Sentiment Analysis for Political Reviews using AAVN Combinations

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Abstract—**Sentiment analysis is to distinguish and group the assessments/ feelings/opinions in composed content. Till date, English language incorporates the majority of the examination work around there. This paper represent strategy to classify tweet sentiment using Naive Bayes technique based on three categories; positive, negative or neutral. People have different opinions for single thing. So it is very difficult to evaluate reviews manually for a particular thing. People usually misinterpret the reviews and finally come to wrong conclusion. So to deal with this problem an attempt is made to propose software for analysing the tweets of people on political views by using Adverb-Adjective-Verb-Noun combinations. Separate positive and negative condensed results are created which is useful for the client in choice making.**

Keywords—*Sentiment Analysis, Adverb-Adjective- Verb- Noun combinations*

I. INTRODUCTION

Opinions are the key influence of human behaviour. The internet communication has brought the world closer .Nowadays social networking, microblogging and blogging are becoming popular. The age of the internet has changed the way people express their thoughts and feelings. The people are connecting with each other with the help of the internet through the blog post, online conversation forums, and many more.In this internet world it is very difficult to for person to analyse each and every tweet or comment manually. Sentiment analysis is one kind of computational linguistic means sentiment analysis is the task of identifying positive and negative opinions, emotions, and evaluations. By using sentiment analysis using Naive Bayes algorithm with Adverb-Adjective-Verb-Noun combinations can easily find the view of the people, that it is positive negative or
neutral on the particular blog. To correctly classify the tweets machine learning technique uses the training data. So, this technique does require the database of words like used in knowledge-based approach and therefore, machine learning techniques is better and faster.The several

methods are used to extract the feature from the source text. Feature extraction is done in two phases: In the first phase extraction of data related to twitter is done i.e. twitters specific data is extracted. Now by doing this, the tweet is transformed into normal text. In the next phase, more features are extracted and added to feature vector. Each tweet in the training data is associated with class label. This training data is passed to different classifiers and classifiers are trained. Then test tweets are given to the model and classification is done with the help of these trained classifiers. So finally we get the tweets which are classified into the positive, negative and neutral.

II. PREVIOUS WORK

Numerous study has been done in determine and classify sentiment of tweets in Twitter. Both supervised and unsupervised technique are used. Supervised technique such as Naïve Bayes Algorithm[1]. Some other papers have shown an AAVN based sentiment analysis technique deploying linguistic analysis of adverbs, adjective, abstract noun and categorized verb, the paper defines a set of general axioms for opinion analysis to determine a functional value of the sentiment analysis[2]. The paper suggest,Text mining can be applied to many fields like in the digital newspaper to do politic sentiment analysis. The sentiment analysis is applied to get information from digital news articles about its positive or negative sentiment regarding particular politician. The model used to analyze digital newspaper sentiment polarity using naïve Bayes classifier method. It uses a set of initial data to begin with which will be updated when new information appears. The study showed promising result when tested and can be implemented to some other sentiment analysis problems[3]. It states that machine learning approach in which machines analyze and classify the human's sentiments, emotions, opinions etc about some topic which are expressed in the form of either text or speech. The textual data available in the web is increasing day by day[4]. Some paper approach on opinion mining, on the particular blogs or forums[5].

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III.   ALGORITHM

A.   System Block Diagram:

As per the existing system there are many techniques to calculate the sentiments on various things but as we saw there are not any system developed for the political reviews. So we are proposing to develop a Sentiments Analysis System for Political review based on Adverb-Adjective-Verb-Noun (AAVN), which takes the words into consideration and calculate the sentiments based on the points or ranking given to each word. It can be either negative or positive. There are two stakeholders in the system which are as follows: Admin and User.

i.   Admin as a stakeholder can manage political parties and the system users and also can create and manipulate the blogs for political parties.

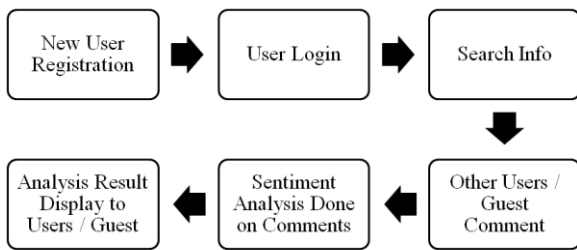ii.   User as a stakeholder can post a review on the blog for which the sentiment will be calculated.

Fig.1 Basic Flow Diagram of System

The above figure shows that a user can register and login in a system after which they can post a review on the blogs created and managed by the admin. A user can also checkout the comments/reviews given by the other user and their sentiments.
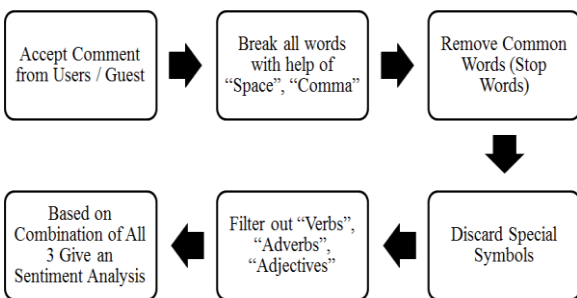
B.   Basic Working of Algorithm:

Fig.2 Basic Working of Algorithm

The above figure shows the working of AAVN algorithm to calculate the sentiments on the comments/reviews given by the users. The flow is whenever a user comments on the blog the whole comments are split by the help of the space and comma so that each word can be searched in the dataset with respect to points/rank. After splitting the comments all the irrelevant words and special symbols are removed like "a", "is", etc. so that the calculation is faster. After which all the remaining words are filtered for AAVN approach and the formulas is applied to each words [2].

CONCLUSION AND FUTURE WORK

The Proposed system presents by training and verifying the sentiment classification by the algorithm, the system could archive a high degree of accuracy using AAVN Combination. This method is suitable to train and classify sentiments from various blogs/twitter and reviews on political points or issues. This method is also a good candidate to assist human/operator to classify a large number of tweets and also suitable for political or business sentiment classifications.

The future of sentiment analysis lies in resolving the challenges faced and forming an effective sentiment analysis tool with the following additions:

- Harnessing the wisdom of crowds- let the tool scale and learn, once it has relevant data across various platforms.
- Flexibility- Make sure that the tool adapts through the changing needs of the brands across various time domains and for the years to come.
- Don't stop at positive or negative sentiments- Generate a tool that adds various other sentiments in addition to the existing ones. Add wishes, caveats, comparisons and preferences to the existing sentiments.
- Detection of biased messages- the tool must be able to identify false messages that are used to portray the brand in a positive way. These messages are computer generated.
- Used for various platforms- the language used by finance industry is different as compared to the language used by the food industry. Sentiment analysis should adapt itself depending on the target-industry and deliver the output accordingly.[9]

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