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Personality prediction from Tweets Using Machine Learning

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ABSTRACT: Blogs, social sites, and web pages all make a lot of data every hour. Many businesses collect all of this information to learn more about their customers, their marketing strategies, and what they want. Then, they can make the right changes to change the way their businesses work. We need to use Emotion Classifier techniques to get information out of this content. Many groups want to know the big picture of any new policy or product that comes out on the market. By using Flair module we get output in the form of positive, negative and Neutral, and the Profile of Mood States (POMS) six mood states, Python can be used to get a general idea of how people feel. Python is a strong and easy language that is spreading around the world and making its way into every area of modern technology. The number of people using Twitter has grown a lot in the world today. People use them to talk about their thoughts, feelings, and experiences, as well as to share a lot of personal information. All of this information could be put to good use to help grow the business and figure out what users want. Predicting people's personalities is getting a lot of attention these days. It looks at how users act and shows what they think, feel, etc. Traditional ways of taking surveys took a lot of time, so a lot of people need automatic prediction. Users are always changing, and they can have their account on more than one platform because they can have information in more than one context. This survey gives an overview of the different ways that content on social sites is used to make predictions about personality and behaviour. Being able to guess a user's personality traits can help make many services or products that fit them better. In the end, the last section talks about trends and directions for the future.

KEYWORDS: Profile of Mood States,Plutchik's basic emotions, Tweeter, Personality.

I. INTRODUCTION

People have been using social networking sites like Twitter, Facebook, and Instagram in huge numbers over the past few years. These sites show what they believe, how they feel, and what they think about the people and places. Sentiment analysis can be done in a number of ways. Most of these methods can be put into one of four main groups: artificial intelligence, natural language processing, statistical, and knowledge-base. Computationally analysing how people feel and what they think is hard research. So, it takes the data from the Twitter account and uses it to predict marketing, political elections, business analysis, communication, research, and educational solutions. Sentiment analysis can be done by looking at how people act in their social and business tweets on their Twitter accounts.

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Recent research has shown that people's ideas, thoughts, and decisions are affected by what they post on Twitter and other social networking sites. It was suggested that tweets could be used to change how people feel. For sentiment analysis, a huge amount of data was taken into account. Kanavos came up with a way to find social communities based on how people act and gave each user's emotional posts a metric value. In this project, we look at how people feel about different things, such as an election, business, education, etc. Different Twitter profiles were used to gather these thoughts. Based on the different aspects, the analysis of how the different users feel. We also use different classifiers to make sure that the results of the sentiments are correct. The results of the experiment show that the different feelings have different polarity scores. In this project, we build a model that sorts the moods of the most popular blogging sites, like Twitter, into positive, negative, and neutral. Personality is a set of different traits, like behaviour or emotions, that are caused by things in the environment or in the body. It shows how each person is different in how they think, act, and feel. Personality traits are not separate parts of a person's personality. Instead, they show the highs and lows of certain traits in a person over time. The Latin word "persona," which means "mask," is where the word "personality" came from. Personality traits are defined by three things: how well they work in different situations, how stable they are over time, and how different they are from person to person. People act differently in different ways. The field of study that looks at the different types of people and how they act.

II. LITERATURE REVIEW

[1] Twitter based sentiment analysis to predict public emotions using machine learning algorithms: R.S. Mohana; S. Kalaiselvi; K. Kousalya; Mohamed Hanif P; Lohappriya D; Khalid Ali Khan K. DOI: 10.1109/ICIRCA51532.2021.9544817. Electronic ISBN:978-1-6654-3877-3. DVD ISBN:978-1-6654-3876-6. Print on Demand(PoD) ISBN:978-1-6654-4604-4.

People use Twitter to send and receive "tweets," which are brief communications that may be shared on the social media site. This may be used to express one's thoughts and feelings on a broad variety of subjects. The sentiment analysis of these tweets has been used by a wide range of individuals, including customers and marketers, to learn more about goods or do market research. Machine learning approaches have also improved the accuracy of sentiment analysis forecasts. A variety of machine learning techniques were used in this study to determine how individuals saw "tweets." It attempts to figure out whether the tweet is favourable or bad, but it fails. The general tone should be utilised to classify a tweet that contains both positive and poor elements. Kaggle's dataset, crawled and sorted into positive and negative categories, was utilised for this study's data analysis. Among the data to be processed and transformed into a standard format are emoticons, usernames, and hash tags. Unigrams and bigrams, which are two different ways to pronounce "twitter," need to be analysed in the proposed research study. A meta-learning approach called ensembling is used to increase the accuracy of researchers' forecasts. Finally, the research reveals that Deep Learning approaches outperform other methods.

[2] Emotion analysis of Arabic tweets using deep learning approach: Massa Baali& Nada Ghneim. (2019) 6:89 DOI: https://doi.org/10.1186/s40537-019-0252-x.

Many individuals now post memories of special occasions on their social media accounts. By expressing our ideas, thoughts, and fond recollections via text, we may convey our feelings without using a lot of words. If you want to know what people think, how they feel, and what they want, Twitter is an excellent place to start. Emotion analysis often provides a more in-depth look at the emotions experienced by the author. A phrase's favourable, negative, or neutral status has been the focus of most Arabic social media research efforts. We wish to categorise phrases depending on how they make us feel, such as pleased, furious, terrified, or sad. Only a few of the attempts to automatically recognising emotions in text in other languages have been based on deep learning. In this post, we'll show you how we categorised Arabic tweets depending on how they affected us emotionally. Deep Convolutional Neural Networks are trained on word vectors from our dataset to perform sentence categorization. SVM, NB, and MLP, three different machine learning algorithms, were all compared to see how well this technique performed. A network is the foundation of our deep learning approach, and it includes processes for word, phrase, and document vectorization. SemiEval

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provided the EI-oc task with an Arabic twitter dataset, which was used to evaluate the suggested deep learning algorithm. When compared to other machine learning approaches, the results were excellent.

[3] Emotion Detection from Tweets and Emoticons Using Machine Learning: Prayas More1, Abhishek Kshatriya2, Rushikesh Kedari3, Prof. Renuka Nagpure4: e-ISSN: 2395-0056. p-ISSN: 2395-0072.

Millions of people share their thoughts every day on many microblogging sites. We propose and look into the sentiment on Twitter, which is a popular real-time microblogging service where users post their reactions in real time, and we find out what they think about almost "everything." The best way for internet users to talk to each other is through social networking sites like Twitter, Facebook, Instagram, Orkut, etc. So this becomes an important way to figure out what people think, feel, or believe. We get data, or tweets, from Twitter in real time and use machine learning techniques to turn them into something useful. We then use this information to build a sentiment classifier. If you have a piece of written text, the problem is to put it into one of two categories: positive or negative. With more people using the Internet and a lot of text data being created, it has become a very important area of research to find useful information in Text Ocean. This project promotes an RNN language model based on Long Short-Term Memory to make multi-classification of text and emoticons possible (LSTM). The LSTM is much better than the old RNN. And as a language model, LSTM is used to achieve multiclassification for text and emoticon emotional attributes.

[4] A Novel Machine Learning Approach for Sentiment Analysis on Twitter Incorporating the Universal Language Model Fine-Tuning and SVM: Barakat AlBadani , Ronghua Shi and Jian Dong. DOI: https://doi.org/10.3390/asi5010013

TSDs (Twitter sentiment detectors) are a superior tool for determining the quality of a service or product. Precision and detection performance of TSDs rely greatly on the effectiveness of classification algorithms as well as their input characteristics. When it comes to current machine learning approaches, they require a long period of time, which makes it difficult for organisations to implement automated workflows. Sentiment analysis is one area where deep learning algorithms have been successfully used. A variety of algorithms are used to extract information from raw data, such as tweets or texts, and build a variety of models. Using these models, you may deduce information about previously unmodeled datasets. By combining "universal language model fine-tuning" (ULMFiT) and "support vector machine," we demonstrate a new, effective method for analysing sentiments. For Twitter sentiment analysis, the system makes use of a novel deep learning algorithm that analyses tweets to determine how people feel about certain items. Based on the findings from three different datasets, we can confidently say that our model outperforms the competition. When applied to the Twitter US Airlines dataset, it achieves an accuracy rate of 99.78 percent.

[5] Sentiment analysis in twitter using machine learning techniques: R. Rajasree, M. S. Neethu. DOI:10.1109/ICCCNT.2013.6726818.

Understanding and classifying the thoughts and emotions represented in a piece of writing is known as sentiment analysis. More and more people are using social media to express themselves via postings like tweets and status updates, as well as blogs and videos. If you want to know what people think, you may do a sentiment analysis on this data. As a result of slang terms and misspellings on Twitter, it is more difficult to determine how individuals are feeling than it is in general. Twitter has a limit of 140 characters per post. Machine learning and knowledge bases are two approaches to figuring out what people think about something in a text. Machine Learning is used in this project to figure out what people are saying about electronics on Twitter. You may understand how domain information influences sentiment categorization by doing a sentiment analysis in a specific region. We show a new way to categorise tweets as positive or negative and find out what people think about products. for the analysis because there are a lot of users. To figure out what kind of person someone is, the user's data can be pulled out and more analysis can be done based on the text, status profiles, or preferences they share with other Twitter users. The user's comment, tweet, social behaviour, and language habits on Twitter are used as data for analysis to help people understand the different kinds of texts. You can go further with this research by using Machine Learning algorithms to process the data and figure out the user's real personality prediction.

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Our team made a model to sort the feelings of the most popular places to write a blog, like Twitter, into three groups: positive, negative, and neutral. Character is the way that things like how someone acts or how they feel are put together because of natural or organic factors. It shows how different people are in how they think, what they do, and how they feel. Character qualities are always the same because they show the highs and lows of a person's explicit traits on a nonstop basis instead of showing their true nature. There are three ways to describe a person's character: consistency across different situations, security over time, and individual differences. Different people have different ways of acting. The field of study that focuses on the different kinds of people and how they act.

III. LITERATURE SUMMARY

As social networks have grown quickly, people have gone from being general users to being information producers on the network. The goal of emotion analysis is to automatically figure out how people feel based on what they write on social networks (e.g., blogs, tweets). This study tries to figure out a Twitter user's personality by looking at the words they use in their tweets. People of this generation are very interested in social media, and it has become easy to use on the internet. Researchers can study and learn more about online behaviours, preferences, and personality traits from the things that people do on social media. We use Twitter because it is the best social media platform.

IV. EXISTING SYSTEM

Existing System Personality is an important part of being a person. Personality is a specific area of study in psychology. Personality is made up of things like the way a person thinks, feels, and acts, all of which change over time. Personality prediction is a field of study in which a person is put into a class based on his or her personality. Different types of personality classes can be found in the results of different psychological tests. One popular test is Flair Module, which divides people into three personality types based on how open they are to new experiences, how conscientious they are, how agreeable they are, and how neurotic they arethis leads to getting the output int the form of Positive negative and neutral.

V. PROBLEM STATEMENT

Since more people are using social networking sites like Twitter and Facebook, more people are sharing their thoughts, feelings, opinions, and emotions with each other, which shows how they think, act, and feel. There is a clear link between how people act on social networks, like in comments or tweets, and how they feel about themselves. Researchers are now interested in building automatic systems that can figure out a person's personality from what they post on social networking sites . Using Flair module predicting personality can be done by classifying the tweets into positive, negative and neutral, and the DISC Assessment are at the heart of these kinds of apps. The work that has already been done on figuring out who someone is based on what they say on social media is based on supervised machine learning techniques applied to a benchmarks dataset. But the biggest problem with the above studies is that the datasets are skewed, which means that the classes aren't the same when it comes to different personality traits. This problem is the main reason why the performance of the personality recognition system is getting worse.

Proposed Solution

A system is proposed that would look at a person's social media posts or tweets and make a personality profile based on that. The work focuses mostly on data collection, methods for preprocessing, and the flair module. Different ways of choosing features, like the Flair Module, are used to make the feature vectors. The Flair Module has been used to figure out how people feel about Tweets and show the results as positive, negative, or neutral. Which emphasis to further evaluate the tweets and try to figure out the person's personality.

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Proposed Objectives

- To find out how people feel about a specific keyword in tweets in real time.
- To use Tweepy to get tweets in real time that contain the matching keyword.
- To learn Flair is a model for analysing how people feel about tweets that has already been trained. We think there will be three types of emotions: positive, negative, and neutral.

VI. SYSTEM DESIGN

System Architecture

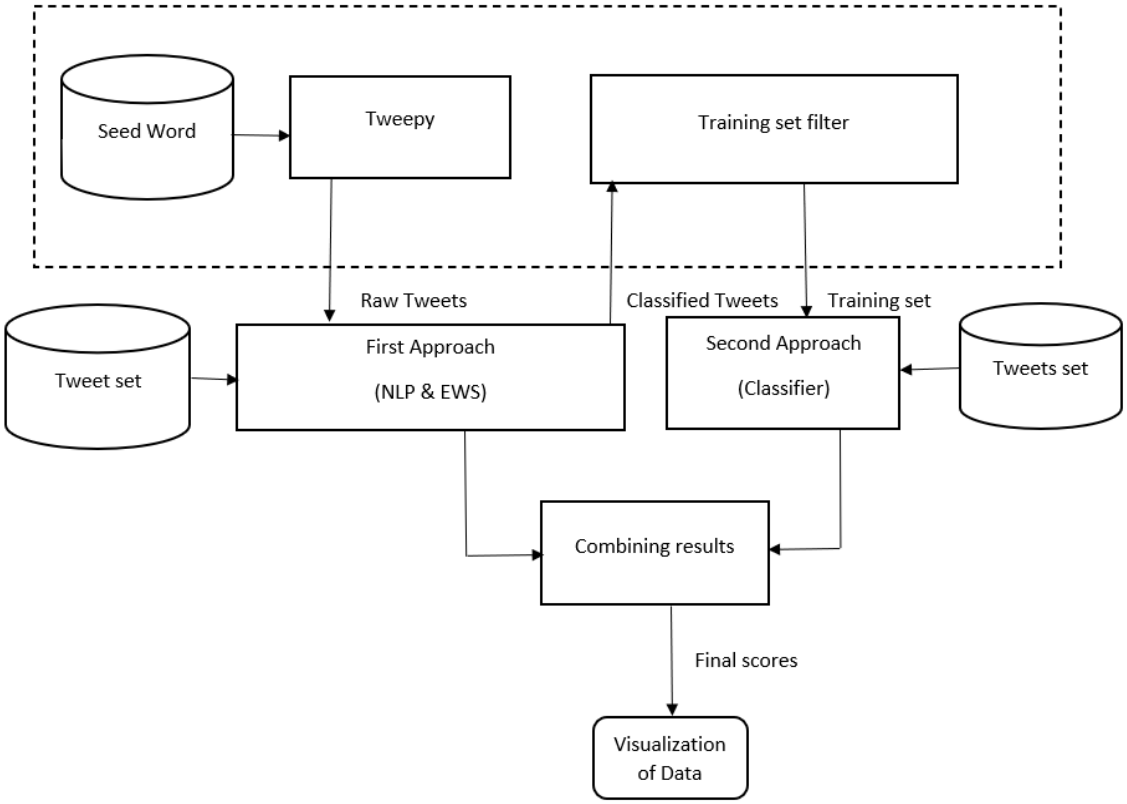

Fig: System architecture of personality prediction from tweets

The process of getting data from Twitter to send it to Tweepy is started. In the first step, a set of tweets and raw tweets are processed again. In this step, the tweets go through NLP and EWS processes to be put into groups, and then they are sent to the training set filter. Another set of Tweets was collected by the second method, which also collected data from the training set filter. Here, the actions of removing punctuation, tokenization, and stop words end. Here, we'll call 'predict classes' and 'predict probabilities' to get the predictions from the model. Trained data is sent back to the second approach model (classifier), and the final data visualisation is made by combining both approaches.

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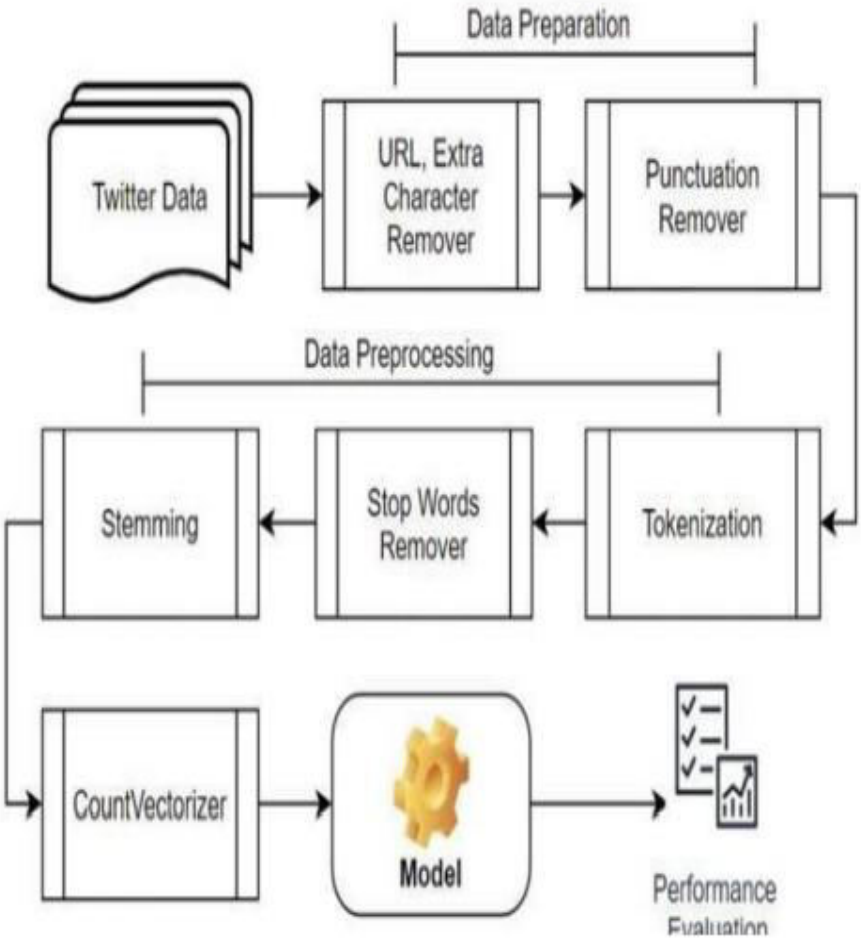
Methodology Presented



Methodology to accomplish the objectives of personality prediction

Researchers are increasingly trying to figure out a person's personality from what they write online. Predicting personality from the text that is given has already been done enough. But more work needs to be done to improve the performance of the current personality recognition system, which most of the time is caused by classes of personality traits that are not balanced. In the work that is planned. For balancing the personality recognition dataset, a method called "resampling" is used. This could lead to better performance.

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VII. RESULTS AND DISCUSSION

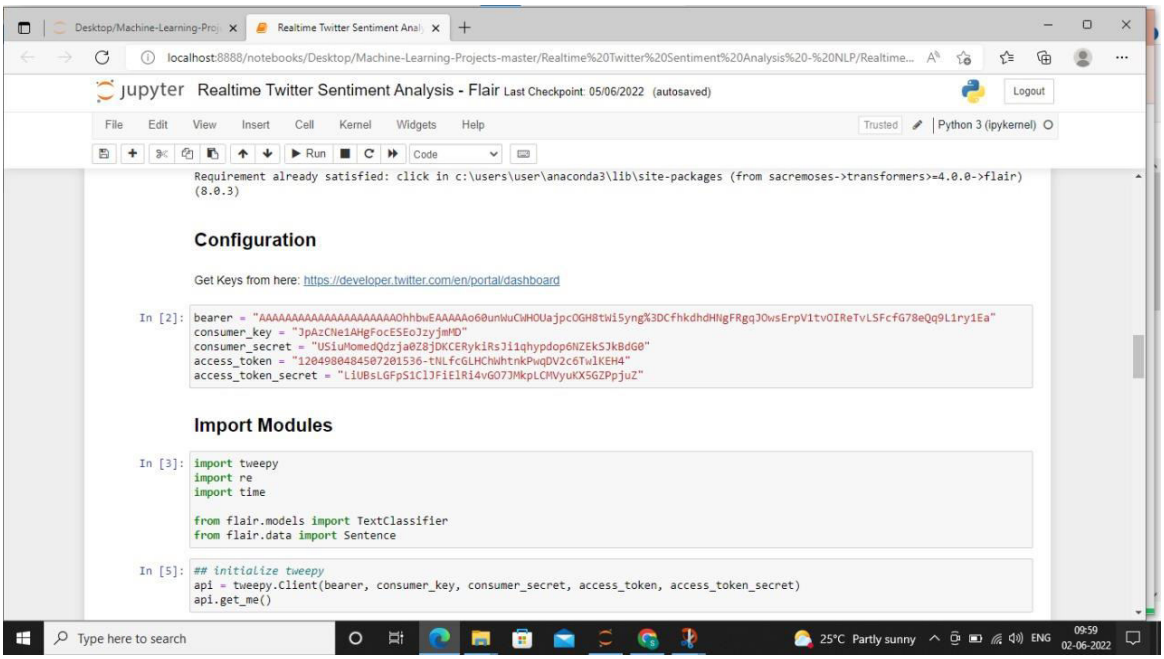

Figure: importing modules

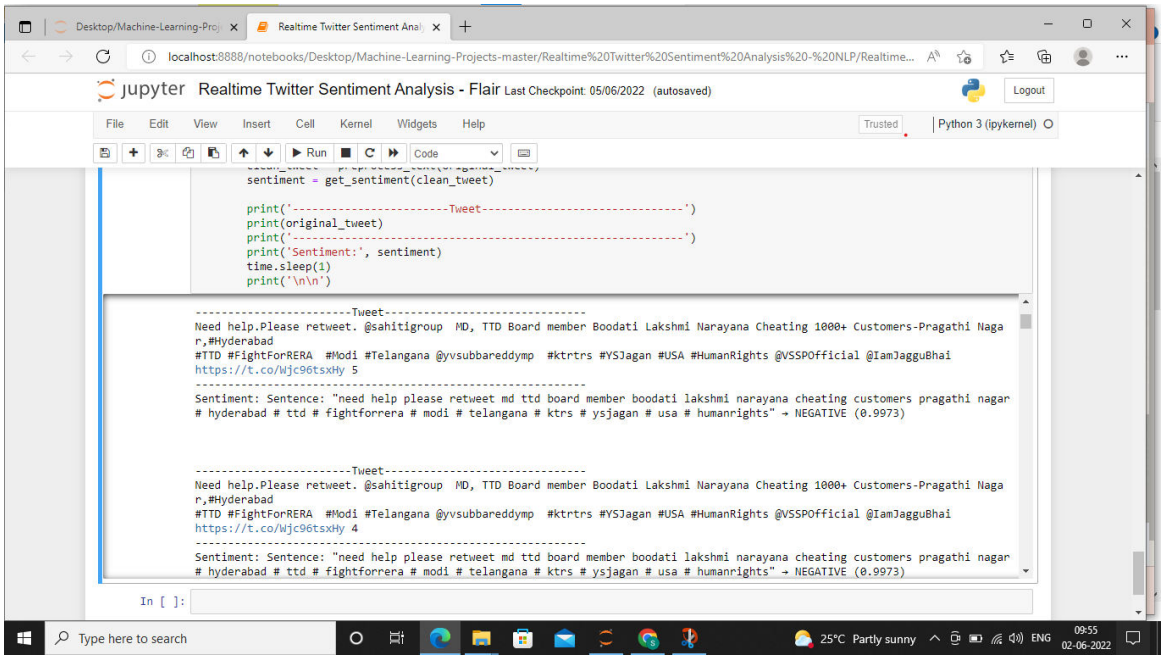

Figure : Output

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VIII. CONCLUSION

In this competitive world, it's important to get things done quickly, make sure users are happy, and give them accurate information at the right time. This software was made with the idea that more and more people are using them. We want to identify the best method for predicting whether a person is positive, negative, or neutral based on Twitter data. For opinion mining, we leverage English text from social media sites like Twitter, which provides us with a wealth of information. Using Twitter, for example, people from all over the globe express themselves verbally. Text analysis and categorising by how it makes you feel is difficult, and might be considered an advanced type of Sentiment Analysis.

IX. FUTURE SCOPE

The project that is being worked on is almost perfect. It can't do everything. This project can be put into action with better features and ideas to develop a device more precisely and effectively. Here are a few things that could be added to this device in the future.

New tweets and other analysed data might be used in the future to automatically update our bag of words. It is possible to create many useful apps using our approach, such as a social networking site add-on that displays your friends' most recent moods. In addition, our Twitter analysis may be utilised to create a real-time system that monitors mood swings and sentiments on Twitter.

REFERENCES

1] Twitter based sentiment analysis to predict public emotions using machine learning algorithms: R.S. Mohana; S. Kalaiselvi; K. Kousalya; Mohamed Hanif P; Lohappriya D; Khalid Ali Khan K. DOI: 10.1109/ICIRCA51532.2021.9544817. Electronic ISBN:978-1-6654-3877-3. DVD ISBN:978-1-6654-3876-6. Print on Demand(PoD) ISBN:978-1-6654-4604-4.

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[5] Sentiment analysis in twitter using machine learning techniques: R. Rajasree, M. S. Neethu. DOI:10.1109/ICCCNT.2013.6726818.

[6] Emotion Detection and Analysis on social media: Bharat Gaind, Varun Syal, Sneha Padgalwar. DOI: arXiv:1901.08458v2 [cs.SI] 12 Jun 2019.

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