SENTIMENT ANALYSIS OF SOCIAL MEDIA

Prof.P.S.Gawande[1], Nitin Shirole[2], Rohit Rajput[3], Madhuri Katarnavre[4], Vikas Sonawane[5]

[1] *Professort, Department of Information Technology, sandip polytechnic, Maharashtra, India*
[2] *Student, Department of Information Technology, sandip polytechnic, Maharashtra, India*
[3] *Student, Department of Information Technology, sandip polytechnic, Maharashtra, India*
[4] *Student, Department of Information Technology, sandip polytechnic, Maharashtra, india*
[5] *Student, Department of Information Technology, sandip polytechnic, Maharashtra, india*

ABSTRACT

Social media platforms are witnessing a significant growth in both size and purpose. One specific aspect of social media platforms is sentiment analysis, by which insights into the emotions and feelings of a person can be inferred from their posted text. Research related to sentiment analysis is acquiring substantial interest as it is a promising filed that can improve user experience and provide countless personalized services. Twitter is one of the most popular social media platforms, it has users from different regions with a variety of cultures and languages. It can thus provide valuable information for a diverse and large amount of data to be used to improve decision making. In this paper, the sentiment orientation of the textual features and emoji-based components is studied targeting "Tweets" and comments posted in Arabic on Twitter, during the 2018 world cup event. This study also measures the significance of analyzing texts including or excluding emojis. The data is obtained from thousands of extracted tweets, to find the results of sentiment analysis for texts and emojis separately. Results show that emojis support the sentiment orientation of the texts and that texts or emojis cannot separately provide reliable information as they complement each other to give the intended meaning.

Keyword : - *Complex networks, Sentimental analysis, Social media platform, tweets*

1. INTRODUCTION

Opinion mining has become an important research area for understanding people's opinions on a matter by analyzing a huge amount of data. Emotions play a very important role not only in your personal life but in business as well. Billions of internet users express their thoughts about various online services or products using social networking sites, forums, or popular reviews sites. The positive feedback of the people is valuable not only for companies to analyze their customers' satisfaction and the monitoring of competitors but is also very useful for consumers who want to research a service or a product prior to buying that product. The real world challenge for today and it's a problem that I see all the time that companies want to do we want to take tweets about a brand and classify them as positive or negative so there is a need to build a classifier that can look at more tweets about products and say if they're positive or negative.

This paper presents the results of several machine learning algorithms for classifying Facebook, Twitter, and Yelp reviews using opinion mining and natural language processing techniques. The large number of user-generated reviews and ratings for restaurants, businesses and service providers are classified as either positive or negative or neutral with respect to the star ratings and reviews.

2. LITRATURE REVIEW

Past work regarding opinion mining classification using machine learning techniques in determining if the overall sentiment of a review is positive or negative used IMDB movie reviews as data. The authors use a unigram model and Naïve Bayes, and SVM to perform the opinion mining and achieve 81% accuracy. their outcomes beat the strategy dependent on human labeled highlights .

Hu et al. perform the opinion mining of a document at a sentence level instead of the whole document and extract features on which opinions have been expressed, detecting opinion words by proposing a technique that uses WordNet lexical database. For each feature, the related sentence is included into negative or positive categories and computes a total count. The highlights are positioned by the recurrence of the appearance in the reviews. The authors provide a feature-based summary of reviews of online product .

3. PURPOSED ARCHITECTURE

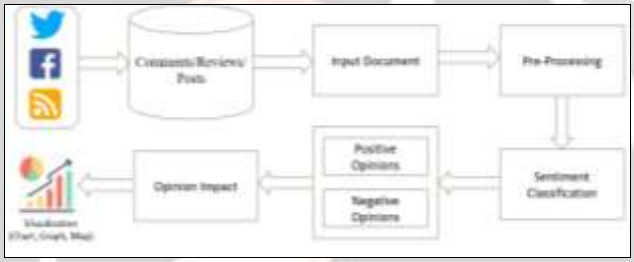

Figure 1 System Architecture

Sentiment analysis also called opinion Mining is a process of finding user's opinion towards a service or a product. Sentiment mining concludes whether text review is negative, positive about product, service etc. sentimental and summarization process involve three steps, first is Retrieval of Opinions, Opinion Classification and Opinion Summarization. Review is retrieved from review websites. Opinion text in forums, reviews, comments etc. contains subjective information about topic, product, or service. Reviews classified as positive or negative or neutral review. The final summary is generated based on features opinion sentences by considering frequent features about that product or service.

4. APPLICATION OF SENTIMENT ANALYSIS

Sentiment Analysis has many applications in various Fields.

1.Applications that use Reviewsfrom Websites:
Today Internet has a large collection of reviews and feedbacks on almost everything. This includes product reviews, feedbacks on political issues, comments about services, etc. Thus there is a need for a sentiment analysis system that can extract sentiments about a particular product or services. It will help us to automate in provision of feedback or rating for the given product, item, etc. This would serve the needs of both the users and the vendors.

2.Applications as a Sub-component Technology:
A sentiment predictor system can be helpful in recommender systems as well. The recommender system will not recommend items that receive a lot of negative feedback or fewer ratings. In online communication, we come across abusive language and other negative elements. These can be detected simply by identifying a highly negative sentiment and correspondingly taking action against it.

3. Applications in Business Intelligence:
It has been observed that people nowadays tend to look upon reviews of products which are available online before they buy them. And for many businesses, the online opinion decides the success or failure of their product. Thus,

Sentiment Analysis plays an important role in businesses. Businesses also wish to extract sentiment from the online reviews in order to improve their products and in turn their reputation and help in customer satisfaction.

4. Applications across Domains:
Recent researches in sociology and other fields like medical, sports have also been benefitted by Sentiment Analysis that show trends in human emotions especially on social media.

5. Applications In Smart Homes Smart homes :
are supposed to be the technology of the future. In future entire homes would be networked and people would be able to control any part of the home using a tablet device. Recently there has been lot of research going on Internet of Things(IoT). Sentiment Analysis would also find its way in IoT. Like for example, based on the current sentiment or emotion of the user, the home could alter its ambiance to create a soothing and peaceful environment. Sentiment Analysis can also be used in trend prediction. By tracking public views, important data regarding sales trends and customer satisfaction can be extracted.

4. CONCLUSIONS

It's the process of analyzing online pieces of writing to determine the emotional tone they carry. In simple words, sentiment analysis is used to find the author's attitude towards something. Sentiment analysis tools categorize pieces of writing as positive, neutral, or negative. Thus, Opinion Mining and Sentiment analysis has wide area of applications and it also facing many research challenges. Since the fast growth of internet and internet related applications, the Opinion Mining and Sentiment Analysis become a most interesting research area among natural language processing community. A more innovative and effective techniques required to be invented which should overcome the current challenges faced by Opinion Mining and Sentiment Analysis.

5. FUTURE SCOPE

The approach described in this thesis is therefore only reliably usable within the constraints of the corpus we have collected. In future work, we propose an improved system for sentiment prediction based on the lessons learned during the work on this thesis. Due to time constraint, the research has been restricted to a sample, but in future, people could use Twitter sentiment analysis in real time to predict the price movements of any stock continuously, which will also improve the accuracy of prediction. Even researchers can identify new ways of classifying the textual data into various moods such as happiness, alertness, certainty, and calmness. In this research, Twitter is the only social media taken into account, but various platforms such as, Stock Twits, Yahoo Finance, Facebook, blogs, discussion forums can also be analyzed. The research work presented in this thesis has identified new directions for future research. This experimental work is an improvement on the accuracy prediction using three different algorithms. In this work, the five different numerical datasets are used from Learning Repository. Further, the research work may be extended and analyzed with categorical datasets. This can be extended by evaluation criterion measures for finding the relevant features and for improving the accuracy of prediction. In this section, the limitations of the research are listed: There are many words whose polarity changes from domain to domain. Some word may be positive in one domain and the same may be negative in another domain. This is to differentiate between opinionated and non-opinionated text. This is used to enhance the performance of the system by including a subjectivity detection module to filter out objective facts. Although there exists a number of techniques for finding relevant predictions, the following techniques namely ALM, ANN are considered in the research for prediction. The experimentation of the proposed algorithms is done only by utilizing the numerical datasets.
If we perform on real time then we get the exact or correct output regarding that data.

6. ACKNOWLEDGEMENT

A moment of pause, to express a deep gratitude to several individuals, without whom this project could not have been completed. We feel immense pleasure to express deep sense of gratitude and indebtedness to our guide for constant encouragement and noble guidance. We express our sincere thanks to,Head of Department, Information Technology Engineering, and the other staff members of the department for their kind cooperation. We express our sincere thanks. Last but not the least we are thankful to our friends and our parents whose best wishes are always with us.

7. REFERENCES

[1].Product Quality Assessment using Opinion Mining in Persian Online Shopping Fatemeh HosseinzadehBendarkheili;Rezvan MohammadiBaghmolaei;Ali Ahmadi 2019 27th Iranian Conference on Electrical Engineering (ICEE) Year: 2019 | Conference Paper | Publisher: IEEE

[2]. News Comments Modeling for Opinion Mining: The Case of Senegalese Online Press Lamine Faty;Marie Ndiaye;Edouard Ngor Sarr;Ousmane Sall;Sény Ndiaye Mbaye;Tony Tona Landu;Babiga Birregah;Mamadou Bousso 2020 International Conference on Advances in Computing and Communication Engineering (ICACCE) Year: 2020 | Conference Paper | Publisher: IEEE

[3]. Opinion Mining Using Live Twitter Data Andleeb Aslam;Usman Qamar;Reda Ayesha Khan;Pakizah Saqib;Aleena Ahmad;Aiman Qadeer 2019 IEEE International Conference on Computational Science and Engineering (CSE) and IEEE International Conference on Embedded and Ubiquitous Computing (EUC) Year: 2019 | Conference Paper | Publisher: IEEE

[4]. The Essential of Sentiment Analysis and Opinion Mining in Social Media : Introduction and Survey of the Recent Approaches and Techniques Hoong-Cheng Soong;Norazira Binti A Jalil;Ramesh Kumar Ayyasamy;Rehan Akbar 2019 IEEE 9th Symposium on Computer Applications & Industrial Electronics (ISCAIE) Year: 2019 | Conference Paper | Publisher: IEEE

[5]. Public Opinion Detection in an Online Lending Forum: Sentiment Analysis and Data Visualization Ge Zhan;Ming Wang;Meiyi Zhan 2020 IEEE 5th International Conference on Cloud Computing and Big Data Analytics (ICCCBDA) Year: 2020 | Conference Paper | Publisher: IEEE

[6]. Survey on Opinion Leader in Social Network using Data Mining Rahul Katarya;Diksha Gautam 2019 5th International Conference on Advanced Computing & Communication Systems (ICACCS) Year: 2019 | Conference Paper | Publisher: IEEE

[7]. Mining User Opinion Influences on Twitter Social Network: Find that Friend who Leads your Opinion Using Bayesian Method and a New Emotional PageRank Algorithm Armielle Noulapeu Ngaffo;Walid El Ayeb;Zied Choukair 2019 15th International Wireless Communications & Mobile Computing Conference (IWCMC) Year: 2019 | Conference Paper | Publisher: IEEE

[8]. Sindhu C1, Dr. S. ChandraKala, "A Survey on opinion mining and sentiment polarity classification". International Journal of Emerging Technology and Advanced Engineering., Volume 3, Special Issue 1, January 2013).

[9]. K. Dave, S. Lawrence, and D. M. Pennock, "Mining the peanut gallery: Opinion extraction and semantic classification of product reviews," in Proceedings of the 12th international conference on World Wide Web, 2003, pp. 519–528.

[10] Richa Sharma1, Shweta Nigam2 and RekhaJain,"Supervised Opinion Mining Techniques: A Survey". International Journal of Information and Computation Technology. ISSN 0974-2239 Volume 3, Number 8 (2013), pp. 737-742.