A Product Review Using Rule Base And Fuzzy Logic Approach

Rita R. Bhawalkar


Abstract: Nowadays, internet has become used for various working in life. And it is helpful for the great development in resources, communications, online resources, blogs, discussion, conference forums etc. And it is used for getting a new ideas for the identify and exact information get through the internet with help of data, texting subjects. Opinion mining is used for the get perfect data/information. And while shopping people opinion is more helpful for choosing any product. This will be get the product reviews and comments. And getting this comments and reviews determines the polarity of sentiments. And also determine the smiley. And it is product reviews and comments it compares the two and more different products, and choice the which product is best as comparison one of it. Sentiments and smiley's using it finding the source word. And sentiment word includes the positive review, negative review, objective. Rule base and fuzzy logic approach to giving the outputs for products. A facts expressed keywords from opinions. It is helping for the getting exact reviews, comments, opinions etc.

Keywords: my sql, java, data mining, windows xp etc.

I. INTRODUCTION

Internet is important of in every day or in daily life. Because it is get the many ideas, information, solutions for any difficulties, communications systems etc. therefore, internet has need in day to day life. Internet includes very different online resources, groups, formats, sites etc. And people cannot get the proper information's using same topics in different websites. Sometimes it is very difficult to arrange the information rather than to access its sequential manner. It take a large time for gain information properly. Organize text in a proper way to hard. Facts and opinion two types of data. Facts express the data transmission and opinion express the sentiments. It is need a new system because CanNot calculate the exact opinion. Opinions cannot be categorized in well-structured manner. To overcome the existing problem.

Sentiment analysis: Opinion mining means the data mining or sentiments analysis it is useful for the identification and checking the reviews, advice of persons, and communications. And also contents of the documents are positive, negative, neural etc. And accepts the smiley's of product reviews directly identify and main purpose is that to get best product while comparisons between two or more products.

Rule base: store and manipulate the knowledge are used in rule base system for interpret data rule based is used for the lexical analysis, natural language processing, artificial intelligence research etc.

Fuzzy logic approach: fuzzy logic is used for the solving the mathematical logic problems. It include the Boolean logic approach to computer based on degrees of truth. It also works the binary logic for the finding truth values to simply a special case. The works sentimental analysis and opinion mining from social media.

II. PURPOSE

The purpose of testing is to discover errors. It is used for check functional components, sub-assemblies. It is process of exercising software. There are various types of test addresses a specific testing. Unit testing, functional testing, system testing, performance testing are includes in testing.

Unit testing: It is design of test that internal program logic is functional properly. And get proper output. It is software units of applications. It is a structural testing, that relies on knowledge of its constructions.

Functional testing: It is provide the systematic demonstrations. It is specifies the business and technical requirements user manuals etc.

Functional testing include items:
Valid input: identified classes of valid input.
Invalid input: identified the classes of invalid input.
Functions: identified the functions be exercised.
Output: identified the classes of output.
Systems: interfacing system.
System testing: system testing ensures that the entire software system. It is shows the predictable results. It is based on processes of flows, integration points.
Performance testing: it is performance output produced within the time.

III. EASE OF USE

Sentiment analysis or opinion analyser: the main purpose of the to get the online reviews of the products. Determine the fast reviews for opinions whether the positive, negative or neutral. And also shows the expressions using smiley.

Example - we want to buy some products (electronics product, mobile, computer etc) form the electronics market. But we get confuse and arising a questions on our mind which product should buy?? Which product is better for used??Etc. Then we asking a friends, relatives. Refers the opinions from blogs, e commerce site, customers reports, discussion forum etc. And we get the different ideas or opinions. Sentiment analysis we get the emotions from text. Fast opinion identify which is better using reviews. And also get the positive, negative reviews a fuzzy set has a graphical description that expresses how the transition from one to another takes place.

Abstraction of the problems: Opinion mining and sentimental analysis it has multiple reviews. The abstraction provide a determining the exact value. It provide online opinion or ideas.
The purpose task are: The feature are evaluated by people.
Determine the features are positive, negative or neural.
Shows the exact reviews.
*fuzzy intensity finder: fuzzy intensity finder is finding the objectives adverb. Just like a good, bad, very good, very bad etc. there are few adverb very, really, extremely which is maybe used the positively or negatively.

Abstraction of the problem: fuzzy intensity finder is calculated the which is exactly better. And calculated the weight of exact opinion.
The purpose task are: the feature are determine the exact review.
And also shows the product weight using smiley. 1

<table>
<thead>
<tr>
<th>Good</th>
<th>0.625</th>
<th>Very good</th>
<th>0.7906</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bad</td>
<td>0.25</td>
<td>Very bad</td>
<td>0.0625</td>
</tr>
<tr>
<td>Awesome</td>
<td>0.875</td>
<td>Simply Awesome</td>
<td>0.9354</td>
</tr>
<tr>
<td>Pathetic</td>
<td>0.375</td>
<td>Highly Pathetic</td>
<td>0.1406</td>
</tr>
</tbody>
</table>

Rule based approach: rule based is divided into a numbers of sentence.
Certain rule organised the depending on those rule. it helps the stop words are remove automatically.
Abstraction of the problem: it is based approach the lexical analysis.
It gives the sufficient accurate analysis.
The purpose task are: the feature are detected stopping word.
*Comparison of product: the comparison express the relation of two or more sets. Comparisons of multiple product of same category on the basis of sentiment score.
Abstraction of the problem: identify the sentence from the text.
Gives the exact comparative solution.
*Data sets: it is a collection of related sets of data or information. It is managed as a whole entity. It is include customer review, additional review, sentiment analysis, comparison review etc.

IV. SYSTEM ARCHITECTURE
It is the basic sentiment analysis structure of system architecture. Sentiment analysis has different structures. Includes a word, sentence, and document level. Data collection and identification process is to measure the data from different resources. Data shows the input system. Pre-processing is used for removing unwanted wastage words from the customer opinion. Part of speech tagging of each word whether the noun, verb, adjective, adverb etc. It identifies the simple noun and verb group, and also identifies the simple feedback. Negation detection is used for implementing the sentiment analysis. Stop word removal is used for removing the digits, prepositions, articles, proper nouns etc. It gives the better extraction of opinion from tagged file. Rule-based approach defined the relation and result. A consequent represents the review is positive, negative. It is used to find which is the best product which is not and calculate the score sentiment.

Customer review contains the facts and review. And the sentence are divided into subjective and objective. It is based on the dictionary. Subjective is categorized as positive, negative, neutral opinions. A rule-based method is used for subjective and objective method.

SentiWordNet: It is lexical resources used for opinion mining. Positive, negative, objectivity are sentiment scores.

The diagram shows the graphical representation of the SentiWordNet. It represents the opinion of a particular word. SentiWordNet Example:
A. Sentiment Analysis at Different Levels

Interesting  Fabulous  Bad

The mobile is Great.

The movie was very boring

VI. MODULES

Modules includes:

- Creating a structure of database
- Insertion of product
- Display of product
- Display of specification and review of product
- Add reviews on product
- Calculating individual score of product
- Categorization of keywords of reviews on the basis of grammar
- Comparison of multiple product of same category on the basis of sentiment score
- Displaying the graph of comparison

A. Creating a Structure of Database
B. Insertion of Product

C. Display a product

D. Display a Specification and Review of Product
E. Add Reviews on Product

I have ordered this laptop which was having a very good features and configurations. But the supplier did not send me the OS recovery CD and Dell Driver CD along with the product packet. Which is very unsatisfactory for me. Without these CD it is useless. I enquired Flipkart to take care of these things while processing the order.

ey say that this can be expandable up to 8 gb but they dont even have RAM slot for that. it has only 1 slot and i want 8gb ram u need to throw away that 4 gb ram which means a los of 2000 rs. Dell them self confirmed me that this has 2 slot and when i purchased they were like we are sorry for misconception ....this is pure unpertolentism from dell and they are useless people sitting over der . DONT WASTE YOUR MONEY ON THIS LAPTOP

with in the 20 days of purchase it was dead touch pad was also not good. even after 1 month the money was not refunded to be. 

Guys - I am suggesting you from my heart. If you do not want to waste your money, then please do not buy any dell product. Granted you have to call Dell call center for expiring within five days only. Do better go to any intel brand. If you want to add value for your money. Thank you.

Very recently I have got this laptop from Flipkart the same DLL says it all. Its a good buy within this Price range. There are one or two minor problems or rather you can say hindrances which you might face while you use, such as the hard disc is not equally divided into 2 or 3 hard Disc drive and you can also have a little problems with the new updated windows 8.1 OS, but with time it will be fine tuning. I could strongly suggest it 4.5 STARS.

I bought the laptop from a dell store and I am using it for the last 15 days. I bought it in silver-black combination which is my favorite. At this price you can't find a better laptop. I didn't find any problems with battery, touch pad or key pad on USB slots which have been mentioned by some people.

Very nice laptop, but dell should provide driver cd and recovery disk. It would be helpful down the line. Very good laptop, slightly broad then inspiron 5353 at the edges overall completely satisfied.

The product is a steal at its pricing. I bought it at 10,000. There were a plenty of discounts and goodies along with it some days back. Anyways, the product is a steal at even its current 27K6. The features and the DELL guarantee it an awesome buy.

Sample. Great Product, good delivery commitment. I have bought many items from Flipkart last year one di never disappointed with their service , product , delivery unlike snapdeal , unibike. I hope you people be committed with your product & service delivery. Thanks. Appreciate your way !!

This product is worth the price remember this its ram can be upgraded to 16 GB I don't it and it is now super fast .... you guys may think that why do I have to buy a lap with 3 processor but its quality is super and you know its from DELL. Also the screen is big but its very light to use and the covers is a very stylish silver ...... walk my words guys its very light to use it is even lighter than many notebooks that are as the market now so why are you waiting under this product from Flipkart and upgrade it to 16GB.

F. Calculating the Individual Score on Product

G. Categorization of Keywords of Reviews on the Basis on Grammar
H. Comparison of Multiple Product of Same Category on the Bias of Sentiment Score

I. Display the Graph Comparison
Unlimited, unfiltered, unbiased
Real-time opinions of users.
Cost effective approach.
Actionable market intelligence based on direct user feedback.

VIII. CONCLUSION
It will give all numbers of reviews for products, and gives the product is good, bad, poor best etc. It is web-based application, and it is access for anywhere. System can be used in company for the better developing product. and flipkart.com take a review. n get review different online resource.

IX. ACKNOWLEDGEMENT
We have great pleasure extending my deep sense of gratitude to our project "A Product Review Using Rule Based And Fuzzy Logic Approach" Assistant professor, Department of computer science engineering M.Tech. vidharbha institute of technology Nagpur, for their guidance, inspirations throughout this research work, and I would like to thanks to Prof. Pravin Kuluurkar, head of department of computer science and engineering M.Tech. vidharbha institute of technology, Nagpur, for the support for my research work.

REFERENCES
[2] Feature Selection for Sentiment Analysis Based on Content and Syntax Models Adnan Duric and Fei Song School of Computer Science, University of Guelph, 50 Stone Road East, Guelph, Ontario, N1G 2W1, Canada