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# Opinion Mining And Sentiment Analysis On Comments

KEYWORDS: Opinion extraction, Sentiment analysis, opinion mining

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**ABSTRACT** Now a days, Social networking web sites play very important role in day to day life. Whenever people experience something new or buy new things, they post its reviews. People have hectic schedule and monotonous life style. To eliminate stress from life and make it different from routine, people like to travel, shopping, watching a movie etc. online shopping and online analysis of reviews are also a vital part in day to day surfing. Normally before buying a product or for going on some vacation people usually refer to check the comments from different web blogs, post, news feeds, web sites etc. Many factors affects to the person before buying a new product or travelling to the new place. Among them some are personal interest, time schedule, discount, weather forecast and e- word of mouth. In this e-world, this e-word of mouth is very important. Today users can easily spread their comments and complaints which can easily read by other users also. So, other users can also come to know the reviews of different places, products and movie reviews. Electronic word of mouth is a useful tool to disseminate positive and negative observations on any place, product via websites, chat rooms, and consumer forums. If people want to buy or visit any place they will go through different blogs, websites and read reviews. But by just reading it, users can not judge the place as it is very tedious, difficult and time consuming. The aim of this paper to prepare a tool for opinion mining and sentiment analysis for comments posted on the web.

## I. INTRODUCTION

Sentiment analysis or opinion mining refers to the application of natural language processing computational linguistics and text analytics to identify and extract subjective information in source materials [1]. Opinion mining is a type of natural language processing for tracking the mood of the public about a particular product [2]. Opinion mining (sentiment mining, opinion/sentiment extraction) is the area of research that attempts to make automatic systems to determine human opinion from text written in natural language. Two main types of textual information are available. The two types are Opinions and facts.

## II. PROBLEM STATEMENT

There are some problems related to tools which are used to analyze comments from twitter while facebook is not having any facility of sentiment analysis yet.

**Related Tools:-**

**Tweetfeel:-**Tweetfeel analysis positive and negative feelings in twitter conversations about different things like popular movies, musicians, TV shows, some places. It display these sentiments in a simple way.

**Problem in tweetfeeel:-**

It shows only some specific places not all the popular. So it fails to give sentiment analysis for all the tourism places.

- Tweetfeel monitors only positive and negative feelings for that word.
- Problem is it does not categorize that word in different category like whether it is product or place or about movie.

it cannot differentiate in tweets. For example,royal challenger bangalore wonthe match andbangalore is a nice city to visit.

Both are positive comments in tweetfeel while first comment is about match and another is about place.

So, if user wants only result for particular place like bangalore, goa or any other then tweetfeel fails in that.

- Here, we have taken some different tweets from tweet feel. It shows wrong opinion result for some tweets. Some are related to place and some are not but still in result we can see clear difference about positive sense and negative sense.

@karnnan @dundukutty I freaking Love winter. Summer in Kerala is Horrible.

- **Problem:- Here tweetfeel displays the negative comment. But here one word love is positive and other word horrible is negative so it is confusing**
- **Good morning warriors.** Hope you will beat delhi as your team balance is much better than delhi. common warriors@IPL_Pune.
- **Problem:-**Here it displays negative but actually it is in positive sense.




**Figure 1 :- screen shot of a facebook wall post**

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Problem:- Here is a screen shot of a facebook wall post. Facebook has no facility available for sentiment analysis for wall posts. So, user can not differentiate which wall posts are positive and which wall posts are negative.



**Figure 2 :- screen shot of a tourism blog**



**Figure 3 :- screen shot of a tourism blog**

**Problem:-** Here above are the screen shots of a tourism blog [18] where some commetns are positive and some comments are negative. There are lots of comments and difficult for user to read and differentiate them in positive or negative sense.

At the same time to read all the comments is also difficult and tedious job.

## III. PROPOSED ARCHITECTURE




**Figure 4:- proposed architecture**

**Opinion request: -** Whenever user wants a result for particular place then opinion request will be sent.

**Fetch document: -** After opinion request from a user, all the opinions from different blogs, face book wall post, tweets are taken about that place.

**Identify word type: -** We have prepared a dataset from wordnet related to tourism sector only. In this, we have prepared verb, adverb, adjectives, and noun datasets. We will check and compare all the datasets with the opinion. If there is no word matching with these datasets then we will discard it or we can say it is neutral comment. It is not related to that place. For example, rajasthan royals won the match. Here, rajasthan place is there in comment but it is not related with tourism sector.

**Get opinion value: -** When we get adverb, adjectives, noun, verb list from opinion we will compare it with our positive keyword set and negative keyword set.

**Process opinion: -** After getting the opinion value if positive and negative both keywords are there in opinion then we will apply our rules for better result.

**Opinion aggregation: -** After all the procedure when all the documents are processed then it will give a result about positive comments and negative comments and below that the result of these analysis in percentage. In addition, we have provided different categories like cuisine, hotel, weather, culture. It will show the comments for it.

**Our approach:-**

**1) Identify verb, noun, adverb, adjectives**
**2) Identify whether opinion is positive, negative or neutral**
**3) Comparison with positive list and rules**
**4) Comparison with negative list and rules**
**5) Apply rules**
**6) Result of the opinion**

Identify verb, noun, adverb, adjectives: - Here is an example so we can identify which words are nouns, verb, adverb or adjective in opinion.

**Example:-** Kashmir is a nice place to visit again.

nice:- noun, adjective
place:- noun,
verb visit:-noun,
verb again: adverb



**Figure 5:- screen shot of verb, noun, adverb, adjectives** in opinion

Here is the screen shot of Kashmir that displays Part of Speech of comment.How many words are Verb, Noun, adverb and Adjectives .For example again is adverb.

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Identify whether opinion is positive, negative or neutral: - For this we have to compare the opinion with our data set.

If there is no word related to tourism comparing data set then it is neutral.
For example:-

- Delhi daredevils won the match. ---- neutral
- Earthquake in Delhi is normal thing. ---neutral

**Identify whether opinion is positive or negative:-**
**Positive words:** - below are some positive words examples. Love, aspirations, beauty, best, better, cool, cheers, dynamic, desire, eager, easy going, fun, favorite, far, good, great time, interesting, joy, like, miss, much, more, nice, paradise, prefer, etc.…

**Negative words**: - below are some negative words examples. boring, disgust ,fade, fade up, hate ,stupid, tough, think again, upset,wastage, bored, disgusting, , dull, frustrated ,irritate, not, no, untouched, hard, painful, pathetic, sad, untouched, terrible, unpleasant, unhappy, woeful, uff, hell, dislike, nothing, Hated, fear, horrible, unfortunately, bad, worst, tired, losing, bored, never, etc.……



**Figure 6 :- screen shot of opinion results about Kerala**

Here is the screen shot of the Kerala that display positive and negative comment as discussed earlier. So that here we used this rule.



**Figure 7 :- screen shot of opinion result about kulu manali**

## IV. RESULT COMPARISON

We have checked our tool for different comments for different places and we found below results. Another table gives us original result which should come in our tool.

| Total comments | 600 |
|---|---|
| positive | 61.90% |
| negative | 31.75% |
| neutral | 6.35% |

**Table 1:- Result produced by tool**

Here is the screen shot of kulu manali that display positive comment. we have used rule that If only negative words come with not then it is positive comment.

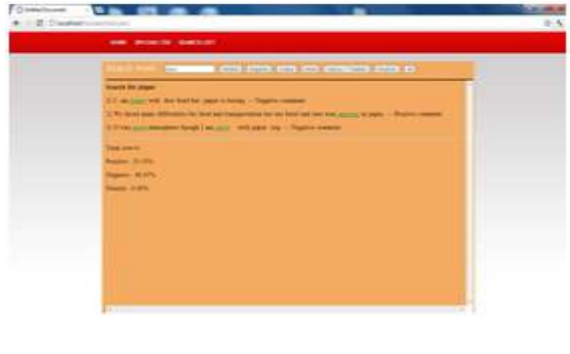


**Figure 8:- screen shot of opinion results about Jaipur**

Here is the screen shot of Jaipur that display positive and negative comment. We have used rule that using 'though' and 'but' word.

| Total comments | 600 |
|---|---|
| positive | 54.73% |
| negative | 34.34% |
| neutral | 10.93% |

**Table 2:- Desired result of the opinion**

## V. CONCLUSION AND FUTURE WORK

Online content is publishing millions day by day and it is very time consuming that no one can read it all. Everyone wants to see some analysis for checking the review, even corporate brands are also eager to know the review of the product. Sentiment analysis is a much sought-after technology that almost no one has really complete achieved it yet. Now days, companies are spending lots of money to find out the opinions about their product. On average, humans can process only six articles per hour against the machine's output is 10 per second. One part of answering that question is to ask how people seem to be feelings about the things they are talking about. In this situation opinion extraction and sentiment analysis will be useful. Keeping in mind, the literature survey discussed in the paper, our future work includes design and development of tool for Opining mining of tourism related text available on the web.

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