Chapter 1
A Study and Comparison of Sentiment Analysis Techniques Using Demonetization:
Case Study

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ABSTRACT

Sentiment analysis is an analytical approach that is used for text analysis. The aim of sentiment analysis is to determine the opinion and subjectivity of any opinion, review, or tweet. The aim of this chapter is to study and compare some of the techniques used to classify opinions using sentiment analysis. In this chapter, different techniques of sentiment analysis have been discussed with the case study of demonetization in India during 2016. Based on the sentiment analysis, people's opinion can be classified on different polarities such as positive, negative, or neutral. These techniques will be classified on different categories based on size of data, document type, and availability. In addition, this chapter also discusses various applications of sentiment analysis techniques in different domains.

INTRODUCTION

The aim of sentiment analysis (SA) is to discover the emotional orientation of user opinion or review of the particular topic, product or object. Sentiment analysis is different from traditional text mining in that we focus on a particular topic for mining whereas sentimental analysis is much complex. Sentimental analysis can be considered as a classification process in which opinion or reviews are classified as posi-

tive, negative or neutral (Lei et al., 2016). Sentimental analysis has played an important role in various applications of text mining for consumer opinion detection, customer relationship management, brand and product poisoning and reviewed analysis. Based on the sentimental analysis multiple companies can know the status of their product and take different decision to enhance their business.

There are a lot of research has been done in the field of sentimental analysis (Medhat et al., 2014) which is mostly classify reviews based on their polarity. In general, a review can be categorized by different topics, for example, mobile phone reviews most likely discuss topic of a feature such as a price, brand, memory, camera, etc. in sentimental analysis task, users are not only interested in the opinion of review but also interested in the topics discovery. Therefore, it is known that the sentiment polarities are also dependent on various topics. The complete process of sentiment classification is shown in Figure 1.

The classification of sentiments can be performed on three levels such as document, sentence and aspect level. Document-level SA classifies an opinion as positive or negative. Sentence-level SA expresses each sentence as positive or negative opinion. When classifying opinion as document or sentence level, there is no significant difference because sentences are the short documents (Liu, 2012). While aspect level SA classifies entities or objects concerning specific aspect. For example, a different user may have different aspects towards mobile phone such as voice quality, battery life, camera quality, etc. To classify sentiments, it is needed to have a review or opinion information. There are different sources from where the user can collect data for sentiment analysis. Microblogs and social networks are excellent resources for information in these days because they provide an efficient environment to share opinions.

Figure 1. Sentiment analysis process
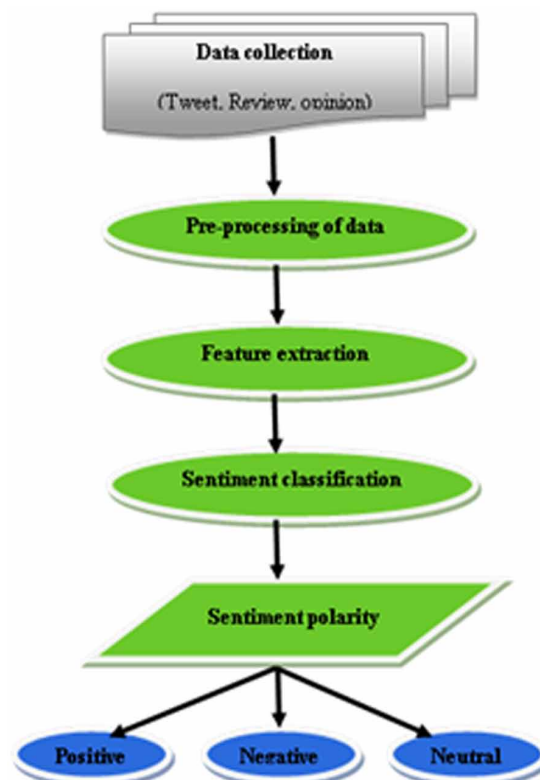
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