



## SENTIMENT ANALYSIS OF FEEDBACK

R. Velmurugan<sup>1</sup>, N. Rajalakshmi<sup>2</sup>, S. Sona<sup>3</sup>

<sup>1</sup> Assistant Professor

Department of Aeronautical Engineering,

Sri Ramakrishna Engineering College, Coimbatore, Tamil Nadu, India.

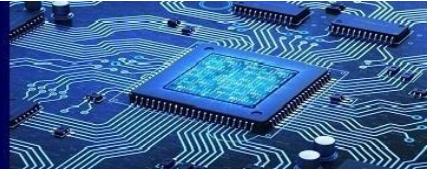
[velmurugan.r@srec.ac.in](mailto:velmurugan.r@srec.ac.in), [rajalakshmi.1708024@srec.ac.in](mailto:rajalakshmi.1708024@srec.ac.in), [sona.1708030@srec.ac.in](mailto:sona.1708030@srec.ac.in)

**Abstract**— As a result of immense innovations, the measure of information is expanding day by day. This information is utilized by web clients who likewise give their input. They describe the product in detail and calculate the sentiment of the product. It is essential to explore and analyze their reviews for a better decision making. For this, we use sentiment analysis process. Sentiment classification is a special task of text classification whose objective is to classify a text according to the sentimental polarities of opinions it contains e.g., favorable or unfavorable, positive or negative. A Senti-Universe Method, which relatively automatic “machine learning” method, which calculates the sentiment results on the time of feedback posting time itself. In other words, contrasted with the intricacy of the investigation, generally little information is needed from the expert. This Senti-Universe Method provides clear feedback analysis for customers and vendors. Sentiment analysis tends to these issues with new techniques for characterization. Its goal can be to perform a simple binary classification (positive or negative), or to perform a multi-class classification. Reviews contain people opinions on a variety of subjects thus opinion mining must be adapted to the extract subject specific reviews. Sentiment analysis can be performed on a global level topic or on a more specific topic.

**Key words:** Sentiment analysis, Machine learning, Sentiment classification, Web data, Text mining

### I. INTRODUCTION

Sentiment analysis is also called as “opinion mining” or “emotion Artificial Intelligence” and to the utilization of natural language processing (NLP), text mining, computational linguistics, and bio measurements to methodically perceive, remove, assess, and analyze passionate states and abstract data. Opinion investigation is for the most part worried about the voice in customer materials For instance, studies and audits on the Web and electronic interpersonal organizations. When in doubt, assessment examination endeavors to decide the manner of a speaker, writer, or different subjects as far as topic through extraordinary enthusiastic or energetic reactions to a document, correspondence, or event. The manner may be a judgment or evaluation, brimming with feeling (at the end of the day, the energetic state of the maker or speaker) or an assumption for excited reactions (all in all, the effect planned by the maker or purchaser). Immense quantities of customer reviews or suggestions on all themes are accessible on the Web nowadays and reviews may contain overviews on things, for example, on customers or deficiency discoveries of movies, etc. Studies are growing quickly, on the premise that people like to give their perspectives on the Web. Enormous amounts of overviews are open for singular things which make it hazardous for customers as they should examine every one to settle on a decision. Therefore, mining this data, recognizing customer evaluations and arranging them is a fundamental endeavor. Assessment mining is an assignment that exploits NLP and data extraction (IE) ways to deal with break down a broad number of chronicles to assemble the notions of remarks presented by various creators . This interaction joins different systems, including computational derivation and data recovery (IR) . The



fundamental thought of conclusion examination is to recognize the extremity of text records or short sentences and characterize them on this reason. Assessment extremity is classified as "positive", "negative" or "unbiased" (nonpartisan). It is critical to feature the way that assessment mining can be performed on three levels as follows:

- Document-level sentiment classification: At this level, a document can be grouped completely as "positive", "negative", or "impartial"
- Sentence-level sentiment classification: At this level, each sentence is classified as "positive", "negative" or unbiased.
- Aspect and feature level sentiment classification: At this level, sentences/reports can be arranged as "positive", "negative" or "non-sectarian" considering certain parts of sentences/files and usually known as known as "perspective-level assessment grouping".

## **II. METHODOLOGY**

### **A. Technology to be used**

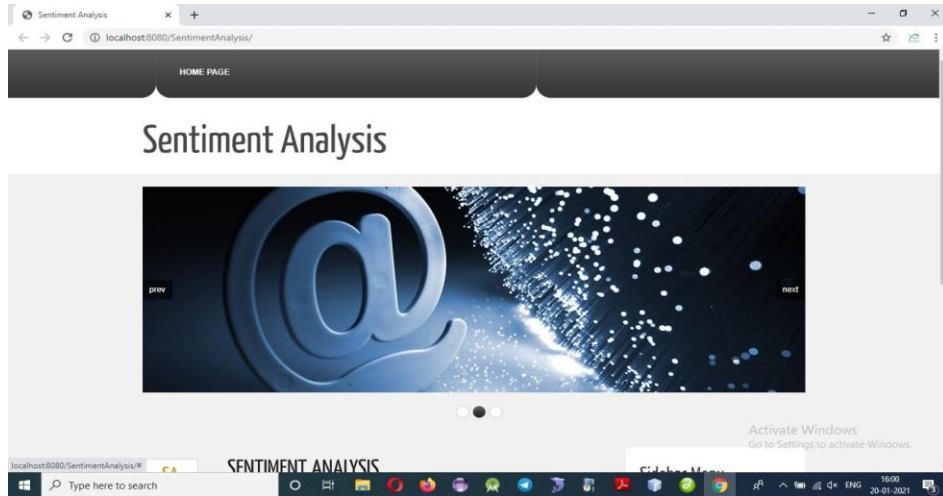
The different technologies that we have used for the solution are listed below.

- **Java** (For processing the customers feedback and result as analysis results)
- **JSP** (For Server-Side Processing, getting input from customers, Storing It &View Sentiment Results)
- **HTML & CSS** (For Web Application Structure & Design)
- **Apache Web Server** (For Serving Web Application)
- **MySQL Server** (Database for customer information and feedback information)
- **SqlYog** (GUI for MySQL)

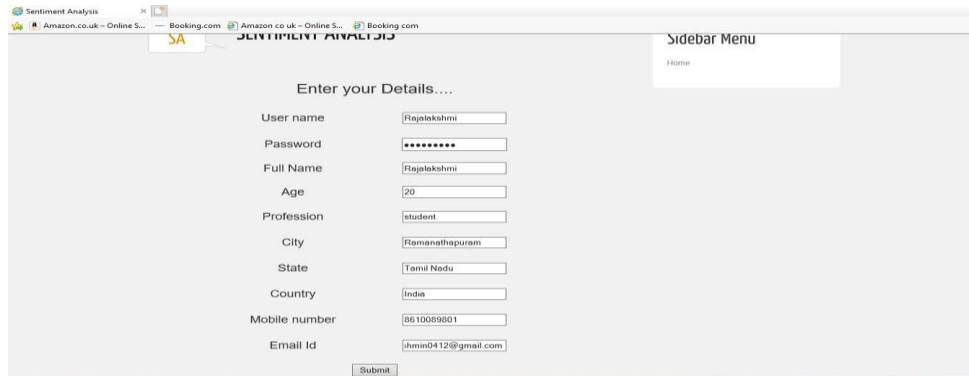
### **B. Description of solution**

Senti-Universe application is generated as same as social network for posting only the text contents. For UserInterface Design, web application is used, which have the registration and login for the user who entering into the social network. When a user first uses the Senti-Universe system, s (he) is required to complete his/her social profile such as contact, professional background and so on. A registration server is responsible for user registration. Every client has an interest ID, which addresses his/her advantage. When the user wants to post a content in Senti-Universe system, they must login to the system. User post their own information or status in our designed social network. The system continuously monitors a user post and analyses the sentiment.

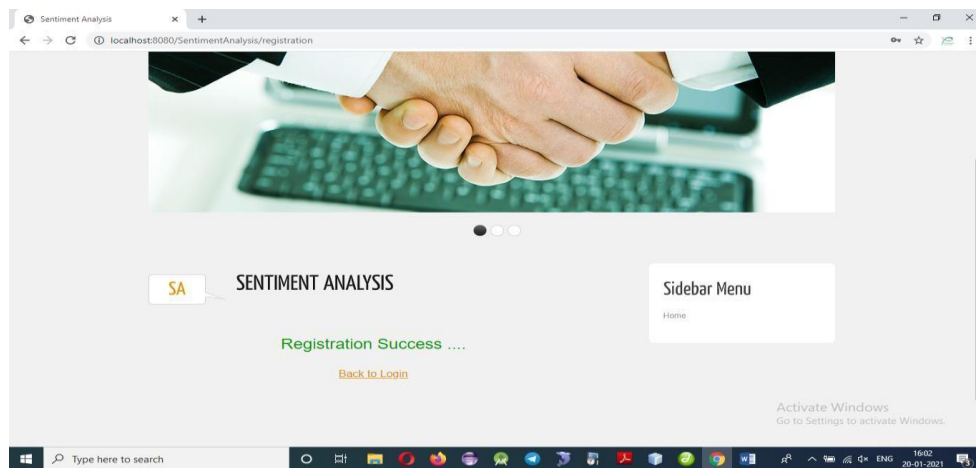
HOME PAGE

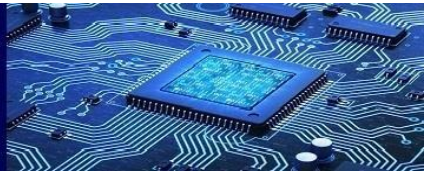


REGISTRATION PAGE

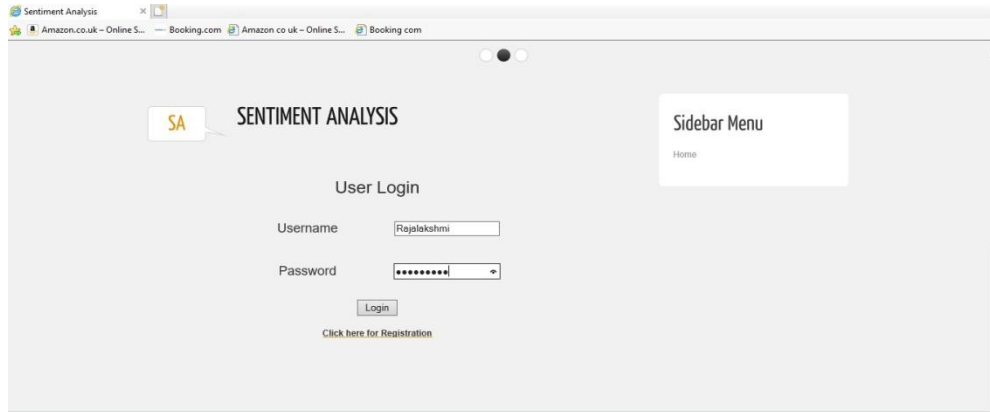


REGISTRATION SUCCESS PAGE

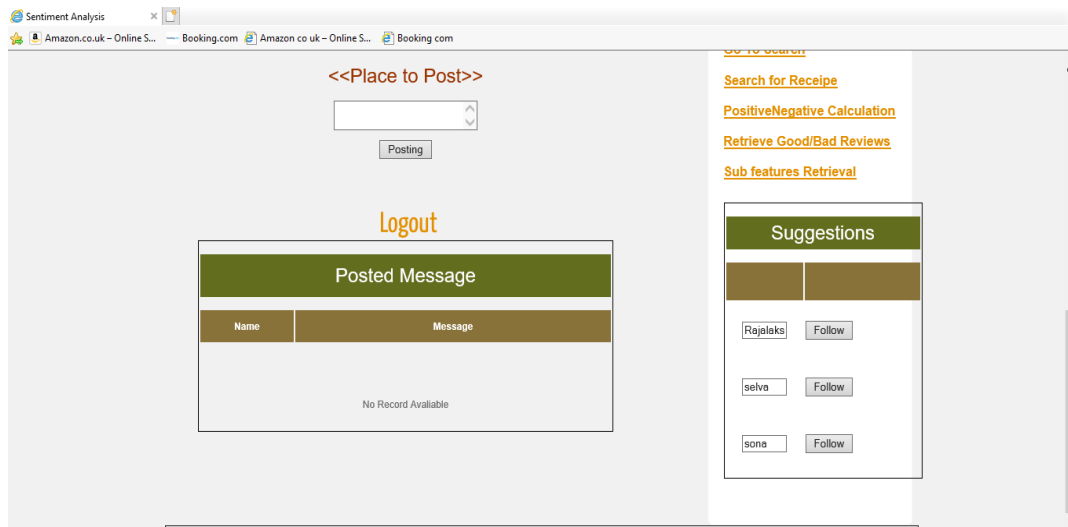




## LOGIN PAGE

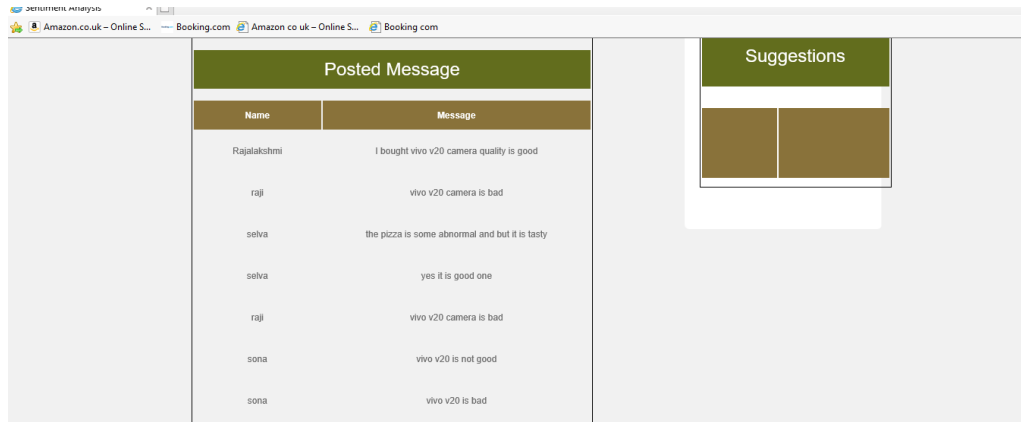
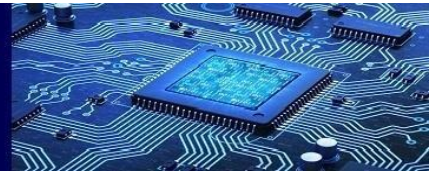


## USER PAGE



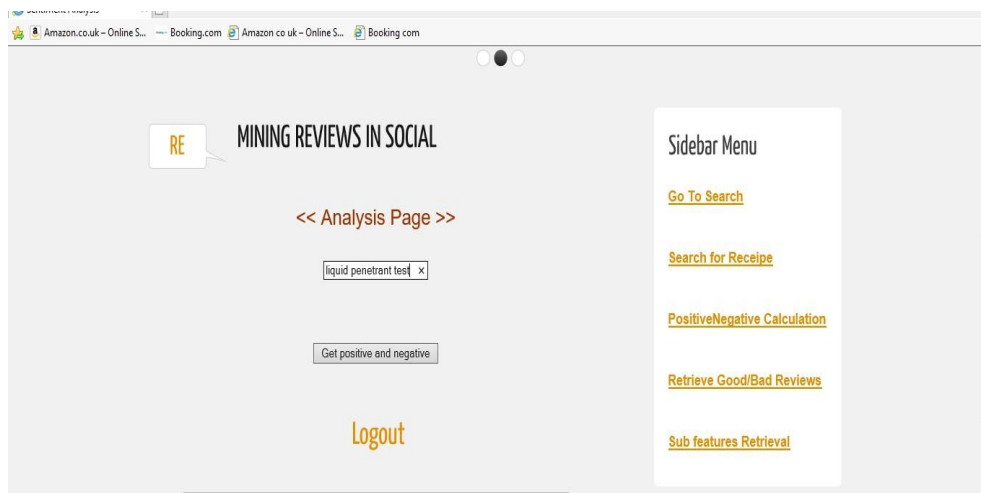
### Follow Friends

Friend suggestions is given at the right side menu, Now I am going to click follow the username “sona, selva”, If you register more users details, it will show more friend suggestions. After I give follow, the below screenshot is displayed. If A user follow B user, then B user posts can be viewed by A user.



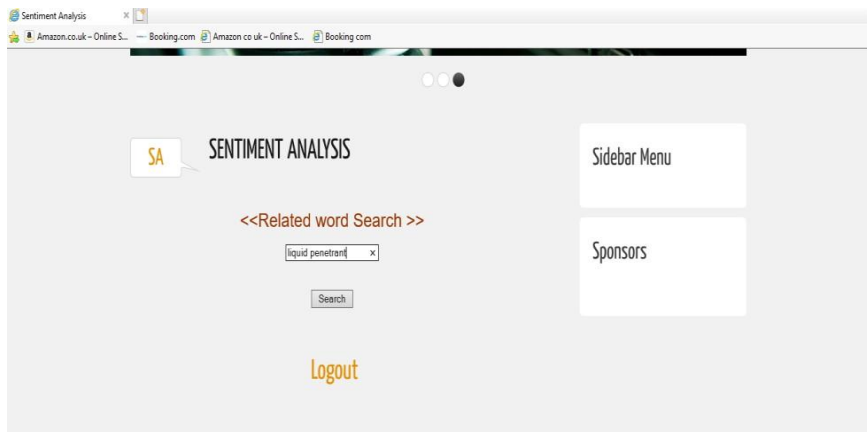
### POSTING COMMENT PAGE

Here you can give the post like what we give in social network, that is normal message, birthday wishes, congratulation message, feedback about buyed products, about elections, etc.



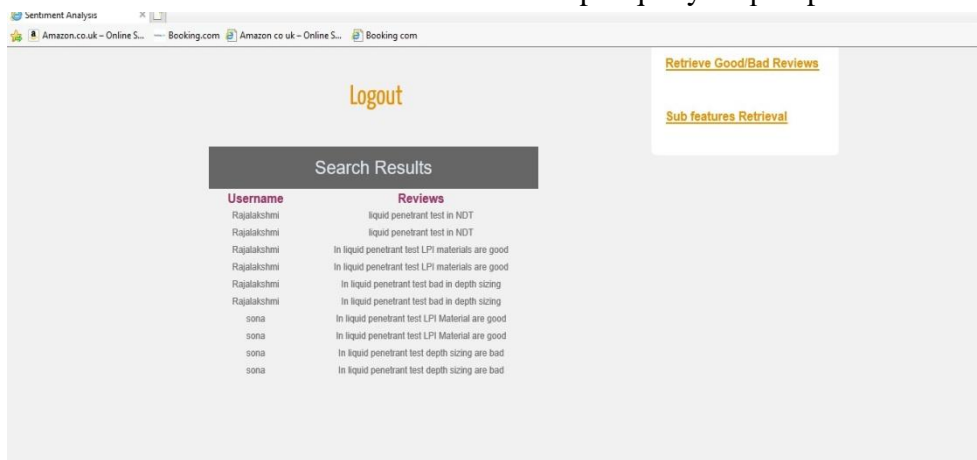
### TO SEARCH

Here the customer or vendor, anyone can give the product name or party name or any in this search box and get results for their query.



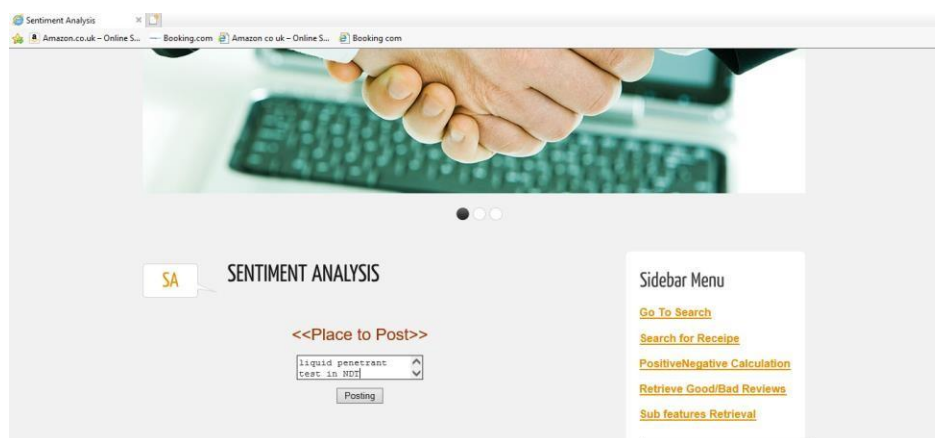
### SEARCH RESULT

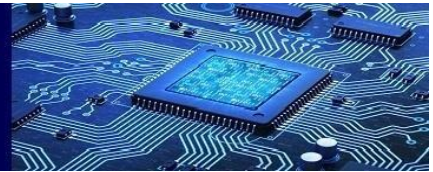
It displays the reviews what are available related the input query “liquid penetrant test in NDT”



### POSTIVE AND NEGATIVE CALCULATION

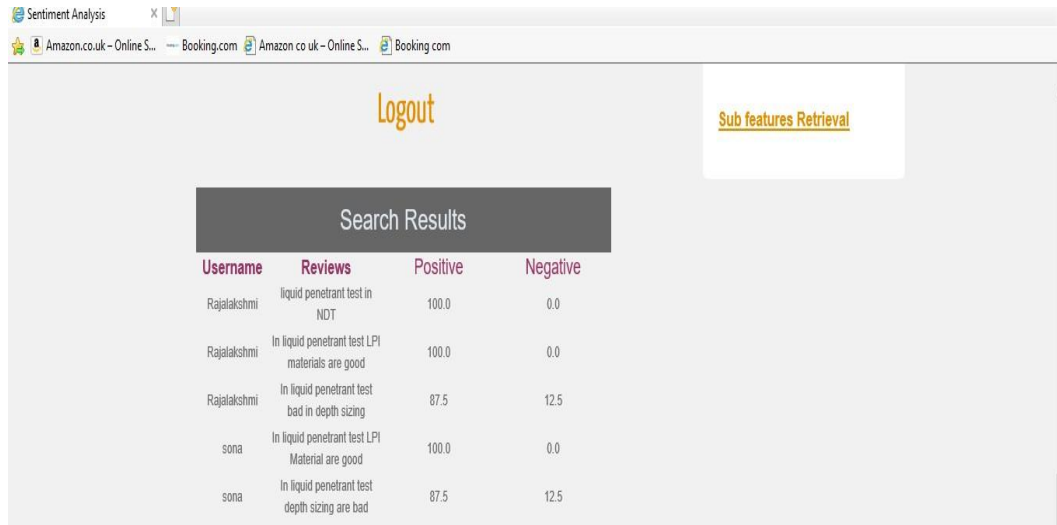
Here the customer or vendor, anyone can give the product name or party name or any in this search box and get results for their query.





### POSITIVE AND NEGATIVE RESULT

It displays the negative and positive percentage what are available related the input query liquid penetrant test in NDT”

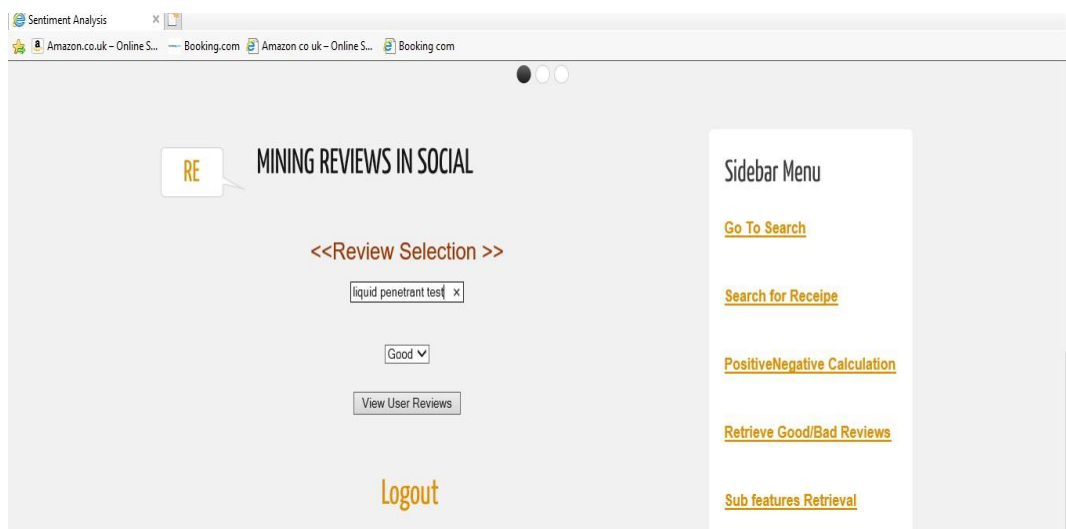


The screenshot shows a web browser window with the title 'Sentiment Analysis'. The page has a 'Logout' button at the top center and a 'Sub features Retrieval' link on the right. The main content is a table titled 'Search Results' with the following data:

Username	Reviews	Positive	Negative
Rajalakshmi	liquid penetrant test in NDT	100.0	0.0
Rajalakshmi	In liquid penetrant test LPI materials are good	100.0	0.0
Rajalakshmi	In liquid penetrant test bad in depth sizing	87.5	12.5
sona	In liquid penetrant test LPI Material are good	100.0	0.0
sona	In liquid penetrant test depth sizing are bad	87.5	12.5

### GOOD AND BAD CALCULATION

Here the customer or vendor, anyone can give the product name or any in this search box and get results for their query. And can choose good/bad, using this the system will retrieve good and bad reviews for given product

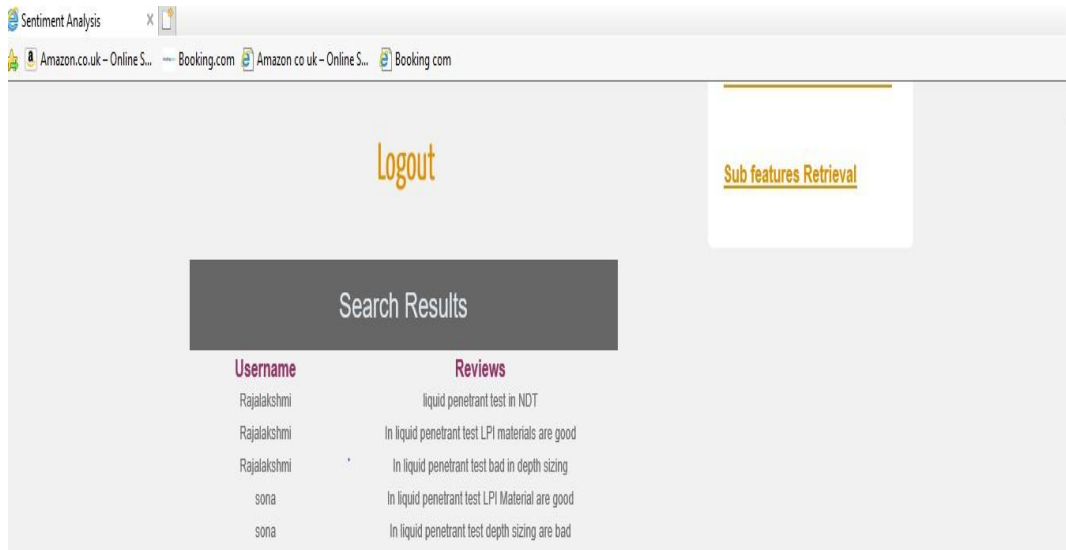


The screenshot shows a web browser window with the title 'Sentiment Analysis'. The page has a 'Logout' button at the bottom center. The main content is a form titled 'MINING REVIEWS IN SOCIAL' with a 'RE' icon. The form includes a search box containing 'liquid penetrant test', a dropdown menu set to 'Good', and a 'View User Reviews' button. The form is flanked by a 'Sidebar Menu' with the following links: 'Go To Search', 'Search for Receipe', 'PositiveNegative Calculation', 'Retrieve Good/Bad Reviews', and 'Sub features Retrieval'.



## GOOD AND BAD RESULT

It displays the good and bad reviews what are available related the input query “liquid penetrant test in NDT”.



Username	Reviews
Rajalakshmi	liquid penetrant test in NDT
Rajalakshmi	In liquid penetrant test LPI materials are good
Rajalakshmi	In liquid penetrant test bad in depth sizing
sona	In liquid penetrant test LPI Material are good
sona	In liquid penetrant test depth sizing are bad

### III. SCOPE OF AUTOMATION

This application is well valuable for the clients and merchants, the sellers can remember the client necessities for their next model. Additionally they can address or remanufacture their item with the estimation investigation. With the type development of online media and internet business sites like flipkart.com, amazon.com and so on Individuals can ready to share their encounters about different items through audits, remarks or evaluations. Item notoriety depends on its combined assessment of the online clients. Assumption examination or computational investigation of assessment has pulled in a lot of consideration because of different possible uses of estimation examination in online business space, online conversation discussions and audit destinations. Retail organizations, for example, Amazon and Bol have various surveys of the items they sell, which give an abundance of data, and destinations like Yelp offer itemized customer surveys of nearby restaurant, hotels, and different organizations.

### IV. CONCLUSION

In this paper it is seen that assumption examination/opinion mining assumes indispensable part to settle on choice about item/administrations. Opinion mining not just includes ideas of text mining yet in addition the ideas of data recovery. Significant difficulties in assessment mining incorporates include weighting which assumes a urgent part for great characterization. Likewise, it is seen that delicate processing procedures have not been broadly utilized in the writing. Without opinion, life resembles a vacant vessel.





#### REFERENCES

- [1] R. Ortega, A. Fonseca, and A. Montoyo, "SSA-UO: unsupervised Twitter sentiment analysis," in Second joint conference on lexical and computational semantics (\* SEM), 2013, vol. 2, pp. 501-507.
- [2] G. Paltoglou and M. Thelwall, "Twitter, MySpace, Digg: Unsupervised sentiment analysis in social media," ACM Transactions on Intelligent Systems and Technology (TIST), vol. 3, no. 4, p. 66, 2012.
- [3] F. M. Kundi, A. Khan, S. Ahmad, and M. Z. Asghar, "Lexicon-based sentiment analysis in the social web," Journal of Basic and Applied Scientific Research, vol. 4, no. 6, pp. 238-48, 2014.
- [4] M. Z. Asghar, A. Khan, S. Ahmad, M. Qasim, and I. A. Khan, "Lexicon-enhanced sentiment analysis framework using rule-based classification scheme," PloS one, vol. 12, no. 2, p. e0171649, 2017.
- [5] P. Balage Filho and T. Pardo, "NILC\_USP: A hybrid system for sentiment analysis in twitter messages," in Second Joint Conference on Lexical and Computational Semantics (\* SEM), Volume 2: Proceedings of the Seventh International Workshop on Semantic Evaluation (SemEval 2013), 2013, vol. 2, pp. 568-572.
- [6] N. F. F. da Silva, E. R. Hruschka, and E. R. Hruschka, "Tweet sentiment analysis with classifier ensembles," Decision Support Systems, vol. 66, pp. 170-179, 2014/10/01/ 2014.
- [7] M. Hagen, M. Potthast, M. Büchner, and B. Stein, "Webis: An ensemble for twitter sentiment detection," in Proceedings of the 9th international workshop on semantic evaluation (SemEval 2015), 2015, pp. 582-589.
- [8] E. Martínez-Cámara, Y. Gutiérrez-Vázquez, J. Fernández, A. Montejo-Ráez, and R. Muñoz-Guillena, "Ensemble classifier for Twitter Sentiment Analysis," 2015.
- [9] T. Chalothom and J. Ellman, "Simple Approaches of Sentiment Analysis via Ensemble Learning," Berlin, Heidelberg, 2015: Springer Berlin Heidelberg, pp. 631-639.
- [10] Miller GA, Beckwith R, Fellbaum C, Gross D and Miller KJ. Introduction to Wordnet: An on-line lexical database. International journal of lexicography 1990;3(4):235-244.
- [11] Nagy A, Valley C M S and Stamberger J. Crowd sentiment detection during disasters and crises. In Proceedings of the 9th International ISCRAM Conference 2012;1-9.
- [12] Nielsen FA. A new ANEW: Evaluation of a word list for sentiment analysis in microblogs, arXiv preprint arXiv 2011;103(2903).
- [13] Olson DL and Delen D. Performance Evaluation for Predictive Modeling. In Advanced data mining techniques. Springer-Verlag Berlin Heidelberg 2008;137-139.
- [14] Farra, N., Challita, E., Assi, R. A., & Hajj, A. (2010). Sentence-level and document-level sentiment mining for arabic texts. Data Mining Workshops (ICDMW) (pp. 1114–1119). IEEE.
- [15] Bhayani, R., & Huang, L. (2009). Twitter sentiment classification using distant supervision.
- [16] F. Akba, A. Uçan, E. A. Sezer, and H. Sever, "Assessment of feature selection metrics for sentiment analyses: Turkish movie reviews," in 8th European Conference on Data Mining, 2014, vol. 191, pp. 180-184
- [17] Ko Youngjoong, Seo Jungyun. Automatic text categorization by unsupervised learning. In: Proceedings of COLING-00, the 18th international conference on computational linguistics; 2000.
- [18] Ganchev K, Graca J, Blitzer J, Taskar B. Multi-view learning over structured and non-identical outputs. In: Proceedings of the 24th conference on Uncertainty in Artificial Intelligence (UAI'08); 2008. p. 204–11.
- [19] Mudinas Andrius, Zhang Dell, Levene Mark. Combining lexicon and learning based approaches for concept-level sentiment analysis. Presented at the WISDOM'12, Beijing, China; 2012.
- [20] Aggarwal Charu C, Zhai Cheng Xiang. Mining Text Data. Springer New York Dordrecht Heidelberg London: © Springer Science+Business Media, LLC'12; 2012ud/avs-cvv2