

Sentiment Analysis For Social Media

Prof. D.B. Hanchate ¹, Anjali Jadhav ², Arati Bhoi ³, Pranav Dhandar ⁴, Amol Popalbhat ⁵,
¹HOD, ²³⁴⁵BE Students,
Department of Computer Engineering DGOI, Swami Chincholi, India.
anjali_jadhav2301@gmail.com

Abstract: Sentiment analysis is the computational study of people's opinions, sentiments, attitudes, and emotions expressed in written language. It is one of the most active research areas in natural language processing and text mining in recent years. In the business world, there is an increasing need for analyzing and characterizing the public's attitude towards new products. Its popularity is mainly due to it has a wide range of applications because opinions are central to almost all human activities and are key influencers of our behaviors. Whenever we need to make a decision, we want to hear others' opinions. It is thus no surprise that the inception and the rapid growth of the field coincide with those of the social media on the Web. In fact, the research has also spread outside of computer science to management sciences and social sciences due to its importance to business and society as a whole.

Keywords: *Sentiment Analysis, Social Media, Big Data.*

I. INTRODUCTION

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. Internet is a resourceful place with respect to sentiment information. 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 researcher and developers. We also can give the data which is to be tested dynamically. Here the system is being trained all the time when we execute the program. Hence, sentiment analysis seems having a strong fundament with the support of massive online data.

II. OBJECTIVES

The primary objective of the Sentiment Analysis for Social Media project is to develop and implement an advanced sentiment analysis system that accurately assesses and categorizes the emotional tone expressed in social media content. This system aims to provide valuable insights into public opinions, sentiments, and trends across various social media platforms. By leveraging natural language processing and machine learning techniques, the project seeks to enhance our understanding of user sentiments, identify emerging patterns, and contribute to informed decision-making for businesses, organizations, and individuals engaged in social media monitoring and analysis.

III. LITERATURE SURVEY

In 2019, Saad and Yang [1] have aimed for giving a complete tweet sentiment analysis on the basis of ordinal regression with machine learning algorithms. The suggested model included pre-processing tweets as first step and with the feature extraction model, an effective feature was generated. The methods such as SVR, RF, Multinomial logistic regression (SoftMax), and DTs were employed for classifying the sentiment analysis. Moreover, twitter dataset was used for experimenting the suggested model. The test results have shown that the suggested model has attained the best accuracy, and also DTs were performed well when compared over other methods. In 2018, Fang et al. [2] have suggested multi-strategy sentiment analysis models using the semantic fuzziness for resolving the issues. The outcomes have demonstrated that the proposed model has attained high efficiency.

In 2019, Afzaal et al. [3] have recommended a novel approach of aspect-based sentiment classification, which recognized the features in a precise manner and attained the best classification accuracy. Moreover, the scheme was developed as a mobile application, which assisted the tourists in identifying the best hotel in the town, and the proposed model was analyzed using the real-world data sets. The results have shown that the presented model was effective in both recognition as well as classification.

In 2019, Feizollah et al. [4] have concentrated on tweets related to two halal products such as halal cosmetics and halal tourism. By utilizing Twitter search function, Twitter information was extracted, and a new model was employed for data filtering. Later, with the help of deep learning models, a test was performed for computing and evaluating the tweets. Moreover, for enhancing the accuracy and building prediction methods, RNN, CNN, and LSTM were employed. From the outcomes, it was seemed that the combination of LSTM and CNN attained the best accuracy.

In 2018, Mukhtar et al. [5] have performed the sentiment analysis to the Urdu blogs attained from several domain with Supervised Machine learning and Lexicon-based models. In Lexicon-based models, a well-performing Urdu sentiment analyzer and an Urdu Sentiment Lexicons were employed, whereas, in Supervised Machine learning algorithm, DT, KNN, and SVM were employed. The data were combined from the two sources for performing the best sentiment analysis. Based on the tests conducted, the outcomes were shown that the Lexicon-based model was superior to the supervised machine learning algorithm.

In 2020, Kumar et al. [6] have presented a hybrid deep learning approach named ConVNet- SVMBoVW that dealt with the real-time data for predicting the fine-grained sentiment. In order to measure the hybrid polarity, an aggregation model was developed. Moreover, SVM was used for training the BoVW to forecast the sentiment of visual content. Finally, it was concluded that the suggested ConvNet-SVMBoVW was outperformed by the conventional models.

IV. SYSTEM OVERVIEW AND DESIGN

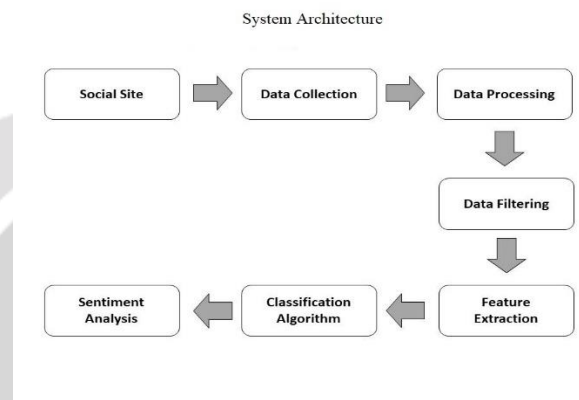


Figure 1 : Architecture Diagram

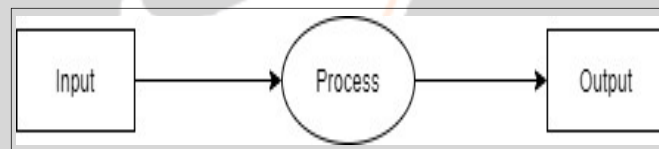


Figure 4.2: Data Flow diagram

Figure 2 : DFD LEVEL 0

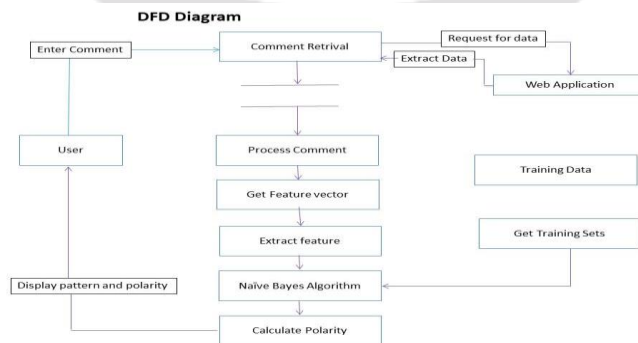


Figure 3 : DFD LEVEL 1

V. APPLICATION RESULT

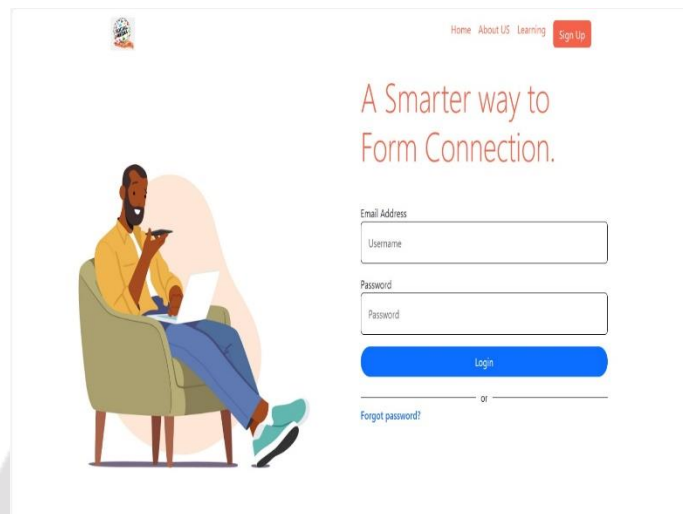


Figure 4 : Login

A web-based module allows the user for their safe and service registration in the website, hence user can login in their credential through their specific id passwords.

Although this login page basically helps user's to keeps their data secure in the specific manner.

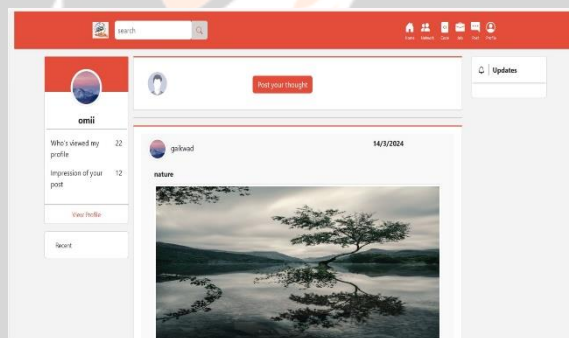


Figure 4 : Interface

User can post a thought after login to the website.

All the post of user are shown on the field. It Predict the post is good or bad. And only good post are activate automatically.

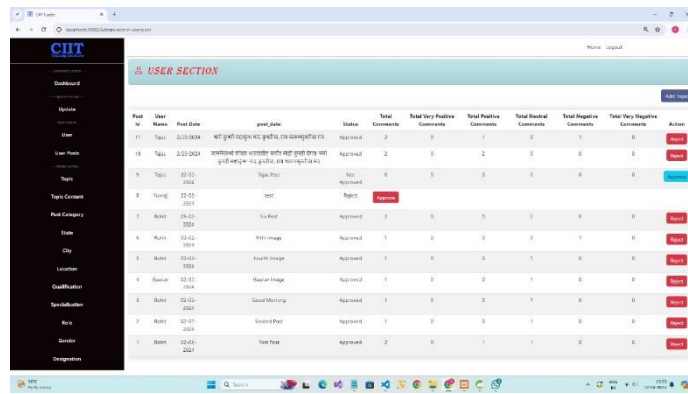


Figure 5 : Prediction

This is User section where all post with active or deactive state are shown. The Number Of bad or good comments are tally.

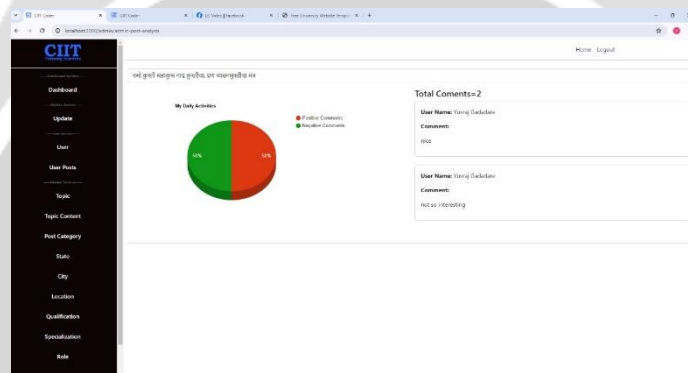


Figure 4 : Result

Comments are compare in the form of pie chart.

VI. CONCLUSION

It is a very important fact to analyze how people think in different context about different things. This becomes more important when it comes to the business world because business is dependent on their customers and they always try to make products or services in order to fulfill customer requirements. So knowing what they want, what they think and talk about existing products, services and brands is more useful for businesses to make decisions such as identifying competitors and analyzing trends. Both because people express their ideas on social media and it can access those data, it has been enabled in some way to do the above mentioned things by using those data. The project, Sentiment Analysis for Social Media does that.

VII. FUTURE ENHANCEMENT

Future trends in sentiment analysis will likely focus on improving the analysis of social media content, which often contains slang, emojis, and informal language. Additionally, analyzing the sentiment of trending topics and viral content will be essential for understanding public opinion and managing brand reputation.

VIII. REFERENCES

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