* **Title of Project:**

Sentiment Analysis Framework for Social Media

* **Group Members:**

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* **Brief Description about project:**

Currently, social networking sites are at an all-time high, so from there, a large amount of data is generated. Social Networking websites and micro blogging websites in todays world has become the biggest web destinations for people to communicate with each other, to ex-press their thoughts about products or movies, share their daily experience and communicate their opinion about real time and upcoming events, such as sports or political elections etc. To achieve a large, diverse data set of current public opinions or sentiments, Twitter could be used as a valuable resource which allows users to send and read small messages called Tweets. Twitter is a reservoir for a large amount of data. So this data is extremely useful for predicting results of political activities, new initiatives led by government, or research and deciding on what content to share with the audience. Input to our model is the raw data extracted from tweets. For the same, we automate the process of tweet extraction and categorizing it into two categories i.e. positive or negative. The content in twitter generated by the user is with the advent of social media over the last decade. The efforts to determine peoples attitudes with respect to a specific topic or event have garnered a wide research interest in natural language processing and introduced Sentiment Analysis.

Sentiment Analysis is systematic method of gaining knowledge from opinions or emotions. It's application has shown significance in business and marketing field. As social media gained its importance in recent days, Sentiment analysis turned out to be one of the best era for research. The sentiment analysis of customer's social media data is very important in the present day business scenarios. Customers share their reviews and their comfort towards the products on social media. This information can be used for various application such as market research, product feedback and analysing customer service effectiveness. The analysis of the sentiment could lead to many interesting results.

Machine Learning is a prediction technique in which the present data classification is

predicted based on past observations. There are many machine learning algorithms that

are in use today. These algorithms can also be successfully applied for classification of text efficiently. This is achieved by using Naive Bayes, Logistic Regression and Random Forest. In the Sentiment analysis literature, the best classification accuracy is achieved with Logistic Regression. We have used Jupyter Notebook in Anaconda version 4.2-3 and it's coding is implemented in Python by importing libraries for processes. Also there are diagrammatic representations in the form of Bar Graph, Word cloud, Confusion Matrix. Finally, all of those classification algorithms are compared and the best which fits the data set is obtained.

Sentiment Analysis Dataset Twitter has a number of applications:

* Business: Companies use Twitter Sentiment Analysis to develop their business strategies, to assess customers feelings towards products or brand, how people respond to their campaigns or product launches and also why consumers are not buying certain products.
* Politics: In politics Sentiment Analysis Dataset Twitter is used to keep track of political views, to detect consistency and inconsistency between statements and actions at the government level. Sentiment Analysis Dataset Twitter is also used for analyzing election results.
* Public Actions: Twitter Sentiment Analysis also is used for monitoring and analyzing social phenomena, for predicting potentially dangerous situations and determining the general mood of the blogosphere. Furthermore in this paper we present the results of our experiments and ideas on how to further improve the obtained results.