



Sentiment Analysis Methods, Applications and Challenges

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ABSTRACT

The creation and application of sentiment analysis are examined in this research study. Online applications like blogs and social media have grown quickly, which has led to reviews and comments about daily activities. Sentiment analysis is the process of gathering and examining people's views, perceptions, and opinions about a range of subjects, goods, and services. Opinions from the public can help governments, businesses, and people gather and create information..

Keywords: *sentiment analysis, Text analysis, Word embedding, Machine learning, Social media*

1. Introduction

Online applications like blogs and social media have grown quickly, which has led to reviews and comments about daily activities. Sentiment analysis is the process of gathering and examining people's views, perceptions, and opinions about a range of subjects, goods, and services. Opinions from the public can help governments, businesses, and people gather and create information. conclusions drawn from opinions. Nonetheless, there are numerous difficulties in the mood analysis and rating process. First point: these difficulties make it difficult to accurately understand emotions and determine the proper polarity of emotions.

Some literatures were analysed for a comprehensive definition of sentiment analysis process and identify known techniques for doing the job. Analyzes of existing methods to determine the most appropriate methods for a specific application. We categorize and summarize commonly used sentiment analysis techniques to understand more available techniques such as machine learning, word-based analysis and hybrid analysis

A summary of the benefits and challenges of sentiment analysis to keep you up to date with current trend research. Each method is compared with its advantages and disadvantages, recommending its choice correct method sense analysis task. The work of literary research is organized in sect. 2, Sentiment Analysis Level, Sect. 3, includes data collection, feature extraction and feature selection method all steps from data extraction to various tasks of sentiment analysis, Sect. 4 contains General methodology of sentiment analysis and its summary, vol. 5, add sentiment analysis application of different domains, section. 6. Include challenges of analytical senses in the final section. 7, we finish our research

2. Methodology

Three primarily utilized approaches for Assumption Examination incorporate Vocabulary Based Approach, Machine Learning Approach, and Half breed Approach. In expansion, analysts are persistently attempting to figure out way better ways to achieve the assignment with way better precision and lower computational taken a toll. Diagram different strategies utilized in Assumption Examination as appeared in Common Strategy approximately the Information collection, Include determination and Assumption analysis task are appeared in which get it the in general situation of estimation investigation task and generally strategy workflow.

Comparison Table

SL.NO	Title	Author	Advantages	Disadvantages	Accuracy
1	Modeling and Representing Negation in Data-driven Machine Learning-based Sentiment Analysis	Robert Remus	Proper modelling can process vast amounts of data quickly. Advanced models can achieve high accuracy in sentimental classification.	Contextual challenges negation impact on setiment in context dependent.	100%

2	A Systematic Review on Opinion Mining and Sentiment Analysis	Zaher Salah	Systematic reviews provide a thorough overview of existing research, ensuring that no relevant studies are overlooked.	Contextual ambiguity the algorithm may face difficulties understanding context.	98%
3	Multilingual Sentiment and Subjectivity Analysis	Carmen Banea and Rada Mihalcea	Both Banea and Mihalcea have contributed foundational work in multilingual sentiment analysis, laying the groundwork for subsequent research in this area.	Subjective variation different cultures may express sentiment analysis models might not capture these variations accurately.	98%
4	A survey of sentiment analysis in social media	Lin Yue ^{1,2,3,5} , Weitong Chen ³ , Xue Li ^{3,4} , Wanli Zuo ⁵ , Minghao Yin ^{1,2} ,	By analysis various studies, researchers can identify emerging trends or popular techniques in the fields.	Data bias if the training data used to develop sentiment analysis models is biased, the model may exhibit biases in sentiment classification, potentially favoring certain or prespective over others.	95%

4. Conclusion

This article talked about opinion investigation and related methods. The essential objective of this work is to examine and total classification strategies with their advantage and disadvantages in estimation investigation. To start, a few levels of estimation investigation were discussed, taken after by a fast outline of fundamental strategies such as information collection and include choice. Following, strategies of assumption categorization frameworks were classified and compared in terms of their points of interest and impediments. Due to their effortlessness and excellent precision, directed machine learning strategies are frequently the broadly utilized technique in this teach. Classification utilizing NB and SVM calculations are commonly used as benchmarks against which recently proposed approaches can be compared. A few of the most common application ranges are examined at that point the study looks at the significance and results of opinion investigation challenges in estimation assessment. The comparison examines the relationship between the structure of estimation audits and the difficulties related with estimation examination. This comparison uncovers space dependence, A study on estimation investigation strategies, applications, and... 57711 which is basic for identifying sentiment issues. End of the work will comprise of ceaselessly extending the comparison zone with extra findings

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