Chapter 75
Application of Sentiment Analysis in Movie reviews

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ABSTRACT

Sentiment analysis is a sub-domain of opinion mining where the analysis is focused on the extraction of emotions and opinions of the people towards a particular topic from a structured, semi-structured, or unstructured textual data. In this chapter, the authors try to focus the task of sentiment analysis on IMDB movie review database. This chapter presents the experimental work on a new kind of domain-specific feature-based heuristic for aspect-level sentiment analysis of movie reviews. The authors have devised an aspect-oriented scheme that analyzes the textual reviews of a movie and assign it a sentiment label on each aspect. Finally, the authors conclude that incorporating syntactical information in the models is vital to the sentiment analysis process. The authors also conclude that the proposed approach to sentiment classification supplements the existing rating movie rating systems used across the web and will serve as base to future researches in this domain.

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INTRODUCTION

Necessity is the mother of invention.

We are drowning in data, but starving for knowledge!

The present era of Internet has become a huge Cyber Database which hosts gigantic amount of data which is created and consumed by the users. The data mining has been growing at an exponential rate giving rise to a new industry filled with it, in which users express their opinions across channels such as Face-book, Twitter etc. Opinions which are being expressed in the form of reviews provide an opportunity for new explorations to find collective likes and dislikes of cyber community. One such domain of reviews is the domain of movie reviews which affects everyone from audience, film critics to the production company. The movie reviews being posted on the websites are not formal reviews but are rather very informal and are unstructured form of grammar. Opinions expressed in movie reviews give a very true reflection of the emotion that is being conveyed. The presence of such a great use of sentiment words to express the review inspired us to devise an approach to classify the polarity of the movie using these sentiment words.

Sentiment Analysis is the process of determining whether a piece of writing is positive, negative or neutral. It's also known as opinion mining, deriving the opinion or attitude of a speaker. A common use case for this technology is to discover how people feel about a particular topic.

Sentiment Analysis is a technology that will be very important in the next few years. With opinion mining, we can distinguish poor content from high quality content. With the technologies available we can know if a movie has more good opinions than bad opinions and find the reasons why those opinions are positive or negative. Much of the early research in this field was centred around product reviews, such as reviews on different products on Amazon.com, defining sentiments as positive, negative, or neutral. Most sentiment analysis studies are now focused on social media sources such as IMDB, Twitter and Face-book, requiring the approaches be tailored to serve the rising demand of opinions in the form of text. Furthermore, performing the phrase-level analysis of movie reviews proves to be a challenging task.

Social media sentiment analysis can be an excellent source of information and can provide insights that can:

- Determine marketing strategy
- Improve campaign success
- Improve product messaging
- Improve customer service
- Test business KPIs
- Generate leads

In a nutshell, if done properly, social media sentiment analysis can improve your bottom line. However, if you are making decisions using incorrect sentiment analysis data, the results can be catastrophic. Most social media analysis vendors will admit (if you push them hard enough) that their sentiment analysis algorithm will be, at best, 50-60% accurate.