

## Chapter 71

# Political Sentiment Mining: A New Age Intelligence Tool for Business Strategy Formulation

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### ABSTRACT

*Investigations on sentiment mining are mostly ensued in the English language. Due to the characteristics of the Indian languages tools and techniques used for sentiment mining in the English language cannot be applied directly to text in Hindi languages. The objective of this paper is to extract the political sentiment at the document-level from Hindi blogs. The authors could not find any literature about extracting sentiments at the document-level from Hindi blogs. They extracted opinion about one of India's very famous leaders who was a prominent face in the national election of 2014. They prepared the datasets from Hindi blogs reviews. They purposed the lexicon and machine learning technique to classify the sentiment. Their purposed method used four steps: (1) Crawling and preprocessing the blog reviews; (2) Extracting reviews relevant to the query using the Vector Space Model (VSM); (3) Identifying sentiment at the document level using the Lexicon method, and (4) Measuring the result using the Machine learning technique. Their experimental result demonstrates the effectiveness of our algorithms.*

## 1. INTRODUCTION

For a variety of purposes, knowing sentiments of public are critical to various organizations including governments and businesses. In the earlier times, these organizations had various mechanisms to identify these sentiments. In the present context, due to the popularity of online expression in social media, social media has become extremely important but then again far easier to extract it (Wasmann & Spruit, 2012). People are writing their opinion about different issues, political personalities, and political parties on various social media platforms, especially on blogs. These opinions may play a vital role in swaying a forthcoming event, including elections. They also help in cultivating the image of personality, policy, and decisions. Furthermore, sentiments behind these opinions can be used for making the necessary amendments or modifications in policies. Business growth is dependent on the political environment (Schuler, 1996; Shaffer & Hillman, 2000). All businesses need a political environment that is pro-business, and particular businesses need business-specific, pro-political environment. Any political change in this regard is a great worry for business organizations. Since politics has a very significant impact on the business organizations, big business organizations need to identify the political sentiments in advance to design the future strategy of their business (Zol & Mulay, 2015). In the era of the digital world, expression of political sentiments on the digital media is very common. The Internet has become an indispensable tool for people to interconnect. More and more people are communicating their feelings and opinion and attracting views from others. With a torrent of data available on the Internet (Thakur & Tiwari, 2014; Wasmann & Spruit, 2012), it is a great prospect for the business organizations to excerpt the sentiments from the Internet and outline the blueprint of their business strategy. The objective of this paper is to compare the six techniques of sentiment mining and propose the best suited for the Indian political circumstance.

We extracted sentiments from various sources like Blogs, Newspaper, Microblogs, and also from traditional media like Television & Radio. The definition of sentiment mining is the computational technique used to perform opinion analysis in the given text (Liu, Law, Rong, Li, & Hall, 2013; Wijnhoven & Bloemen, 2014). Sentiment mining is a perplexing task because one has to measure the customer or blog reviewers view on that object or subject, which in most cases, is not explicit. In the English language, we find extensive research on sentiment mining. English WordNet is universally used to find the opinioned word whether it is positive or negative. Based on the total number of positive and negative words in a sentence, sentence-level opinions are estimated. Finally, documents-level sentiments are based on the sentence-level sentiments.

This study is important because of its context. India is one of the fastest growing economies in the world (Banerjee, Prabhu, & Chandy, 2015; Nishant, Goh, & Kitchen, 2016; Sarkar, 2016). Most of the global firms either want to establish their business in India or they want to increase the existing scale of their commerce (Worm & Kumar, 2014). The standing political environment has chief impacts on both types of organizations. Accurate forecast of the upcoming political environment is very critical for them. Hindi is one of the most spoken languages of the country. In social media and digital platforms, expressions in Hindi are the closest to the Indian sentiments in comparison to the rest of the languages. All this motivates us to mine the sentiment from Hindi blogs reviews by using machine learning and lexicon-based approach and suggest the best-suited technique for this purpose.

Work on political corpus in English was done by various researchers (Bakliwal, Arora, & Varma, 2012; Dang-Xuan & Stieglitz, 2012; Grijzenhout, Marx, & Jijkoun, 2014; Gryc & Moilanen, 2010; Johnson, Shukla, & Shukla, 2012; Mullen & Malouf, 2006; Yano, Cohen, & Smith, 2009). Their study shows

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