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SENTIMENTAL ANALYSIS BASED ON PRODUCT RATING

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Abstract: : Sentiment is an attitude, thought, or judgment prompted by feeling. Sentiment analysis, which is also known as opinion mining, studies people's sentiments towards certain entities. From a user's perspective, people are able to post their own content through various social media, such as forums, micro-blogs, or online social networking sites. From a researcher's perspective, many social media sites release their application programming interfaces (APIs), prompting data collection and analysis by researchers and developers. However, those types of online data have several flaws that potentially hinder the process of sentiment analysis. The first flaw is that since people can freely post their own content, the quality of their opinions cannot be guaranteed. The second flaw is that ground truth of such online data is not always available. A ground truth is more like a tag of a certain opinion, indicating whether the opinion is positive, negative, or neutral.

Index Terms - Sentiment, feelings, flaws, application programming interfaces.

I. INTRODUCTION

Sentimental Analysis is a machine learning tool that analyses texts for polarity, from positive to negative. By training machine learning tools with examples of emotions in text, machines automatically learn how to detect sentiment without human input.

To put it simply, machine learning allows computers to learn new tasks without being expressly programmed to perform them. Sentiment analysis models can be trained to read beyond mere definitions, to understand things like, context, sarcasm, and misapplied words. For example:

"Super user-friendly interface. Yeah right. An engineering degree would be helpful."

II. AIMS AND OBJECTIVES

Sentiment analysis aim is to detect emotions, like happiness, frustration, anger, sadness, and so on. Many emotion detection systems uses machine learning algorithms. Sentiment analysis gives you a clear overview for customer satisfaction. This mean you can keep an eye on the quality of service by analyzing rating. People can easily decide whether the product posted is good or bad by using this application.

III. LITERATURE SURVEY

Sr. No	Paper Name	Description
1	Sentiment Analysis: Machine Learning Approach	Sentiment analysis or opinion mining is nothing but analysis of opinions or emotions from text data. Sentiment analysis identifies opinion or sentiment of each person with respect to specific event. For sentiment analysis we need to pass document or text which can be analyzed and generates system or model which represent summarized form of opinion of given document
2	Application of Sentiment Analysis Using Machine Learning Techniques	OVERVIEW OF SENTIMENTAL ANALYSIS : The method of collecting primary information from unstructured and unoriented textual materials from various social media and website resources, such as chatting on social networks like Twitter, WhatsApp, Facebook, live blogs, or comments can be described as sentimental analysis NEED OF SENTIMENTAL ANALYSIS We are living in a "data age" today. As the number of users on social media sites like Twitter grows rapidly, numerous opportunities and new scope have been opened up to businesses trying to keep track of consumer feedback and product opinions.

3	<p>Sentiment Analysis of Product-Based Reviews Using Machine Learning Approaches</p>	<p>The most fundamental problem in sentiment analysis is the sentiment polarity categorization, by considering a dataset containing over 5.1 million product reviews from Amazon.com with the products belonging to four categories. A max-entropy POS tagger is used in order to classify the words of the sentence, an additional python program to speed up the process. The negation words like no, not, and more are included in the adverbs whereas Negation of Adjective and Negation of Verb are specially used to identify the phrases. The following are the various classification models which are selected for categorization: Naïve Bayesian, Random Forest, Logistic Regression and Support Vector Machine.</p>
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IV. SYSTEM DESIGN

4.1 FLOWCHART

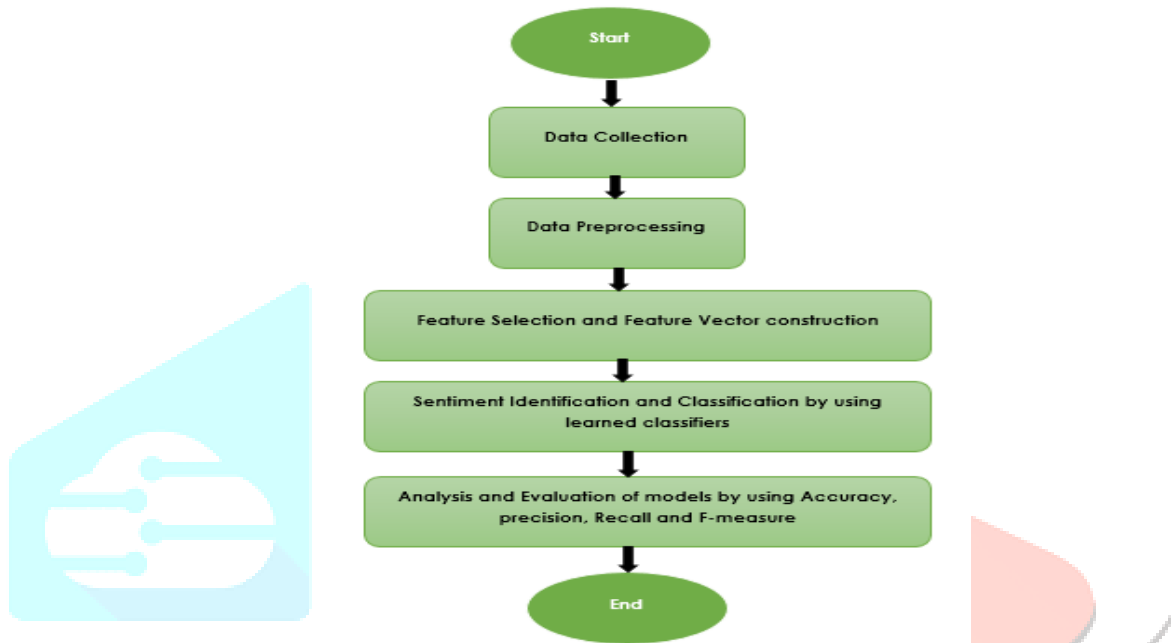


Fig.1.Flow chart diagram

4.2 IMPLEMENTATION

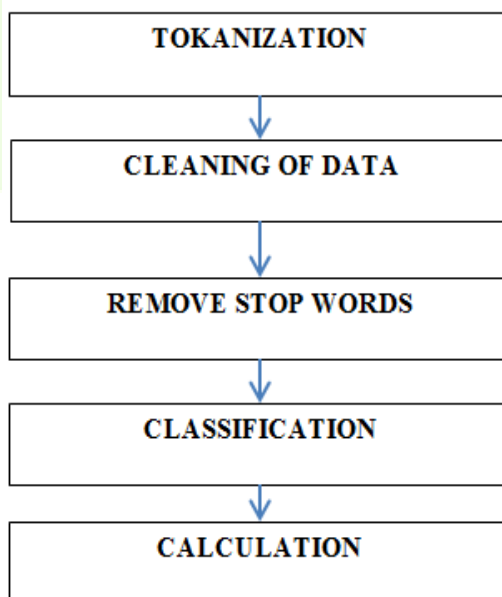


Fig 2. Implementation Diagram

4.3 SYSTEM ARCHITECTURE

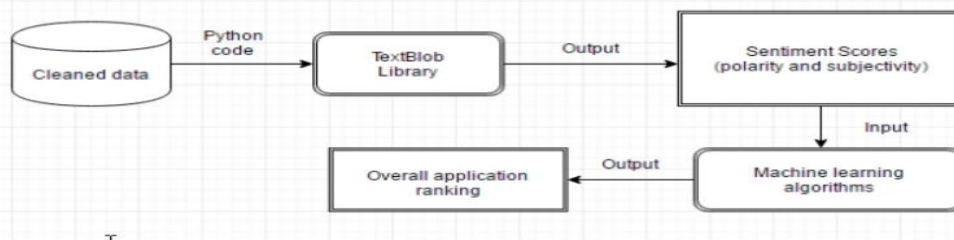


Fig 3. System Architecture Diagram.

VI. CONCEPT OF SYSTEM

System provides User friendly interface and beautiful UI experience. When machine learning comes in picture we use textblob here and in textblob it uses lexiconf (it is predefined classified word)

Software Used

- 1) PYTHON 2.7
- 2) DJANGO VERSION 1.11
- 3) MYSQL VERSION 5
- 4) HTML, CSS AND JAVASCRIPT
- 5) XAMP SERVER FOR MYSQL

VII. IMPLEMENTATION

After calculating result if we get higher polarity '+1' Sentiment score then we can say comment is positive. If we get Lower Polarity '-1' sentiment score then comment is negative and if '0' then comment is neutral

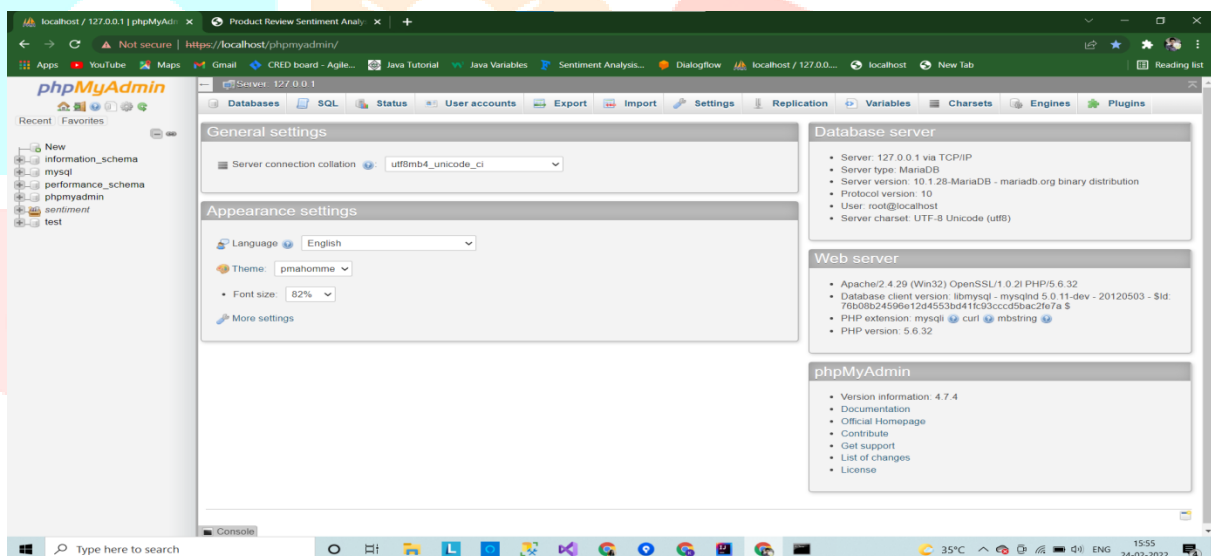


Fig 1. MyPhp Admin

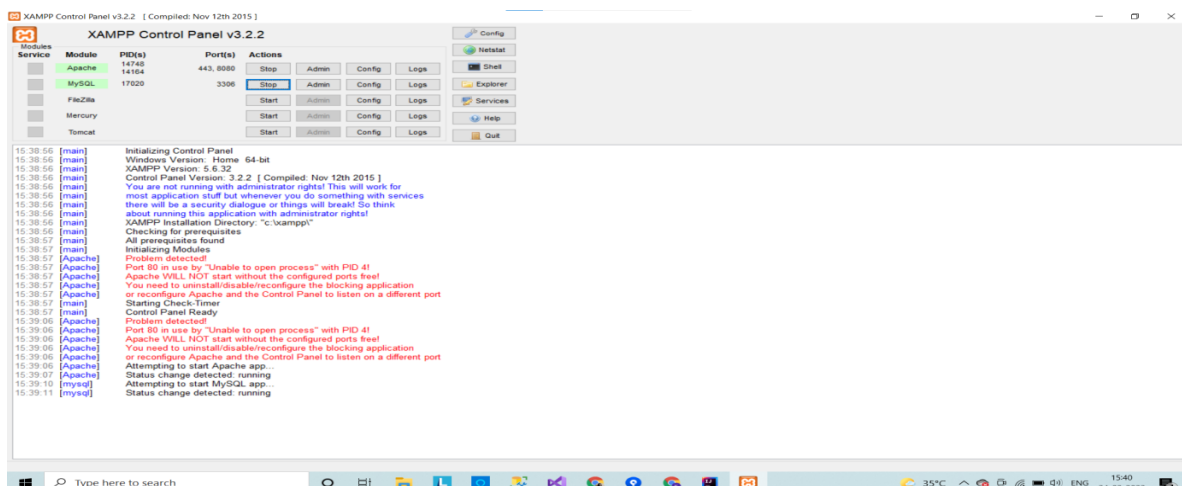


Fig 2. XAMPP Control Panel



Fig 3. Polarity wise Expression

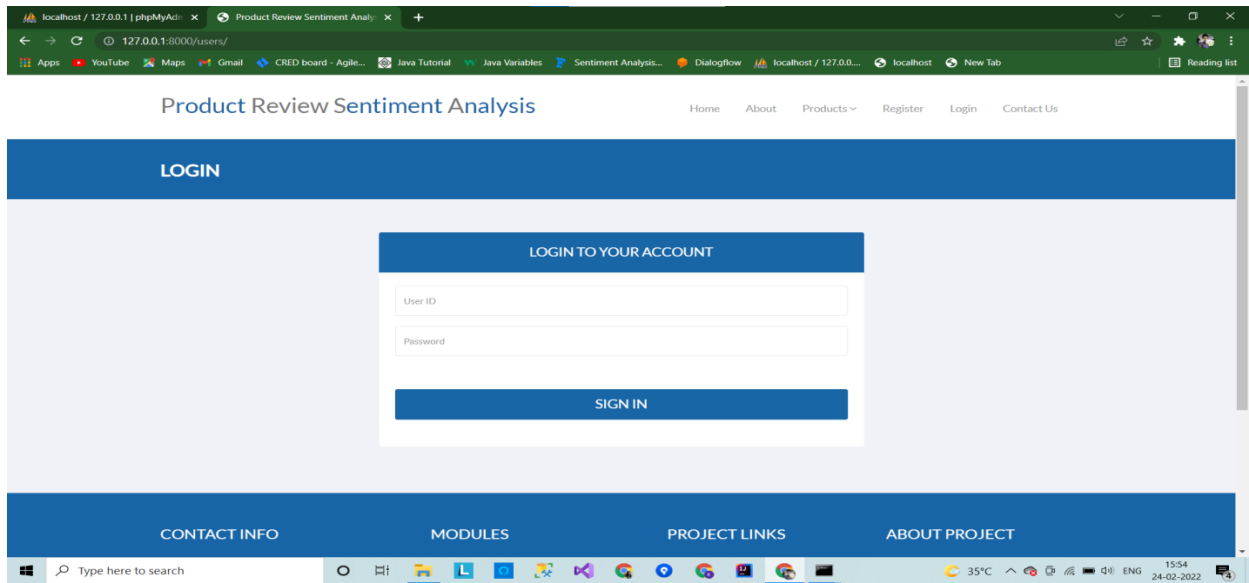


Fig 4. Login Page

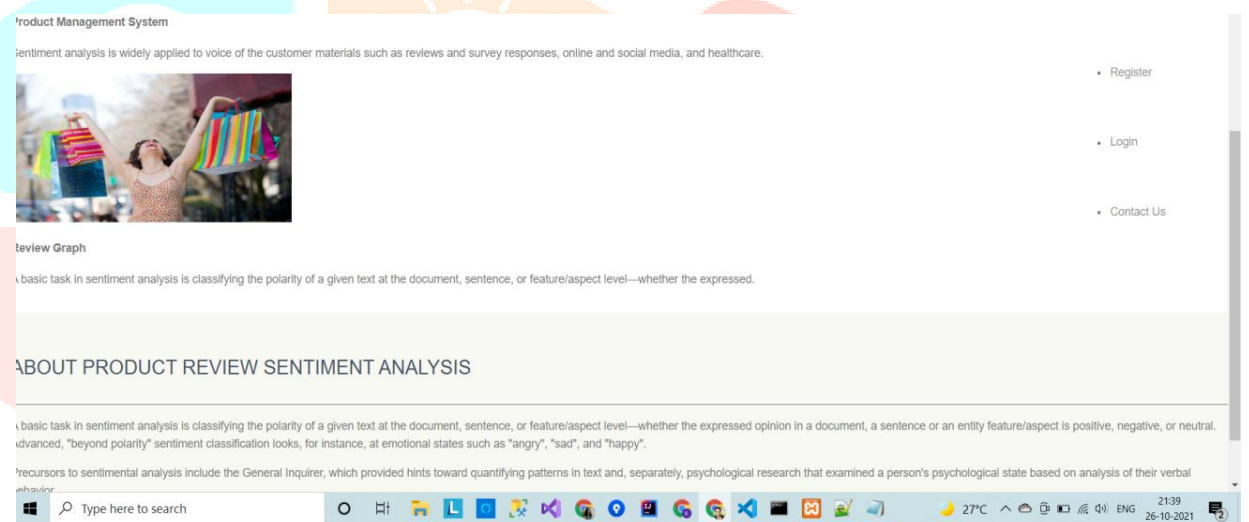


Fig 5. Product Management System

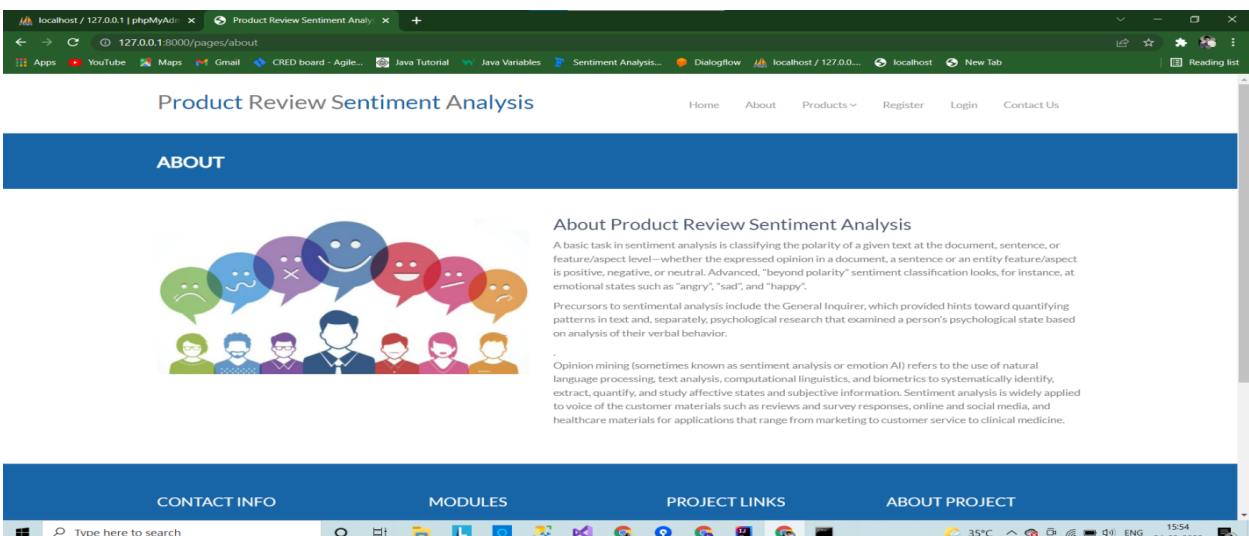


Fig 6. Product Review Sentiment Analysis

VIII. APPLICATION

- 1) Twitter: For analysing the tweet, whether the user tweet is sarcasm or negative response.
- 2) Market and competitor research
- 3) Social media monitoring
- 4) Customer support
- 5) Customer feedback

IX. CONCLUSION

The project is basically designed for analysing emotions of commercial products which is more complicated for humans to understand whether the particular dialogues are positive, negative or neutral hence giving the commercial products this technology for an accuracy of products review, such that action is taken immediately by the team to prevent any kinds of loss by a consumer. For project demo concerns, the prototype was developed, test and proved to be working by integrating all the hardware components and software used. This Idea can be further implemented to develop a real product in the future.

X. ACKNOWLEDGEMENT

Report is on the topic : ” **Sentiment Analysis Based on Product Rating** ” All the Relevant and essential details are included in the paper. At the beginning we have given summarized details of the project which we are building and we have also proceed details about how the project is going to implement and which technologies we are going to use to develop this project.

We are thankful to **Prof. Priyanka Bandagale** who guided us and helped in preparing the paper. We thank her for providing us the confidence and most importantly giving us the track regarding the project topic whenever we needed it.

XI. REFERENCES

1. Rathor, A. S., Agarwal, A., & Dimri, P. (2018). Comparative Study of Machine Learning Approaches for Amazon Reviews. *Procedia Computer Science*, 132, 1552- 1561. doi:10.1016/j.procs.2018.05.119
2. <https://monkeylearn.com/blog/sentiment-analysis-applications/>
3. https://www.researchgate.net/publication/228699116_Sentiment_Analysis_of_Product_Reviews
4. <https://www.repustate.com/blog/product-review-sentiment-analysis/>
5. https://rcciit.org.in/students_projects/projects/cse/2018/GR20.pdf
6. <https://journalofbigdata.springeropen.com/articles/10.1186/s40537-020-00308>

