LOVELY PROFESSIONAL UNIVERSITY

PROJECT FOR INT-404

A REPORT ON THE TOPIC:

"Twitter Data Driven Sentiment Analyser"

Submitted By -

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**Project Link :** https://github.com/shivam231100/AI_Twitter

Abstract:

This report covers the sentiment analysis of Twitter by fetching tweets fetched from Twitter using Python.

Introduction:

What is sentiment analysis?

Sentiment Analysis is the process of 'computationally' determining whether a piece of writing is positive, negative or neutral. It's also known as **opinion mining**, deriving the opinion or attitude of a speaker.

An example of sentiment analysis used by facebook can be seen through the emojis used to react on posts.
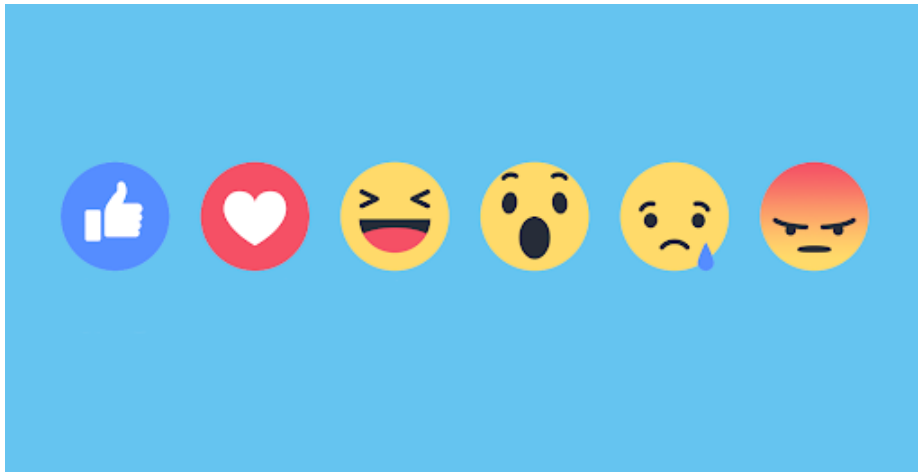
Why sentiment analysis?

- **Business:** In marketing field companies use it to develop their strategies, to understand customers' feelings towards products or brand, how people respond to their campaigns or product launches and why consumers don't buy some products.
- **Politics:** In political field, it is used to keep track of political view, to detect consistency and inconsistency between statements and actions at the government level. It can be used to predict election results as well!
- **Public Actions:** Sentiment analysis also is used to monitor and analyse social phenomena, for the spotting of potentially dangerous situations and determining the general mood of the blogosphere.

Literature Review:

For this project we have seek a lot of sources through which we can complete it in a better manner and can learn from it.

We have used various resources that are available on the internet. Firstly, we watched videos related to sentiment analysis and how does it work. Then for the coding part we have followed some Github resources which were proved to be very useful for us. We have also looked up for the notes which our faculty has provided in the classrooms.

Proposed Methodology:

The very first and foremost thing needed for this project is to understand the concept of NLP i.e Natural Language Processing.

What is NLP?

In simple words it is described as a subfield of linguistics, computer science, information engineering, and artificial intelligence concerned with the interactions between computers and human (natural) languages, how to program computers to process and analyse large amounts of natural language data. There are basically five steps in NLP:
1. Sentence Segmentation
2. Word Tokenization
3. Predicting parts of Speech for each Token
4. Lemmatization
5. Identifying Stop Words

Using Textblob

TextBlob module is a Python library and offers a simple API to access its methods and perform basic NLP tasks. It is built on the top of NLTK module.

It analyses sentiment by calculating polarity between -1 to +1.

Part of Code used in the project:

```
for tweet in tweets:
    print(tweet.text)
    analysis= TextBlob(tweet.text)
    polarity += analysis.sentiment.polarity

    if(analysis.sentiment.polarity==0):
        neutral+=1
    elif(analysis.sentiment.polarity<0.00):
        negative+=1
    elif(analysis.sentiment.polarity>0.00):
        positive+=1
```
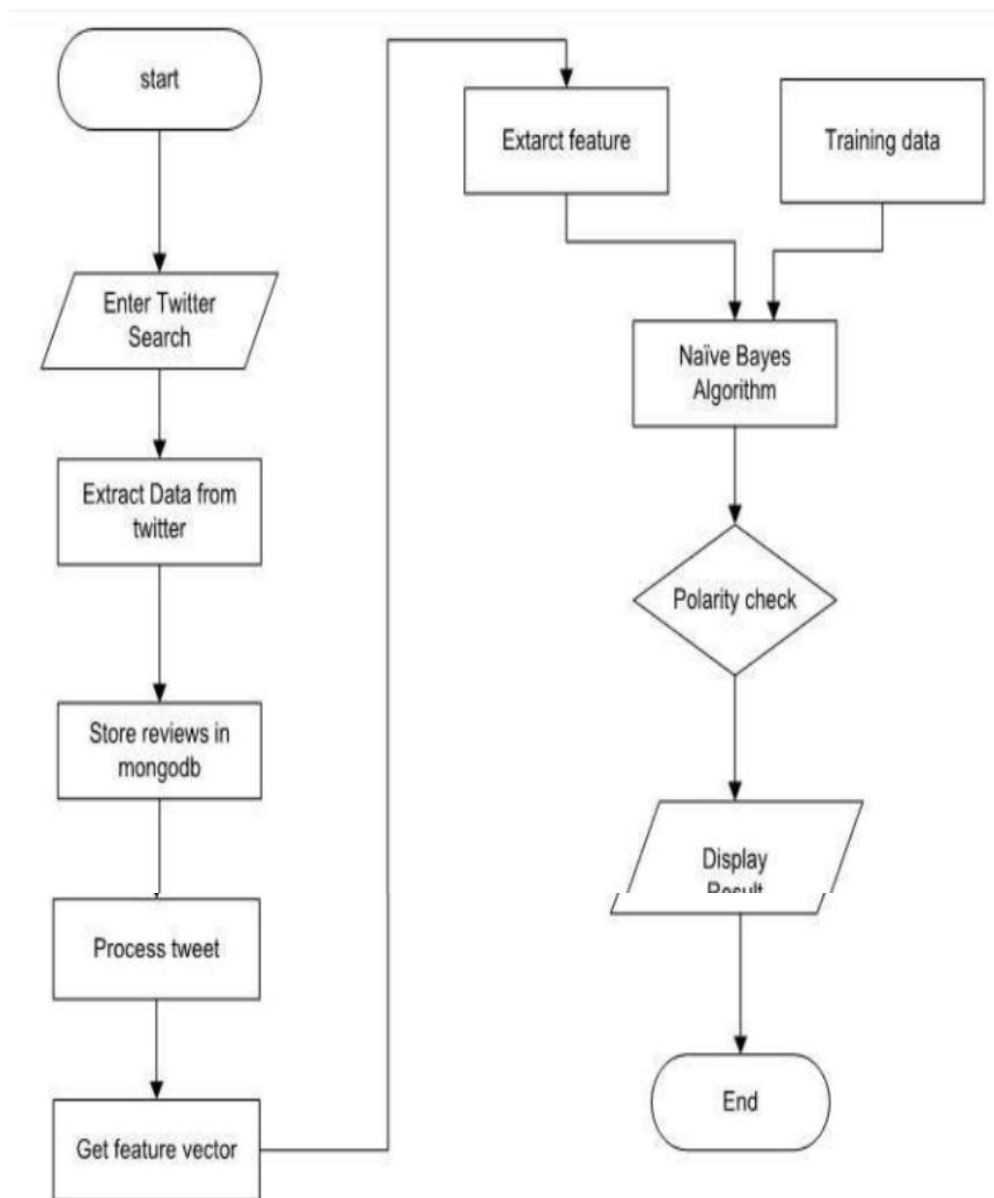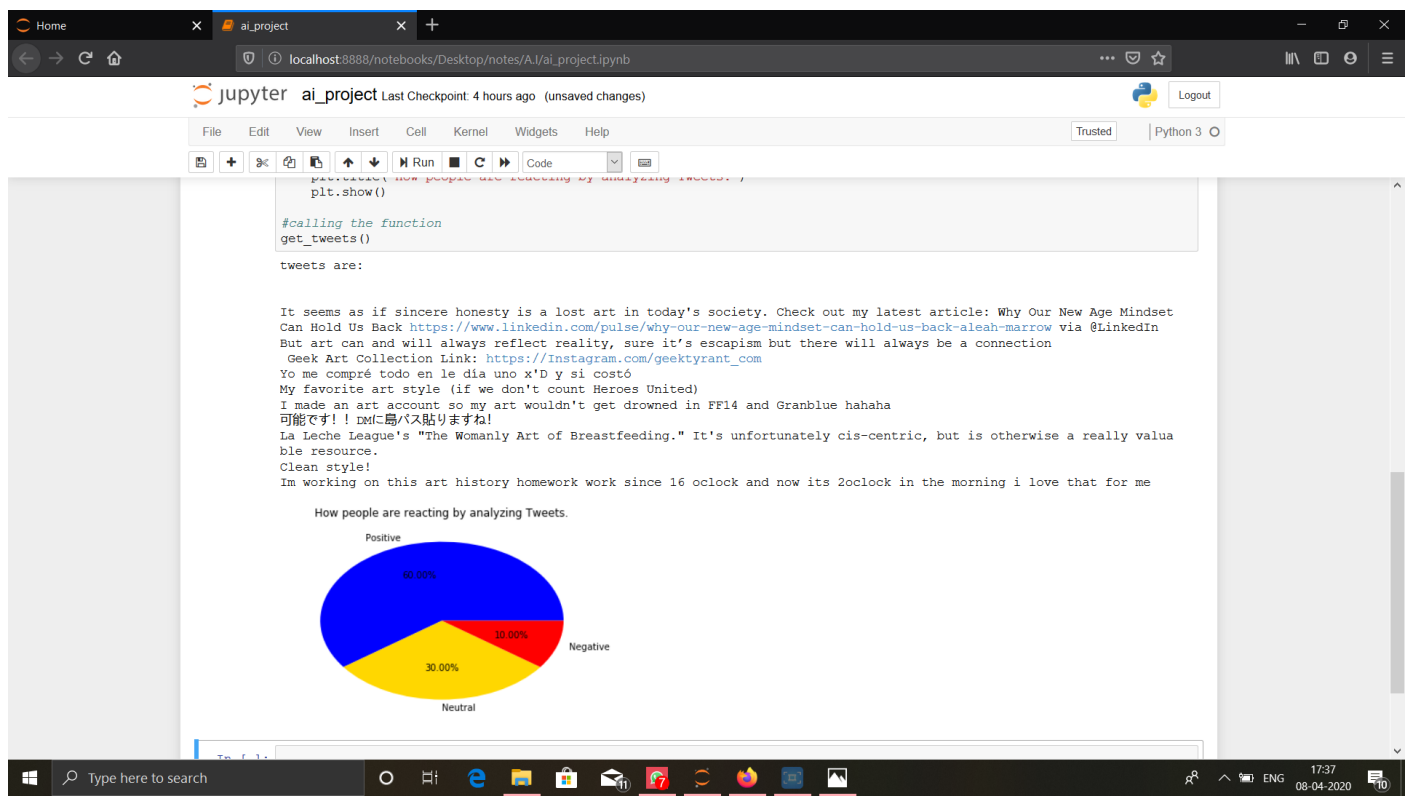
FLOW CHART:

Results and Discussions:

Here in the above result we have printed the tweets which we are analyzing to check the sentiments.

And also we have plotted a pie-chart in which we are showing the sentiment(positive, neutral, negative) about a particular topic or hashtag and also showing the percentage according to it.

Conclusion:

We have seen that Sentiment Analysis can be used for analyzing opinions in blogs, articles, Product reviews, Social Media websites, Movie-review websites where a third person narrates his views. We also studied NLP and Machine Learning approaches for Sentiment Analysis. We have seen that sentiment analysis has many applications and it is important field to study. Sentiment analysis has Strong commercial interest because Companies want to know how their products are being perceived and also Prospective consumers want to know what existing users think.

References:

www.google.com/sentiment_analysis

https://github.com/topics/sentiment-analysis?o=asc&s=stars

https://www.youtube.com/watch?v=O_B7XLfx0ic