

# Chapter 12

## A Review of Text Mining and Sentiment Analysis for the Purpose of Determining the Veracity of Online Reviews

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### ABSTRACT

*Text mining is crucial in extracting valuable insights from unstructured text data, such as emails, social media posts, and consumer comments. By analyzing large datasets, organizations can uncover hidden patterns and trends that provide actionable business intelligence. This process involves several key steps, including*

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*data cleaning to remove irrelevant information, identifying significant keywords that highlight important themes, and structuring the data in a way that facilitates analysis. In marketing analytics, business intelligence derived from text mining enables informed decision-making based on detailed consumer insights. Detecting fake reviews across various platforms and industries is particularly critical today. Methods for identifying counterfeit feedback involve examining corporate achievements, understanding customer purchasing behaviours, managing brand perception, and utilizing emotional intelligence to gauge authenticity.*

## **INTRODUCTION**

The process of identifying implicit knowledge from text using the process of extracting the knowledge is termed as Text Mining. One should understand that the output of text mining, i.e. tacit knowledge does not exist in the storage system, so one should differentiate between text mining and retrieval of information. The text describes some of the typical text mining tasks such as text classification and clustering association, and others. Text mining is one representative of data mining just like other representatives such as relational data mining, web mining etc. but in this paper text mining is considered as a representative of one particular type of data mining. So, before working on text mining, we need to study what is data mining further to understand. Mining is the process of gaining hidden or implicit knowledge from any data but that will be applicable in the broader sense. In the traditional view, the data will act as a source that plays the most important role in the mining concept, and this data type is restricted to relational data in traditional data mining.

Client website reviews may help management learn more about the pros and cons of their products and services. This allows them to react tactically, capitalizing on their strengths while addressing their weaknesses. False negative reviews posted to harm rivals or fake positive reviews used to improve products or services are unethical tactics that some managers and marketers choose to use. In real life, corporations and organizations aim to learn public and consumer opinions about their goods and services. In the past, people asked friends and relatives for views. When gathering public or customer views, organizations and businesses used surveys, opinion polls, and focus groups. Understanding the nuances of this challenge requires a multifaceted approach, incorporating various elements such as business performance evaluation, consumer purchase intention analysis, brand perception assessment, and emotional intelligence discernment (Keswani, et al.,2022; Das, et al., 2019).

Observing specific patterns can help viewers identify fake reviews. These patterns include a lack of reviewer information, repetitive content, concise reviews, a sudden surge of reviews simultaneously, a focus on personal details, and excessive

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