference Location : Copenhagen, Denmark

Conference Dates : June 11-12, 2015