Survey on Opinion Mining and Sentiment Analysis

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ABSTRACT

A significant part of the behavior of gathering information is to analyze the thoughts of other people. Considering the availability together with the popularity of resources that have opinions like the online review sites, people are in a position to identify new challenges and opportunities. They use technology in seeking out information and understanding opinions of their counterparts. The upsurge of activities in the field of opinion mining and sentiment analysis has propelled the initialization of direct response to the flow of interest towards a new system dealing directly with opinions collected. The current survey discusses various techniques and methodologies promising to enable the information systems that are directly opinion-oriented. The focus of the survey relates to the methodologies that address new challenges that emerge because of the sentiment-related applications, compared to the existing traditional analysis of fact-based approach.

Keywords: *Mining, Sentiments, Opinion, Decision-Making.*

1. INTRODUCTION

1.1 Information Demand on Sentiment and Opinions

Different people have different thoughts about the information presented during the process of decision-making. Prior to when World Wide Web was known, people used to consider the recommendation of their friends; however, after the introduction of internet, information is readily available at any time. People can find opinions on their quest without any hustles. As people continue to live, they experience new things and ideas that require explanation. The demand for information has enabled people to depend majorly on internet. Whenever researchers find new ideas, they tend to share on the Internet their thoughts, open for critique by other authors. Opinion raised help in developing the argument of the subject [1].

1.2 Opinion Search Engine

As such, people always depend on the internet for information. The creation of these systems that highlight internet information requires expertise. Some of the things to consider while developing the system include the application used in relation to the purpose of the engine. Users should consider the relevance of the searched information to the existing database. After the identification of the relevant information, the user faces the issue of selecting the target document. Thus, the system has to consider a summary of the presented query for the user to locate the target document [2].

2. APPLICATION

2.1 Web Sites That Review Opinions

Opinion mining and sentiment analysis would be used in review websites. The engine can be applied in the process of reviewing websites, an imitation of sites like Epinions that collect information on a certain subject. While including the review opinions, the users have to restrict the topics especially to product reviews [3].

2.2 A sub-Component Technology

The analysis may serve a significant role as an enabling technology for other systems. A single opportunity relies on the augmentation of the recommendation system as it may make the system recommend some items that have negative feedback. The process of summarization and question-answering process may also use Opinion mining and sentiment analysis [4].

2.3 Business and State Intelligence

Opinion mining and sentiment analysis is significant especially when handling various forms of intelligence activities. The main user of the analysis package is business intelligence, a strategy that is beneficial to the corporate members of the organization. To some extent, the analysis may be used to extract opinions especially from the unstructured documents that are authored by people [5].

3. GENERAL CHALLENGES

Just like any other methodologies, opinion mining and sentiment analysis are susceptible to challenges that may affect their credibility. The first challenge is contrasting the approach with another analysis method like the standard fact-best methodology. Most people consider using opinion mining and sentiment analysis since it has a wide application capability. Similarly, the analysis approach has some weaknesses that affect its credibility in the analysis process. Another challenge is factors, which make the approach difficult like the sentiment polarity classification process [6].

4. SUMMARIZATION

4.1 Summarization of Single-Document Opinion-Oriented Information

Extracting the topic-based information from a single document is almost similar to summarization of topic-based information of the document. The idea is that the pulled information may serve as a summary. A possible way to perform the function relates to the approaches capable of creating textual sentiment information that summarizes the text according to the sentence extraction. Some sentiment summarization approaches may work directly the opposite of the system of opinion-oriented information extraction approach. A more restricted extraction can present a summary representation like the information extraction templates. Application of the summarization technologies may not achieve the required level of the information sophistication of the presentation; however, with the current study, researchers have realized that it is quite possible [7].

5. PUBLICLY AVAILABLE RESOURCES

Resources exist in different forms; these may include datasets, evaluation campaigns lexical resources, and tutorials and bibliographies.

6. Conclusions

The survey highlighted various techniques and approaches capable of supporting opinion-oriented information-seeking systems. It also discussed approaches that would benefit the user when given alternatives of system searches. The survey highlighted few challenges that the user might encounter while using the approach. The challenges help in developing a good system that would give the best service. Lastly, the survey highlighted the various applications of the system. As seen, opinion mining and sentiment analysis, can be applied in different fields making it a viable approach towards opinion search.

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