

SENTIMENT ANALYSIS USING MACHINE LEARNING

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Abstract - - Nowadays, social media has a huge impact on society. But it can be influential on society in both positive and negative ways. Our aim is to make proper use of Social Media in politics. This is the most efficient method to understand the sentiment of any posting in social media. We have analyzed some postings to understand political sentiments. There are some dominant keywords in any politically motivated posting. At first, we have prepared a dictionary consisting of unique words collected from political or nonpolitical posts, titles or comments. We have extracted each word of the posting and then matched those with the dictionary words for classification to identify the sentiment expressed in a new post, title or comment.

Key Words: Sentiment, Post, title or comment, keywords, political.

1. INTRODUCTION

The popularity of social media in youth makes it a potentially influential force. Social Media gives people a way to stay in touch with people who live far away. It lets people share informative, interesting and fun content. It gives a way to businesses to engage with customers. But one of the problems is that anybody can share anything, including material that may not be accurate. Real problem starts when people spread inflammatory, unverified or outright false information. This can harm individuals when someone is bullied online. This can also have a harmful impact on society as a whole. The 2016 presidential election was an example of this problem.

1.1 Social Media Impact

The early days of social networking sites were viewed merely for friendship or dating purposes. But, with the progress of time the characteristics of most of the social media are now changing. For example, in 2008 and 2012 US presidential elections, social media were used for election campaign and for the engagement of the youth [1]. The use of social media in politics including YouTube, Twitter, and Facebook has dramatically changed the way campaigns are run and how people interact with their elected officials. Due to the rapid growth of the Internet, the networked population has been increasing to a few billions [2]. Again in 2009, social media - twitter was used efficiently by the politically interested people and the politicians during German general election

to conduct the election campaign and to discuss political events [3].

1.2 Politics using Social Media

In recent years, social media has an impact on the public discourse and communication in the society. In particular, social media is widely used in political context. More recently, micro blogging services (e.g., twitter) and social network sites (e.g., Facebook) are believed to possess the potential for increasing political participation. While Twitter is a perfect platform for users to spread not only information in general but also political opinions publicly through their networks, political institutions (e.g., politicians, political parties, political foundations, etc.) have also begun to use Facebook pages or groups for the aim of getting into direct dialogs with citizens inspiring more political discussions.

Considering the rapid growth of micro-blogging, many researchers have tried to analyse the sentiments of people either positive or negative and tried to understand their opinions [4], [5], [6]. Expressing political intents in social media is evolving tremendously [7]. The prevalence of social media in politics has made elected candidates and officials more accountable and accessible to voters. And the ability to publish content and broadcast it to many people instantaneously allows campaigns to manage their candidates' images supported rich sets of analytics in real time and at almost no cost.

The goal of this paper is to implement a program where a social media post or comment will be input data to perform Sentiment Analysis and to classify its sentiment either political or non-political.

2. METHODOLOGY

The project contains a User Portal and an Admin Portal. User Portal is just like any other Social media platform i.e. Twitter, Facebook, and Instagram etc. Admin Portal will have control over the activities on User Portal.

- i. User Portal: Users can create their accounts and post pictures with captions. But before account is created, the admin will approve/ disapprove the account creation request. Later, based on the admin's response, the user will be notified.

- ii. Admin Portal: Admin has all the rights to control User Portal. Admin can define some Keywords and their sentiments. Based on these keywords Sentiment Analysis will be done.
- iii. Data Analysis: If the admin has defined a keyword as “Harmful” and a user has used that keyword in the post for more than 5 times, the admin will have the right to hide that post or delete it.
- iv. Graph Generation: Graph will also be generated based on the post. Firstly it will be generated for analysis of Political and Nonpolitical posts. Then further it will be done for identifying actual sentiments i.e. Normal, Harmful or Neutral.

Table-1 displays a list of keywords. Table-2 displays a list of all users. Table-3 has sample post classification in Political and Nonpolitical posts as two categories.

Table -1: LIST OF KEYWORDS

Sr. No.	Keyword	Sentiment
1.	Bomb	Harmful
2.	Protest	Harmful
3.	Support	Good
4.	Social	Normal

Table -2: LIST OF USERS AND THEIR STATUS

Sr. No.	User	Status
1)	Omkar Kadlag	Approved
2)	Kareena Shahani	Approved
3)	Dhanashri Kalaskar	Approved
4)	Prasad Pawar	Disapproved

Table -3: POST CLASSIFICATION

Sr. No.	Post Title	Category
1)	Wildlife	Nonpolitical
2)	Bomb	Political
3)	Election	Political
4)	Nature	Nonpolitical

3. CONCLUSION

We have tested all the posts from the User Portal. Among those, 15 posts are Nonpolitical and 8 posts are Political. Table III shows sample detection results. 1 post is hidden by the Admin as it had a harmful keyword used many times. To understand the sentiment of any social media posts, an efficient filtering method is an ultimate necessity. The aim is to make proper use of Social Media in politics. This research might lead to a more peaceful society using some scientific tools to reduce political turbulence. The accuracy of our classification system depends on the dictionary of data set as well as training.

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