Smart Social Media Using ML

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ABSTRACT

Humans have interacted with each other only in person, but in the last few decades with the explosion in social media, they have started communicating online. Today, people communicate more online than offline and this is changing the way we communicate and interact with each other.

Online interaction is very different from in-person interaction with a known person or a stranger. We have more freedom in an online-in- teraction. Social media gives us the ability to remain anonymous and say whatever we want to anyone and thus, there is more exploitation of this which leads to more aggression and vulgarizes as we com- municate or show our emotions and ultimately leads to more tension between people and communities.

This paper examines current social media platforms and their take over toxicity over the internet and what can be done to decrease tox- icity over the internet like AI and Machine Learning..

INTRODUCTION

The term social media is no stranger to us in the 21st century. It is de- fined as the collection of websites, applications and services that fo- cus on communication over a network mainly internet. Community based input, interaction, content and collaboration are some features provided by social media nowadays. People use social media to stay connected with their loved ones

Social media has affected our lives in many ways. Among this is the way people communicate with each other. Communication is the essential thing in our lives. It makes the work easier and things simpler for us. It is through which people develop trust among each other. From being a tool to establish connections among friends, social media has evolved into a much bigger thing.

SOCIAL MEDIA STATISTICS

As of Dec 2019, total worldwide population is 7.8 billion. The internet users were 4.54 billion users with 3.725 billion active social media users. People have 7.6 social media accounts on aver- age. The average daily time spent on social media is 142 minutes a day. 91% of retail brands use 2 or more social media channels. 81% of all small and medium businesses use some kind of social plat- form Social media users grew by 328 million between October 2018 and October 2019.

That works out at 10 new social media users per second. Facebook Messenger and Whatsapp handle 60 billion messages a day When asked 81% of teenagers felt social media has a positive effect on their lives.

Lack of physical communication

Social media does not allow for physical or in-person communication. Because of the lack of physical contact, it is more difficult to form deep attachments and relationships that lead to high levels of trust, making communication more difficult. Social media communications have the potential to be a great resource for building trust among project team members. The next sections examine research on social networks and social media, as well as trust.

SOCIAL NETWORKS AND SOCIAL MEDIA

Consumer behaviour and business communication patterns are chang- ing as a result of social media. The rise of social media platforms like Facebook and its competitors has been well documented. According to a 2009 McKinsey survey of 1700 executives worldwide, around 64% of these businesses were adopting social media for successful internal communications (Culnan et al., 2010). Barnes and Mattson discovered that 52 percent of executives use social media as a successful tool in their organisations in a study of CEOs. When asked if their organisa- tion utilises social media "to communicate with other companies such as vendors, suppliers, or partners," 34 percent said they do (Barnes & Mattson, 2009).

Trust

A communication exchange typically results in an appraisal of the parties' trustworthiness, in addition to impacting the amount of com- prehension among communicating parties. The words used, the for- mat used, and the regularity with which they are used can all influ- ence the perception of trustworthiness. Because of the reduced reac- tion time and contribution to the network, social networking, accord- ing to Van Zyl (2009), accelerates

the establishment of trust, relation- ship-building, and effective communication among people in commu- nities. Small conversation on social media facilitates familiarisation and aids in the development of rapport as well as a loving, support- ing, collaborative, and trustworthy environment (Pullin, 2010). Trust helps project managers influence and manage stakeholder expecta- tions (Pinto, Slevin, and English, 2009; Smyth, Gustafsson, and Gan- skau, 2010), which is critical to project success (Project Management Institute, 2008). Furthermore, trust has been mentioned as a factor that facilitates cooperation.

PROBLEM STATEMENT

The problem statement of this project is to remove hate speech from the social media among the people of different religion, casts and communities which are with or against some issues.

- Authentication : For creating the profile of the user and to enter in the website we use registration module that help in the registration of the new user and we are using login module for those users who is already been registered and logout module to come out of the website.
    o Registration :- Registration module consist of a name field, Email field, Password field, City, Country and the Marital Status.
    o Login :- In this module user need to enter the email and password and if the entered email and password matched with the database credentials then it will get login.
    o Logout :- This module help us to come out of login page.
- Friends :- This module allows us to make friend to other user and perform different task such as sending a friend re- quest to user and to accept friend request of other user and get time line post of the user, at last checking the list of the friends.
    o Follow User :- This module help us to follow a new user.
    o Unfollow User :- This module help us in un- following a user who is already a follower.
    o Timeline : This module provide the time line of the post of the user.
    o List of Friends :- this module provide us list of friends to whom user has followed.
- Post : This module is used to post caption or caption with file
- This consist of various module such as uploading a post, updating a post , deleting a post and like / unlike a post.
- Uploading Post :- This module is used to upload a post
- Updating Post :- This module is used to update a post such as changing the caption.
- Delete a Post :- This module is used to delete a post that the user already has posted.
- Like/Dislike a Post :- This module is used to like/Dislike a post by different user.
- Comment : This module is use to comment in the post of your own or other user post, the comment you will do get store in the database. The comment can be of any size or it can be a single word as well after the submission of the comment. AI will check whether the comment is come in the category of toxic or not and if the comment comes in the category of the toxic then in this case the whole com- ment will get deleted.
- Chatting : This module is used to chat with your friend in real time you can type any kind of sentences without any restriction our AI will not check comment section. Depend- ing on the internet speed your chat will get send to your friend moreover it will chat will get sore in the database so in case if you want to check your previous chat you can read it.
- Rating People Based On Comments : If a person writes a good comment then in this case person will get a reward of an increased rating and there is no limitation of rating so it will keep on increasing and people can showcase their rat- ing in their profile. The person who has more rating is con- sidered to be better than others this does not mean that rat- ing will not decrease it will decrease when someone writes the wrong comment and also if the people started flagging the comment.
- Restricting Wrong Comments : We know that people use wrong words in the comment which may lead to fight among friends and spread hate among people so we have introduced a new feature to our Smart Social Media that re- strict people to write wrong words for this we will use Ma- chine Learning in the background that will restrict people in doing this Moreover our Smart Social Media will de- crease the rating of the person who has written the wrong comment and if the person gets a rating below 3 out of 5 then there will be Penalty of three days restriction to com- ment anywhere .We will be using Abuse classifier to keep the comments section of post free from any abusive con- tent. This cover different controversial topics like Immigra- tion, Terrorism, Unemployment, etc. Keeping the comment section clean from any abusive or offensive content is one of the top most priority of every social platform today and abuse classifier can play a significant role in this.

IMPLEMENTATION

MACHINE LEARNING
- Libraries Used:- Better Profanity and Profanity Check.
- Datasets Used: - Twitter's and Wikipedia's Combined Da- taset.

Dataset	Not Offensive	Offensive	Total
Tweets	4,163 (16.8%)	20,620 (83.2%)	24,783 (100%)
Wikipedia	143,346 (89.8%)	16,225 (10.2%)	159,571 (100%)
Combined	147,509 (80%)	36,845 (20%)	184,354 (100%)

Combined = Tweets + Wikipedia

- Internal Implementation of model is done with Pandas, Scikit Learn and Linear SVC.

The Twitter dataset has a column named class that's 0 if the tweet contains hate speech, 1 if it contains offensive language, and 2 if it contains neither. I classified any tweet with a class of 2 as "Not Of- fensive" and all other tweets as "Offensive."

The Wikipedia dataset has several binary columns (e.g., toxic or threat) that represent whether or not that text contains that type of toxicity. I classified any text that contained any of the types of tox- icity as "Offensive" and all other texts as "Not Offensive."

Cleaned Dataset

```
is_offensive,text
0,Then go to the village pump and suggest they change the language in how a RFC should be set up.
1,"ANTI GREEK NATIONALIS -WIKIPEDIA

Hi Alexikoua,
Yous should not vandalise Wikipedia by editing false information.You may be a chauvinist but you can not edit false information on Wikipedia.
WIKIPEDIA WITH YOUR MILITANT IDEAS."
1,Dis hoe wasnt dis violent on Lottery Ticket 😂😂
0,It is better for Atabay not helping the banned vandals pushing their POV.
0,"""is in CamelCase.  """SiCKO"""" is not CamelCase, so the CamelCase rule R. Baley mentions is inapplicable.  """
0,"and

Hi!  has Requested Arbitration with me:

Wikipedia:Requests for arbitration/Trey Stone and Davenbelle
Wikipedia:Requests for arbitration/Trey Stone and Davenbelle/Evidence

You are mentioned in evidence that I have presented and I'm bringing this to your attention. Comments and evidence of your own are welcome.

Sincerely,  01:08, May 14, 2005 (UTC)"
0,Nonetheless lactose has a hemiacetal group while e.g. sucrose and trehalose don't (they are locked acetals)
0,"Revert as much as you want
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Pandas for reading and visualizing data.

Scikit-learn's CountVectorizer for bagging the words in a structure of how many times they repeated in the text. Using fit_transform() method of it we fit the whole combined dataset into bag of words or vectors.

LinearSVC is a classification algorithm which is the part of Support Vector Machine and known as Support Vector Classification algo- rithm which in turn return us the prediction of the text string as a real number from 0 to 1.

FRONTED AND BACKEND TECHNOGIES

- MongoDB
- Express
- React
- Node PACKAGES
- Bcrypt
- CORS
- Dotenv
- Express
- Helmet
- Mongoose
- Morgan
- Multer
- Nodemon
- Material-UI
- React
- Timeago.js

CONCLUSION

Project management requires communication practices that go beyond transaction confirmation to include managing relationships, building trust, and managing stakeholder expectations. It seems likely that pro- ject managers can enhance the communication effectiveness of teams by incorporating social media. Therefore, it is important for project managers to understand the relationships among communication prac- tices, trust development and the affect that social media have on them as they apply to the execution of projects. Not only is it important for practitioners to understand these relationships, but researchers and pro- ject management software vendors would benefit from understating the role of social media in managing projects.

Because the phenomenon of using social media to support project man- agreement is new, there are no models to guide our understanding of the important elements associated with this practice or how these elements influence project success. This paper identifies project management information systems that incorporate social media in various ways. It extracts dimensions of these systems and lays the groundwork for the development of a model that can guide researchers and practitioners in understanding this emerging practice.

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