



## Twitter Sentimental Analysis

<sup>1</sup>Prem Suryakant Chougale, <sup>2</sup>Swapnil Sambhaji Budake, <sup>3</sup>Aditya Suresh Idate, <sup>4</sup>Shirram Chandrakant Kamble, <sup>5</sup>Priyanka Santosh Bodake.

<sup>1,2,3,4,5</sup>Computer Science and Engineering, Sharad Institute of Technology Polytechnic, Yadrav, Maharashtra, India

### ABSTRACT:

Microblogging sites, in today's world have become a sea of data for analysts to prey on. This is because most of the individuals today are connected to some kind of microblogging site where they pull out all the hype they feel regarding anything. It won't be wrong to say that in some way these Microblogging sites have given a right to speech to every individual who can access them. People from diverse parts of the world freely discuss, comment, post their opinions about any topic of their choosing in real time. These blogs are mostly a complain expressing a negative vibe Or an appreciation expressing a positive vibe toward any topic of their choosing. The topics people post about could be a product from an organization such as a laptop or a phone. Or it could be a famous entity Or any other thing. Most of the leading organizations in today's era have employed analysts who have a job to derive emotions of people behind these posts. This helps them to get a proper review About their product or company which helps them know public demand and the alterations they Need to make in order to make better product in future. Therefore from the discussion above it could be concluded that these micro-blogging sites could become an asset to different organizations public or private if analysis of sentiment could be implemented on them. Sentiment analysis also known as analysis of feelings is an useful tool for analyzing different sites where people post their opinions regarding a topic of interest. With the help of this kind of analysis organizations can obtain the sentiments of the people which they post as tweets or as comments or even as review regarding a particular entity or product of interest to them. This goes in accordance with who says, almost 87% people having a connection with internet check reviews before purchase

**Keywords:** blogs, microblogging, comments

### Introduction:

We have chosen to work with twitter since we feel it is a better approximation of public sentiment as opposed to conventional internet articles and web blogs.

The reason is that the amount of relevant data is much larger for twitter, as compared to traditional blogging sites. Moreover the response on twitter is more prompt and also more general (since the number of users who tweet is substantially more than those who write web blogs on a daily basis). Sentiment analysis of public is highly critical in macro-scale socioeconomic phenomena like predicting the stock market rate of a particular firm. This could be done by analysing overall public sentiment towards that firm with respect to time and using economics tools for finding the correlation between public sentiment and the firm's stock market value. Firms can also estimate how well their product is responding in the market, which areas of the market is it having a favourable response and in which a negative response (since twitter allows us to download stream of geo-tagged tweets for particular locations. If firms can get this information they can analyze the reasons behind geographically differentiated response, and so they can market their product in a more optimized manner by looking for appropriate solutions like creating suitable market segments. Predicting the results of popular political elections and polls is also an emerging application to sentiment analysis. One such study was conducted by Tumasjan et al. in Germany for predicting the outcome of federal elections in which concluded that twitter is a good reflection of offline sentiment

It is no longer difficult to understand what people think about a topic by analysing the tweets shared by people. Sentiment analysis is one of the most popular use cases for NLP (Natural Language Processing).

### What is the sentiment analysis?

sentimental Analysis is process of collecting and analyzing data based upon the persons feelings, reviews and thoughts. Sentimental Analysis often called as opinion mining as it mines the important features from people opinion.

Sentimental Analysis can be done at document, phrase or sentence level. In document level, summery of the entire document is taken first and then it analyze whether the sentiment is positive, negative or neutral.

In phrase level, analysis of phrase in a sentence is taken to check the polarity. In sentence level, each sentence is classified in a particular class to provide sentiment.



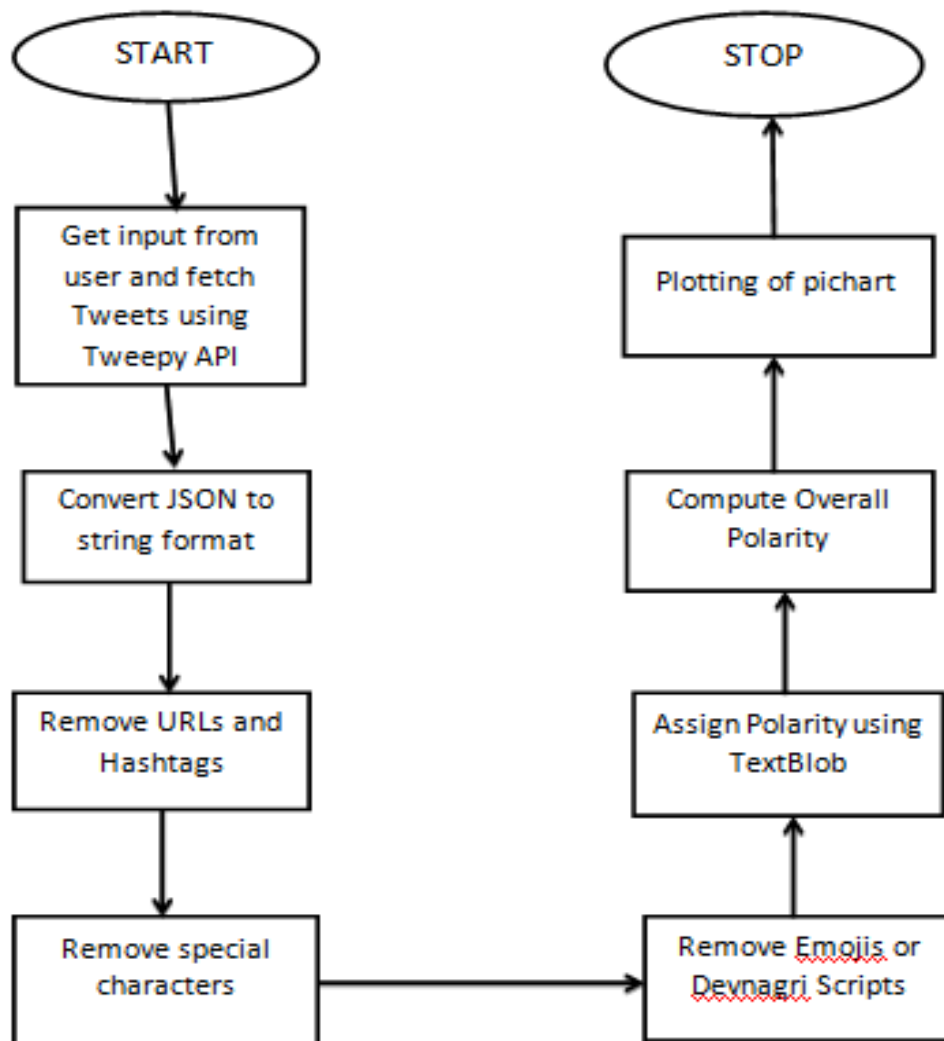
*We follow these 3 major steps in our program:*

1. Authorize twitter API client.
2. Make a GET request to Twitter API to fetch tweets for a particular query.
3. Parse the tweets. Classify each tweet as positive, negative or neutral.

## ALGORITHM

- Get authentication for Twitter Developer API
- Install and Import tweepy, textblob, matplotlib and csv
- Getting Tweets with Keyword or Hashtag and number of tweets to be fetched from user.
- Tweepy module will fetch the tweets from twitter.
- Cleaning Tweets to Analyze Sentiment
- Sentiment Analysis.
- Plotting the pichart.

## Flowchart



---

**Objective:**

- To implement an algorithm for automatic classification of text into positive, negative or neutral.
- Sentiment analysis to determine the attitude of the mass is positive, negative or neutral towards the subject of interest.
- Graphical representation of sentiment in the form of pie-chart

---

**Conclusion**

We will obtain a classification of polarities (of sentiments like positive, negative or neutral), and prepare a plot of the same using our one of the python module matplotlib.

Twitter sentiment analysis comes under the category of text and opinion mining. It focuses on analyzing the sentiments of the tweets and feeding the data to a machine learning model to train it and then check its accuracy, so that we can use this model for future use according to the results. It comprises of steps like data collection, text preprocessing, sentiment detection, sentiment classification, training and testing the model. This research topic has evolved during the last decade with models reaching the efficiency of almost 85%-90%. But it still lacks the dimension of diversity in the data. Along with this it has a lot of application issues with the slang used and the short forms of words. Many analyzers don't perform well when the number of classes are increased. Also, it's still not tested that how accurate the model will be for topics other than the one in consideration. Hence sentiment analysis has a very bright scope of development in future.

---

**References:**

List all the material used from various sources for making this project proposal

**Research Papers:**

- Aliza Sarlan, Shuib and Chayanit [1] conducted experiments on twitter data in which they simply extracted the tweets in Jason format and used python lexicon dictionary to assign polarity to the tweets.
- Vaibhavi N. Patodkar, Imran R. Shaikh[6] aimed to predict the emotions behind the audience watching a random tv show as positive or negative. For this purpose they extracted comments regarding some random tv shows and used these as data set for training and testing the model.
- Mandava Geeta, Bhargavav and Duvvada [2] turned it up a notch and used learning methods for the same purpose and achieved a better accuracy of result
- K.Arun et al [1] gathered data on different aspects of demonetization from twitter. They used R language as a tool for analyzing these tweets. Not only were the tweets analyzed but the result was visualized using different projections such as word cloud and other different plots. These plots showed that the number of people accepting demonetization is more then the number of people rejecting it.
- Sentiment analysis is the process of analysis of the text from many levels. First level is document level [3],the classification task determine the class of an objectbased on its attributes (Turney, 2002; Pang and Lee, 2004), and after that it can analysed at the sentence level[5] for classifying the sentence based on the negative, positive and neutral sentiments
- Devaki.p, et al (2017)[15] has done analysis on twitter data for election. It indicates the popularity of parties in the election based on positive tweets.