

# Chapter 28

## Using Twitter to Characterize Public Opinion in Brazil During Political Events

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### ABSTRACT

*In this work, the authors characterize Brazilian online population sentiment on different political events using data from Twitter and discuss the advantages of the usage of this social media as a data source. The results demonstrated that the Brazilian population uses Twitter to manifest their political view, expressing both positive and negative sentiments regarding political events. This kind of characterization may contribute to build a critical opinion of Brazilian people, once they would not be limited by what is being divulgated by typical media, such as television and newspapers. Additionally, the authors reinforced the applicability of social media, as Twitter, to make this kind of characterization.*

### INTRODUCTION

The democratic system is identified by the involvement of population on political events that are fundamental for the development of a nation (e.g. elections, lawmaking and street protests). In this context, characterizing and monitoring the opinion of population about those events are crucial for the democratic process (Maciel et al., 2016).

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Traditionally, extracting and analyzing surveys is a way to know public opinion regarding political events and are usually linked to high costs. Moreover, in most cases this kind of survey takes into account just a piece of society sample (Bermingham & Smeaton, 2011; Maciel et al., 2016).

Given this scenario, researchers have been exploring other sources to collect and characterize large volume of data which represent the public opinion on political events (Bermingham & Smeaton, 2011; Maciel et al., 2016). Twitter is a promising source for this kind of characterization. This social media has become popular to discuss and to disseminate different kinds of information and knowledge, mainly regarding political issues (Bermingham & Smeaton, 2011; Dokoohaki et al., 2015).

Previous studies have demonstrated the Twitter applicability as a source of data to characterize and automatically monitor the online population's opinion related to political scenario in different countries (e.g. The United States and India) (Almatrafi et al., 2015; Barbosa et al., 2013; Barbosa et al., 2012; Bermingham & Smeaton, 2011; Dokoohaki et al., 2015). Furthermore, they reinforced the argument that the characterization of online population opinion reflects the real sentiment of the society (Almatrafi et al., 2015; Barbosa et al., 2013; Barbosa et al., 2012; Bermingham & Smeaton, 2011; Dokoohaki et al., 2015).

This kind of characterization is important because it may contribute to the reflection and it may guide the decisions and actions of government and society based on the population's opinion (Almatrafi et al., 2015; Barbosa et al., 2013; Bermingham & Smeaton, 2011). Thus, this paper aims to characterize the Brazilian population's opinion about political events in this country and demonstrate the applicability of social media, such as Twitter, to make this kind of characterization. In particular, the authors investigate the reaction of society facing one of the most impactful political events in Brazil: the impeachment of Dilma Rousseff (BBC News, 2016).

To achieve this goal, the authors collected and analyzed Twitter data related to the process of impeachment of the former president Dilma Rousseff and the inauguration of Michel Temer as the new Brazil's president. This perspective of characterization in Brazilian scenario is important because the culture may influence both (1) the political position of population and (2) the use of Twitter to express opinion about this subject.

The results indicated that people in Brazil discuss political issues on Twitter and they also stand for these issues positively or negatively. Besides, from a comparative analysis, it was possible to observe that the online public opinion about politic events reflects the real sentiment of the Brazilian population.

The results presented in this paper are relevant because the sentiment characterization using data from Twitter may contribute for the formation of the public opinion regarding political events. Thus, the population would not be limited on what is published by typical media (e.g., television and newspapers). Furthermore, the government and other interested organizations (e.g. unions) could make use of this new source of information to guide their campaigns and projects, aiming a higher public support.

Additionally, the methodology adopted in this work may be used in services which characterize the opinion of society in relation to political issues. This methodology also may be used to conduct other opinion characterization in relation to events which are not limited to the political scenario, such as sports, products and services.

## **BACKGROUND**

In this section, the authors present related works that have demonstrated that data collected from Twitter can be used to monitor or predict the real opinion of population on different political scenarios.

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