Chapter 3
A Survey on Sentiment Analysis Techniques for Twitter

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ABSTRACT

People regularly use social media to express their opinions about a wide variety of topics, goods, and services which make it rich in text mining and sentiment analysis. Sentiment analysis is a form of text analysis determining polarity (positive, negative, or neutral) in text, document, paragraph, or clause. This chapter offers an overview of the subject by examining the proposed algorithms for sentiment analysis on Twitter and briefly explaining them. In addition, the authors also address fields related to monitoring sentiments over time, regional view of views, neutral tweet analysis, sarcasm detection, and various other tasks in this area that have drawn the researchers ' attention to this subject nearby. Within this chapter, all the services used are briefly summarized. The key contribution of this survey is the taxonomy based on the methods suggested and the debate on the theme's recent research developments and related fields.

1. INTRODUCTION

Internet and social media has changed how people share their opinions. Blog entries, online discussion boards, product review website act as a significant interpersonal dependency. Friends and family counselling has served a decision tool in previous years before any new purchase. The opinion of others is a definite go to in case of decision making. Nonetheless, the online analysis is being looked at in recent years before any decision is made. Customers or consumers rely heavily on web-based information that is accessible through many shopping channels, internet directories, forums, tweets, etc. Before purchasing any product or accessing any service. If one is ordering a product from a website for e-commerce or going to a restaurant to have dinner or watching a film in the cinema, we still consider other customers before enjoying the product and/or the facilities (Akhtar, Gupta, Ekbal, & Bhattacharyya, 2017). If we want to make an online / offline transaction, what will we do initially? We visit various blogs and forums to see if people chat about it. We have seen some online shops selling what we are looking for. We read via the feedback and opinions written or shared by many people on the product and online store. It is only after a sufficient number of comments that we know whether or not to make the order. Analysis of sentiments is a concept that involves several activities such as the extraction of feelings, classification of feelings, classification of subjectivity, summation of opinions and spam opinion detection (Sahoo & Gupta, 2020). This seeks to examine emotions, behaviours, emotional views, etc. about factors such as goods, people, concepts, organizations and services. The increasing importance of sentiment analysis correlates with social media growth including ratings, forums, conversations, blogs, microblogs, Facebook and social networks (Clarizia, Colace, Pascale, Lombardi, & Santaniello, 2019). The massive quantity of data produced makes the social media content impossible to interpret or to summarize. The majority of users write their opinions, social media blogs, ecommerce sites etc. For individuals, the industry, the government and research, this content is very important for decision-making. Mining is a hot area of study under natural language processing for this emotion interpretation and viewpoint.

Twitter sentiment analysis program has a wide range of implementations on a number of the fields described below. Sentiment Analysis aims to achieve different targets, including public opinion in the form of business research, political activity, film revenue forecasting, consumer satisfaction assessment and more. Some of them are listed below:

- **Business**: It allows marketing firms to formulate and frame new approaches, evaluate their consumer feeling for products or brands and use their input

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