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DEPRESSION DETECTION USING SOCIAL NETWORKING SITES VIA DATA MINING

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Abstract —Human emotions like depression are inner sentiments which are often exposed by the way the person behaves. If such emotions can be analyzed and determined from the person's social activities in the virtual world, it can be very helpful to understand these behaviors. To detect depressive moods, detecting words that express negativity in their social media messages can be the first step. Depression doesn't just affect the person himself, it can affect his friends, family, co-workers, and everyone around him. Also, it may have an impact on how he performs at work or his concentration level in general; in short it can negatively affect productivity. To understand if a Facebook type system user could exhibit depression over a period of time, then the system will be able to identify the depressed user based on his activities like post and chats, which includes emotional type keywords.

Keywords **-** Depression detection, data mining, social media, PDD (Psychological Disorder Detection), OSN (Online Social Network), SNMD (Social Network Mental Disorder) classifier, feature extraction.

I. INTRODUCTION

Our society is within the throes of a virtual epidemic of depression. The numbers are quite staggering. over 20 percent of the American population will experience at least one episode of what we talk over with as major affective disorder. we'd like to appear deeper into this phenomenon to grasp it and overcome it. My contention is, firstly, that our cultural values and memes induce us to measure in ways which are, indeed, depressing. Secondly, much of what we talk about as depression is inaccurate. Most depression is situational. The symptoms of depression are often because of depressing circumstances, not a disease. In other words, under certain circumstances.

II. LITERATURE SURVEY

1. Depression Analysis from Social Media Data in Bangla Language using LSTM - Long Short Term Memory

Author: Abdul Hasib Uddin, Durjoy Bapery, Abu Shamim Mohammad Arif

Description:

Analyzing and determining these sorts of emotions from people's social activities in the virtual world are often very helpful to know their behaviors. Existing approaches may be useful for analyzing common sentiments, like positive, negative, or neutral expressions. However, human emotions, like depression, are very critical and sometimes almost impossible to analyze using these approaches. In this work, we deployed LSTM - Long Short Term Memory Deep Recurrent Network for depression analysis on Bangla social media data.

2. Survey of depression detection using social networking sites via data mining.

Author: Dr. Sanjay Chitnis, Aqsa Zafar; Mannudeep K. Kalra

Description:

Depression detection from Social Networking sites has been studied broadly in previous years. These sites provide a platform for his or her users to share their life events, emotions, and everyday routine. Many researchers demonstrated that content generated by the users is efficient thanks to realizing their psychological state. By mining user-generated content, depression can be predicted. By collecting all the necessary and relevant information from the social networking sites from the posts, we can predict the person's mood or negativity. This survey paper focuses on prior research done regarding detecting depression levels based on content from social network sites

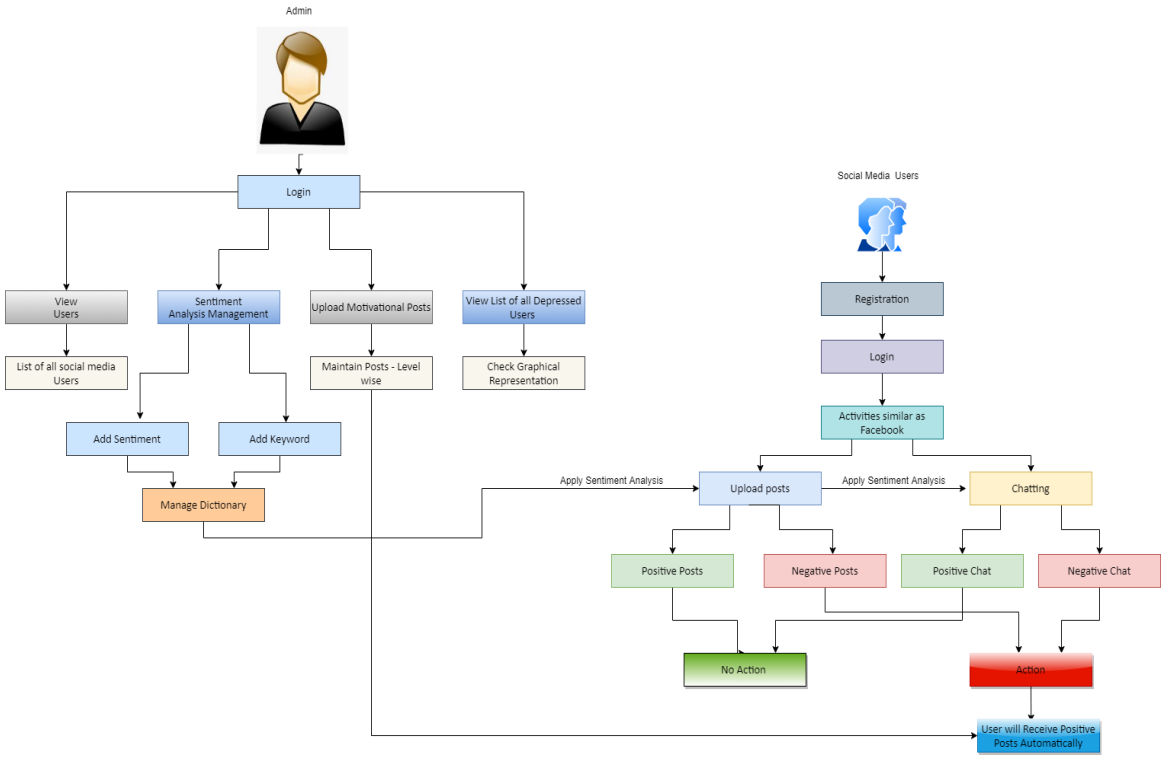
III. EXISTING SYSTEM

Mental health has become a very important topic, it is observed that people don't even express their real emotions to the people around them like their family or real-world friends. Rather they use social media platforms to express their emotions. Existing approaches are useful for analyzing common sentiments such as positive, negative, or neutral expressions. However, depression is very critical and sometimes almost impossible to analyze using existing systems.

IV. PROPOSED SYSTEM

The proposed system will consist of two main modules, one admin and the other is the user. Admin will maintain the dataset of all the keywords related to depression. The system will continuously monitor the posts & chats and will identify if the user is depressed or level of depression he/she is going through. The user module consists of the functionality same as Facebook. The Depression level of a user has been detected based on his posts on social media. The system will automatically send the motivational post to a depressed user based on the level of depression he/she is going through.

Proposed system architecture



V. MODULES

5.1 Admin:

- **View Users:** Admin can view all the users registered in system
- **Sentiment Analysis Management:** Admin add the sentiments and keyword to dataset in the form of key value pair
- **Manage Dictionary:** System itself monitors all the posts, chats etc of the social media user and apply sentiment analysis
- **Upload Motivational Post:** Admin uploads the best motivational post, so that the system can send those posts on users' wall based on sentiment analysis.
- **Maintain Post Level Wise:** Post are classified based on the level of depression of the end user is.
- **View List of all Depressed Users:** Admin can view all the depressed users in graphical design.

5.2 Social media user:

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

VI. 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 this system will be very useful in today's world where most of us don't have time to meet our friends and share their thoughts and feelings like 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.

VII. REFERENCES

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