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Sentiment Analysis

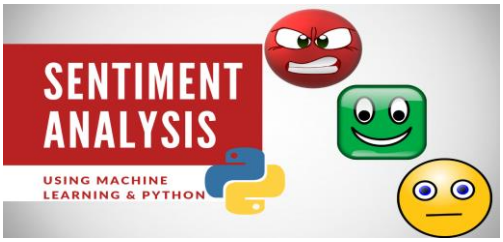
Shivani Pawar[1], Nikita Chakrawarti[2], Mayur Thombare[3], Swapnil Waghadhare[4], Manish Salvi[5]
[1,2,3,4]*Student, Department of Computer Engineering, Thakur Polytechnic, Mumbai, India*
[5]*Sr. Lecturer, Department of Computer Engineering, Thakur Polytechnic, Mumbai, India*

***Abstract*: Due to increase in amount of hate content on the online in past years, there are more requirements to perform sentiment analysis. Sentiment Analysis (SA) may be a task which finds orientation of one's opinion in an exceedingly piece of knowledge with relevance an entity. It deals with analysing emotions, feelings, and therefore the attitude of a speaker or a writer from a given piece of knowledge. Sentiment Analysis involves capturing of user's behaviour, likes and dislikes of a personal from the text. The work of most of the SA system is to spot the feelings express over an entity, and so classify it into either positive or negative sentiment. Our proposed system for sentiment analysis uses Social Media data set to seek out the sentiment related to the document; polarity of words within the review are extracted from Social Media data set and so final aggregated polarity is calculated which might sum as either positive, negative or neutral.**

***Keywords*: Twitter, Text mining, Sentiment analysis, Polarity.**

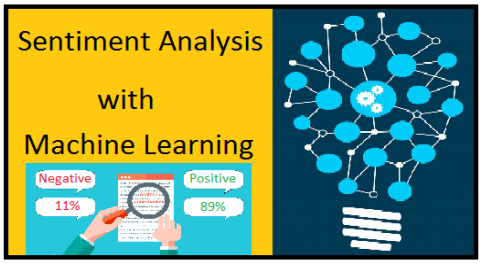
1. Introduction

Sentiment analysis and opinion mining are subfields of machine learning. they're vital within the current scenario because, innumerable user opinionated texts are available within Infobahn now. this might be often a troublesome problem to be solved because language is extremely unstructured in nature. The interpretation of the meaning of a particular sentence by a machine is tiresome. But the usefulness of the sentiment analysis is increasing day by day. Machines must be made reliable and efficient in its ability to interpret and understand human emotions and feelings. Sentiment analysis and opinion mining are approaches to implement identical.



The sentiment analysis problem is additionally solved to a satisfactory level by manual training. But a completely automated system for sentiment analysis which needs no manual intervention has not been introduced yet. this might be often mainly owing to the challenges during this field. This paper aims at a literature survey on the matter of sentiment analysis and opinion mining. Many relevant studies have emerged during this field and this paper is additionally a peep into variety of them.

2. Methodology of solving Identified problem



This paper reports the implementation of the Sentiment analysis, during this project the wealth of obtainable libraries has been used. The approach to extract sentiment from tweets is as follows:

- Start with downloading and caching the sentiment dictionary
- Download social media testing data sets, input it in to the program.
- Clean the tweets by removing the stop words.
- Token each word within the information Set and enclose to the program.
- For every word, compare it with positive sentiments and negative sentiments word within the dictionary. Then increment positive count or negative count.
- Finally, supported the positive count and negative count, we are going to get result percentage about sentiment to create a call the polarity.

3. Problem Definition

Sentiment analysis of communication on cyber web is one among all in every of the text mining aspects accustomed determine sentiments in a very given text. The strategy of sentiment analysis could also be a task of detecting, extracting and classifying opinions and sentiments expressed in texts. It includes the identification of the meaning of words within the text through language processing rules. The proposed framework includes an overview of rules for negation identification and calculation. These negation rules are designed so on enhance sentiment text analysis. Main achievement of the paper could also be an illustration on an approach for automatic identification and calculations of

negation in opinion and sentiment analysis. The extensive growth of user-generated content has introduced new aspects of study on World Wide Web data. Therefore, this paper presents a framework for automatic identification of the presence of opinion in textual data.

4. Objectives

To design and develop the Sentiment Analysis tool using machine learning and data science to generate report for the social media data.

To Implement and generate report on a query as:

- Positive tweets percentage: 16.39 %
- Negative tweets percentage: 72.13 %
- Neutral tweets percentage: 11.47 %

5. Conclusion

In this project, we discussed the importance of social network analysis and its applications in different areas. We have implemented the python program to implement sentimental analysis. We showed the results on different daily topics. We realized that the neutral sentiments are significantly high which shows there is a need to improve Sentiment analysis.

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