

DEPRESSION DETECTION USING SOCIAL NETWORKING SITES USING MACHINE LEARNING

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Abstract - In today 's world, Social networking obsession is increasing day by day. Social media is popular among youngsters, senior citizens, and almost all people. But with the extreme use of social network communication, that affects human life very badly. Recently, a growing number of mental illnesses have been observed in social networks. Nowadays, the symptoms of these mental illnesses are observed, which causes various dangerous issues. Human emotions like depression are inner thoughts of human beings that expose an actual feeling of a person. Analyzing and determining these types of feelings from people's social actions in a virtual world can be very helpful to understand their behaviors. Detecting words that express negativity in a social media post is one step towards detecting depressive moods.

Key Words: Data Mining, social media, Depression, PDD (Psychological Disorder Detection), OSN (Online Social Network), SNMD (Social Network Mental Disorder) Classifier, feature extraction.

1. INTRODUCTION

Human feelings like depression are inner thoughts of human beings that expose the actual behaviors of a person. Determining these types of feelings from people's social posts in a virtual world can be very helpful to understand their behaviors. Existing approaches may be useful for finding common emotions, such as positive, negative, or neutral expressions. The system will have two main modules, System will continuously keep on checking the posts and chats of users. And if it detects the negative thought kind of behavior then the system will automatically send the positive post on his/her wall based on the level of depression. Most depression is situational. The symptoms of depression are often due to depressing conditions. So, there is a need to propose a system, where a depressed person can be identified on social media based on his activities like posts and chatting. we have many social media sites through which users interact

among their friends and share their thoughts, but till now there is no system implemented which will help the admin to find out if someone is depressed.

1.1 Motivation

The main motivation of this project based on our society is in the throes of a virtual epidemic of depression. The numbers are quite staggering. Most depression is situational. The symptoms of depression are often due to depressing situations, not a disease. So, there is a need to propose a system, where the depressed person can be identified on social media based on his activities like posts and chatting.

1.2 Proposed System

We have many social media sites through which users interact among their friends and share their thoughts feelings, but till now there is no system implemented which will help the admin to identify if someone is depressed. So, we are proposing the system which will have the 2 main modules. The System will continuously keep on monitoring the posts and chats of users. And if it detects the negative thought kind of behaviour then the system will automatically post the positive post on his/her wall based on the level of depression. It will be based on data mining.

2. SYSTEM ARCHITECTURE

2.1. Admin:

1. View Users: Admin can view all the users registered in system.
2. Sentiment Analysis Management: Admin add the sentiments and keyword to dataset in the form of key value pair.
3. Manage Dictionary: System itself monitors all the posts, chats etc. of the social media user and apply sentiment analysis.

4. Upload Motivational Post: Admin uploads best motivational post, so that system can send those post on user's wall based on sentiment analysis.
5. Maintain Post Level Wise: Post are classified based on the level of depressed the end user is.
6. View List of all depressed Users: Admin can view all the depressed users in graphical design.

2.2. Social Media User:

1. Registration: This module takes care of the registration part of the new user.
2. Login: Once the user gets registered, he/she login with the credentials.
3. Activities like Facebook: Once the user logs in to the system, he/she will come across the features and functionalities like upload posts, chatting.
4. The system will continuously keep on monitoring the posts and chats of users. And if it detects the negative thought kind of behavior then the system will automatically post the positive post on his/her wall based on the level of depression.

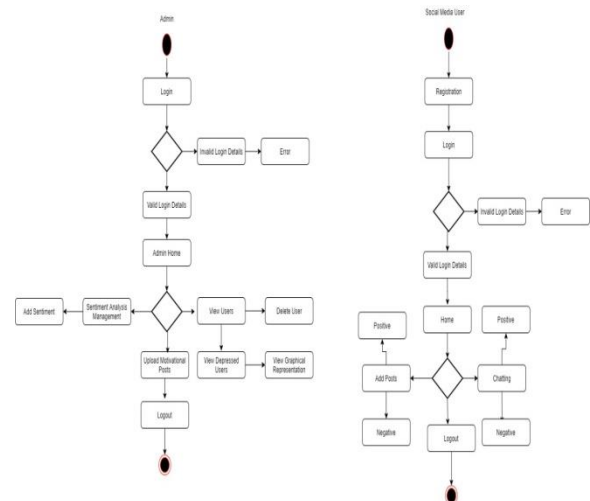


Fig -2: Activity Diagram

These social networking platforms give a person's experiences, opinions, socialization, personality. People's feelings could be positive, negative, or neutral. To determine depression levels, a person's negative response is important because it tells us about negativism. The earlier method of diagnosis of the patient is not so relevant but using user-generated content on social media helps to predict the mental health levels and depression of a particular individual.

3. CONCLUSION

We have proposed a system that will help suspected users to save his/her life, by knowing in advance whether the user is depressed and even the system will send some motivational posts to the user based on the level of depression he is. We conclude that system will be very useful in today's world where most of us don't have time to meet our friends share their thoughts and feelings as we used to have in older days due to busy schedules. So, our system plays a very vital role over here to avoid any unwanted human loss. Our future work would inform their family members or relatives regarding the situation or depression the person is doing through. So that family or friend circle will help the person to come out of depression.

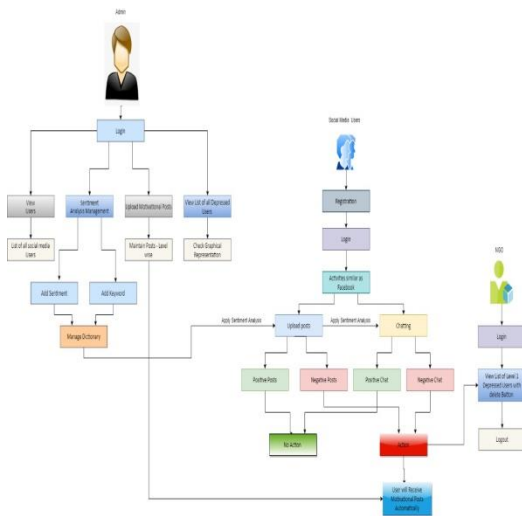


Fig -1: Architecture diagram

We have used the Naive Bayes Algorithm in this project. Using Sentimental analysis, we can detect human emotions which can be positive, negative, or neutral. A dictionary of all negative words is stored in the Naive Bayes Algorithm. If the users post any negative word in their post, then the system compares the negative word posted by the user with the dictionary which is stored in the Naive Bayes algorithm.

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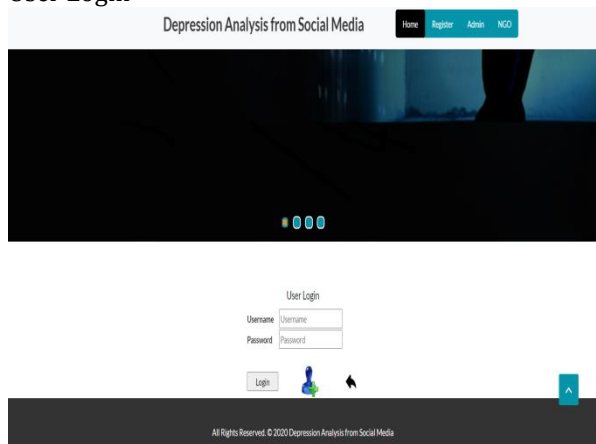
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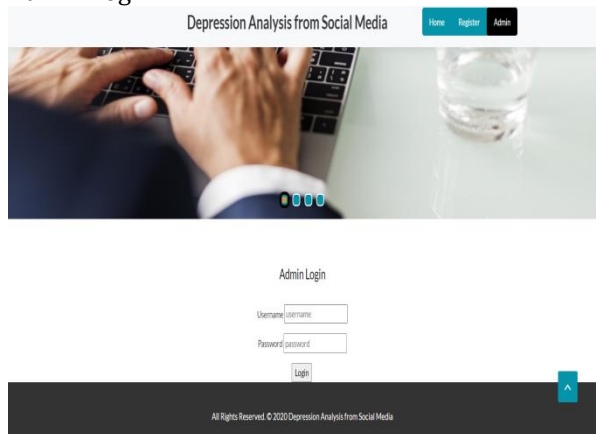
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RESULTS

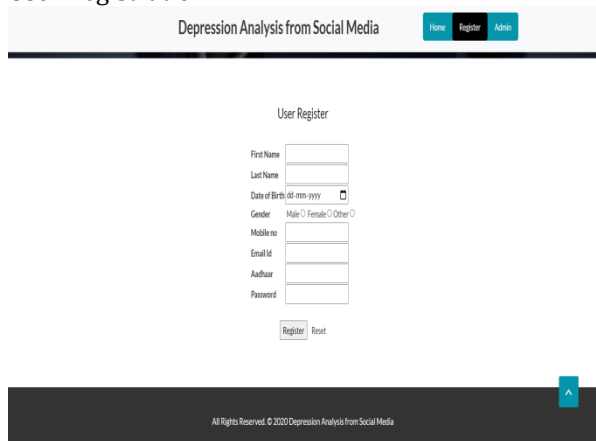
User Login



Admin Login



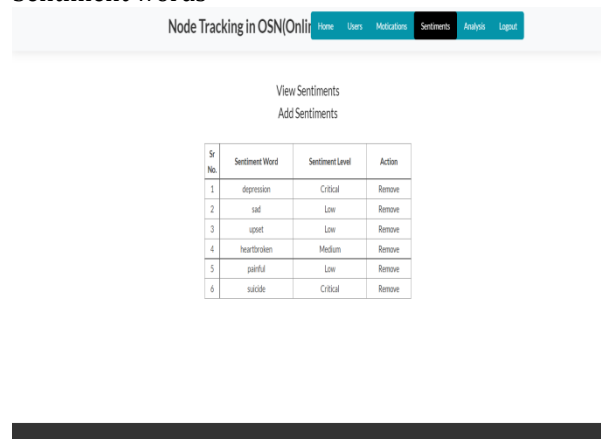
User Registration



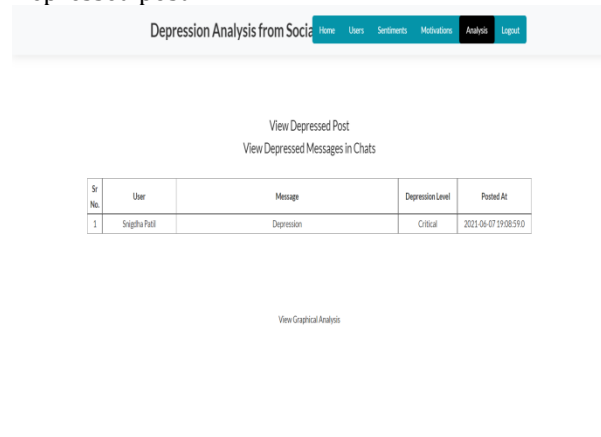
NGO Login



Sentiment words



Depressed post



Motivations

Depression Analysis from Social Media

Home Users Sentiments Motivations Analysis Logout

View Motivations
Add Motivations

Sr No.	Motivation	Sentiment Level	Action
1	Be happy and enjoy	Low	Remove
2	No one is perfect.	Medium	Remove
3	Think positive.	Low	Remove

Graphical Representation

Depression Analysis from Social Media

Home Users Sentiments Motivations Analysis Logout

Graphical Analysis



Sr no.	No of messages	Positive messages	Negative messages	Critical level msg	High level msg	Low level msg
1	1	0	1	1	0	0