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Smart Political Campaign Management

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Abstract— Twitter data analytics helps organizations understand trending topics. Real time text analytics, evaluates the proposed real-time text processing pipeline using open source big data tools which minimizes the latency to process data streams. The main objective of the project is to filter out the opinion of an individual and to analyse the positive and negative views regarding a political party. This in turn, helps one to predict the outcome of an election for a particular region, Machine learning is used to analyse and predict the outcome of the election. Spark is used to combine multiple working systems to increase the speed of processing.

Keywords— Machine Learning ,Big Data, Sentimental Analysis

I. INTRODUCTION

The message of the campaign contains the ideas that the candidate wants to share with the voters. It is to get those who agree with their ideas to support them when running for a political position. The message often consists of several talking points about policy issues. The points summarize the main ideas of the campaign and are repeated frequently in order to create a lasting impression with the voters. In many elections, the opposition party will try to get the candidate "off message" by bringing up policy or personal questions that are not related to the talking points. Most campaigns prefer to keep the message broad in order to attract the most potential voters. A message that is too narrow can alienate voters or slow the candidate down
with explaining details.

II. FIELDS INVOLVED

A. *Sentimental Analysis*

Sentiment analysis can be defined as a process that automates mining of attitudes, opinions, views and emotions from text, speech, tweets and database sources through Natural Language Processing (NLP). Sentiment analysis involves classifying opinions in text into categories like "positive" or "negative" or "neutral". It's also referred as subjectivity analysis, opinion mining, and appraisal extraction.(Sentiment: opinion representing ones feelings).Sentiment Analysis is a term that include many tasks such as sentiment extraction, sentiment classification, and subjectivity classification, summarization of opinions or opinion spam detection, among others.

B. *Machine Learning*

Machine learning can as simply be said as machine inhibiting the human behavior of learning that is improvising through experiences. This learning process is performed with the aid of certain special algorithms known as machine learning algorithms. Presently there are many such algorithms in existence namely k-Nearest Neighbor, Support Vector Machine, Decision Tree, Case Based Reasoning etc. The applications of machine learning canbe divided into two major areas classification and clustering.

Classification is a supervised learning process where there is a predefined label for an instance whereas clustering is an unsupervised or unguided machine learning process where there are no predefined labels available. In classification there is a list of labels as the target set available, and the goal is to map to any of these labels in the set. In clustering the aim is to distribute data into k different groups such that data points similar to each other are in the same group. Similarity between data points is defined in terms of some distance metric. The criteria for dividing into clusters, the number of clusters etc are not at all predefined. Examples for classification is classifying proteins according to their function, pattern categorization etc.

III. PROBLEM STATEMENT

The problem in analysis of campaign management is that there is no system which predicts the mind set of people towards a particular party. So we want to develop a system that can predict the party choice of a particular person based on tweet

IV. LITERATURE SURVEY

Sentiment analysis is an application of natural language processing. It is also known as emotion extraction or opinion mining. This is a very popular field of research in text mining. The basic idea is to find the polarity of the text and classify it into positive, negative or neutral. It helps in human decision making. To perform sentiment analysis, one has to perform various tasks like subjectivity detection, sentiment classification, aspect term extraction, feature extraction etc. This paper presents the survey of main approaches used for sentiment classification.

Nowadays Opinion Mining has become an emerging topic of research due to lot of opinionated data available on Blogs & social networking sites. Tracking different types of opinions & summarizing them can provide valuable insight to different types of opinions to users who use Social networking sites to get reviews about any product, service or any topic.
Analysis of opinions & its classification on the basis of polarity (positive, negative, neutral) is a challenging task. Lot of work has been done on sentiment analysis of twitter data and lot needs to be done. In our work we are trying to perform sentiment analysis of the twitter data set that expresses opinion about Modii's Digital India Campaign. In my work, I have collected these sentiments and classified polarity of sentiments in these opinions w.r.t. Positive, Negative or Neutral. Twitter data is collected for analysis using Twitter API

In the last few years, use of social networking sites has been increased tremendously. Nowadays, social networking sites generate a large amount of data. Millions of people conveniently express their views and opinions on a wide array of topics via microblogging websites. In this paper, we will discuss the extraction of sentiment from a famous microblogging website, Twitter where the user posts their views and opinion.

The widespread use of online social networks (OSNs) to disseminate information and exchange opinions, by the general public, news media, and political actors alike, has enabled
new avenues of research in computational political science. In this paper, we study the problem of quantifying and inferring the political leaning of Twitter users. We formulate political leaning inference as a convex optimization problem that incorporates two ideas, Users are consistent in their actions of tweeting and retweeting about political issues, and similar user end to be retweeted by similar audience.

We then apply our inference technique to 119 million election-related tweets collected in seven months during the 2012 U.S. presidential election campaign. On a set of frequently retweeted sources, our technique achieves 94 percent accuracy and high rank correlation as compared with manually created labels.

V. EXISTING SYSTEM

The System works only on dataset which is constrained to sentiment analysis. The existing system does not determine the measure of impact, the results determined can have on
the particular field taken into consideration.

VI. PROPOSED SYSTEM

In the proposed system, we will retrieve tweets from twitter api. the collected tweets will be subjected to pre-processing. Then these pre-processed tweets will be classified based on the user requirements. the requirements include analysis of campaign management, sentiment analysis, word cloud, and trend identification.

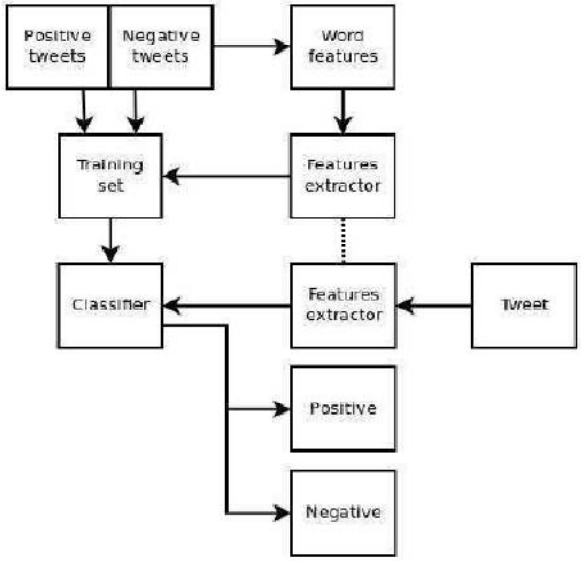

Fig 1. Block diagram for proposed system

VII. CONCLUSION

Most of the people use twitter nowadays. We get a fair idea of how people think about a particular party. Using the twitter data we can find out the mentality of the people and to
whom they vote. Using the above information we can predict to whom the person will vote.
Considering a tweet of particular region (consisting of many members) we can predict which
party is going to win in a particular area.

VIII. FUTURE ENHANCEMENT

The accuracy of the process can be further improved by implementing ensemble of different algorithms and using a voting mechanism to deduce the result.

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