

MULTIFACTOR OPINION MINING AND INTENTION ANALYSIS FOR BUSINESS INTELLIGENCE**ISUKAPATLA RAVI TEJA*, M TILAK******PG SCHOLAR*, ASSISTANT PROFESSOR******E-MAIL ID: ISUKAPATLARAVITEJA2353@GMAIL.COM*,
TILAK_MP@YAHOO.COM******SKBR PG COLLEGE, AMALAPURAM, E.G.DIST, ANDHRA PRADESH – 533201****ABSTRACT:**

The manufacturers are very keen to look into business development and overcome defects of previous launch of the product in better way. The disadvantages to be found and then it should be modified accordingly in an effective way. In order to do that we need to find the vendors of the product and whose service is better and much better approach in marketing. Vendor's service also particularly noted while customer is giving the feedback to particular product. The main aim of the system is to find the business strategies that are improving the business and Launching the new version of the product with which user feel frustrated and lower rated items

INTRODUCTION:

Ever increasing use of Internet and online activities (like chatting, conferencing, surveillances, ticket booking, online transactions, e-commerce, social media communications, blogging and micro-blogging, clicks streams, etc.) leads us to extract, transform, load, and analyze very

huge amount of structured and unstructured data, at a fast pace, referred to as Big Data. Such data can be analyzed using a combination of Data Mining, Web Mining and Text Mining techniques in various real life applications. Huge amount of information related to customer opinions/reviews is quite cumbersome to analyze and needs extant approaches to get a generalized opinion summary. Numerous forums, blogs, social networks, e-commerce web sites, news reports and additional web resources serve as platforms to express opinions, which can be utilized for understanding the opinions of the general public and consumers on social events, political movements, company strategies, marketing campaigns, product preferences, and monitoring reputations [26]. To accomplish these tasks, research communities and academicians are working rigorously on sentiment analysis for last one and half decade. Sentiment analysis (SA) is a computational study of opinions, sentiments, emotions, and attitude expressed in texts towards an entity [138].

Sentiment analysis (also called opinion mining, review mining or appraisal extraction, attitude analysis) is the task of detecting, extracting and classifying opinions, sentiments and attitudes concerning different topics, as expressed in textual input [84]. SA helps in achieving various goals like observing public mood regarding political movement, market intelligence [90], the measurement of customer satisfaction [158], movie sales prediction [131] and many more. Sentiments, evaluations, and reviews are becoming very much evident due to growing interest in e-commerce, which is also a prominent source of expressing and analyzing opinions. Nowadays, customers on e-commerce site mostly rely on reviews posted by existing customers and, producers and service providers, in turn, analyze customers' opinions to improve the quality and standards of their products and services. For example opinions given on e-commerce sites like Amazon, IMDb, epinions.com etc can influence the customers' decision in buying products and subscribing services [18]. In developing countries, online and social media is taking the place of offline media swiftly, which encourages common people to involve in political discussions and enable them to put across unilateral thoughts on Global issues interactively. Online media provides the platform for

wide sharing of ideas and encouraging public for group discussions with open views. Online media provides better means to get quick response and feedback on different Global issues and entities in the form of textual posts, news, images, and videos. Thus, it can be utilized to analyze peoples' opinions for learning the behaviors of consumer, patterns market, and trends of society [206]. Twitter has 255 million monthly active users and it oversees 500 million tweets every day¹. Thus, it serves as a good resource to extract heterogeneous opinions published by people from diverse societies for different purposes like improvement of quality of products and services, prediction of consumers' demand and taste etc. Online media and social networking sites (SNS) are used to express and share public experiences in the form of product reviews, blogs, and discussion forums. Collectively, these media contain highly unstructured data combining text, images, animations and videos that are useful in making public aware of various issues

EXISTING SYSTEM:

The current scenario in business environment is to find the customer's satisfaction. It is very much important for promoting the product, by doing so improving the business. As part of this, sentiment analysis of customer review

process is immediate solution. The major fact is sentiment analysis of reviews in order to find the customer's satisfaction. The five star rating systems some time gets inaccurate so that the focus turns into sentiment review analysis system. The five star rating system is not connected as per the users real thought process of product opinion.

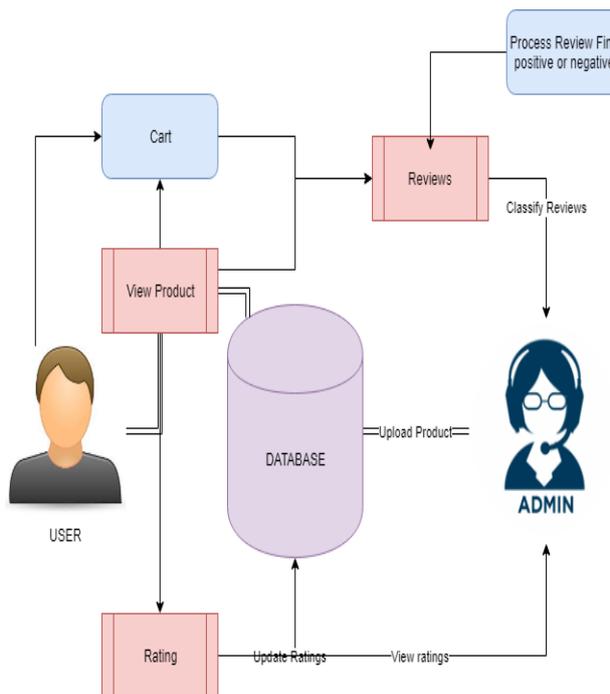
PROPOSED SYSTEM:

The main aim of the work is to customer satisfaction through vendors and identifies the best vendor to deal with. The most important task is to develop business and to release next version of the product which is needed to be better success than the previous one. To achieve this goal there are three phases shown and that are shown below. Reviews are collected from which users were updated and extract the vendors list from the dataset. Then segregate data by products, to do that we need to apply k-means clustering algorithm. Then segregated data can be applied analyzed in order to find the best vendor among the applied vendors. The data can be analyzed with the help of naïve Bayes classifier algorithm. It is using the trained dataset to define the polarity of a sentence. The multiple vendors can be

classified based on the sentiment of the product reviews. Knowledge based opinion mining is categorize the customers based on the knowledge of the customer. This can be achieved by gathering information about user upon their login. The details are already collected while they are registering to our system. Based on the customers we can diverge the category. Based on the profession of the consumers are separate the customers with the help of k-means clustering algorithm. After applying clustering and separated, then naïve Bayes algorithm is applied so that they can extract the polarity of the reviews on product will be resulted. By doing so manufacturers gets the main important factors about customers. This is the best way to find the category of people's mindset and it will helpful to make newer version according to conveniences of customers. This type of opinion analysis is more reliable to make expansion of business. This can be achieved with the help of k-means clustering algorithms which splits the customers location-wise. The locations are clusters and based on the clustering technique customers are classified and then applying the naïve Bayes classifier algorithm based on that it will be make the decision and suggest the manufacturers from the result. The results of the reviews are gives the clarification about the region

of interested people and disinterested customers and how to make product to reach the all sort of customers. With all of the above phases are using two major algorithms, the algorithms are used to classify and finds the sentiment of the word as input and polarized value as output. The two algorithms are k-means clustering and naïve Bayes classifier algorithm algorithms. This machine learning algorithm allows identifying the right strategies to market the product and make sure the product reach to consumer.

ARCHITECTURE:



MODULES:

There are four modules can be divided here for this project they are listed as below

- Product Initialization
- Consumer Purchase

- Rating and Review
- Graph Representation

From the above four modules, project is implemented. Bag of discriminative words are achieved

MODULE DESCRIPTION:

The modules are implemented as given in the following ways

• **PRODUCT INITIALIZATION**

In admin panel, admin is the only person to have access the uploads of product with its parameters required. The data can be uploaded from the admin panel only and admin have the view of the uploaded data. This module is so called initiation module. Based on this module only, project will evolves. The products list will be appear to consumer and then they can view the rating of product or give the rating to product.

• **CONSUMER PURCHASE**

Consumer can purchase the product from different vendors. One product has different n number of vendors. From different vendors consumer can buy many products. The cart option is provide to customer and customers are purchase simultaneously and they

can give the ratings also. The checkout can be done at the last that means once completed shopping.

- **RATING AND REVIEW**

The ratings are given as five star rating and it can count at the end to give customer a perfect solution to user. Reviews are written about the product which can be classified as positive and negative. Based on the words given by the user algorithm classifies the nature of the center that means positive or negative or neutral

- **GRAPH REPRESENTATION**

The data can be taken to represent in the graph format. The charts are plot for different survey on opinion of customer based on the product ratings and nature of the opinion of the product. The three type of analysis can be done those are multi-vendor for same product, location of customer and knowledge of the customer. The charts were plot in different type's pie, column and other types. The graphs and data in the dataset are shown in the picture in order to get the analyzed result of the proposed system

CONCLUSION

We initiated the study of opinion mining of the product that is shown in the project. The main aim of the project is to focus the positive reviews of consumer who have real opinion on particular product. The customer has different opinion on making three different ways namely vendor based mining, knowledge of user based mining and location based opinion mining. Further to this study, in future will have thought implement different opinion mining techniques to identify the real opinion of product by consumer.

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