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Real Time Detection of Depression in Social Media Using Regex

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Abstract: *Depression is a severe mental condition that impacts people everywhere, regardless of age, gender, caste, or religion. Since social media sites make it easier for people to express their opinions, many spend nearly their whole day there. With the use of user posts uploaded on a social networking website, this study aims to investigate a data model for identifying sorrow. On this project, we offered a data model based on user datasets in the social media platform of all social media websites. The dataset's social media postings must be used to estimate the user's depression levels. A technique that comprises data validation, data preparation, and training the model using user test data to predict depression levels is used to identify individual depression. With the use of data models created from people's tweets, we will categorise persons with clinical depression and symptoms associated with it. In this project, we'll create a machine learning system to assess the severity of depression using user information from social networking sites. The Support Vector Machine (SVM) and Nave Bayes algorithms were used with Natural Language Processing (NLP) to diagnose depression in the simplest and most effective manner.*

Keywords: Sentimental analysis, detection depression, Support Vector machine (SVM)

I. INTRODUCTION

One illness that has ties to a widespread sickness is depression. All throughout the world, it is concerned with issues relating to mental health. Nearly 300 million individuals worldwide are affected by mental illness in the present climate. People who are depressed have feelings like joy, wrath, melancholy, and happiness, an empty or anxious mood, increased or reduced appetite, trouble sleeping, guilt, self-harm, and suicidal thoughts. This functional issue may interfere with everyday activities and make it difficult for us to focus on our mental health The majority of individuals now have status equivalent to that of a deceased person, and depression levels are correlated with life expectancy. The majority of people experience depression 3 out of 100 times, affecting 1.5 million persons, according to the Thailand National Psychological State Survey (TNMHS). One of the most prevalent mental disorders in recent years, depression usually results in suicidal thoughts and shortens people's lives. 5.98 suicides per 10,000 individuals were committed in Thailand. These days, mental health issues can have a range of negative economic effects. The paper claims that the recession had an effect on how the economy was doing; causing a loss of $800 billion in 2010 that has since doubled. Both psychological and physical health is negatively impacted by depression. It's also associated to illnesses like diabetes, increased vital signs, and back discomforts [6]. Heart disease and cancer risk are both 67 percent and 50 percent higher, respectively, in those with high levels of depression [7]. In addition, mental illness has extra effects on loved ones, caregivers, friends, and other connections, such as high levels of stress at work, a failing marriage, or loneliness at home [8]. The barriers include a lack of knowledge about depression and awareness of it, as well as a negative opinion of people with psychiatric disorders; all of these factors will increase the number of people who are now depressed. In order to encourage individuals to remember their emotional health, including depression, there should be a reliable depression detection system accessible online.

II. LITERTURE SURVEY

J. B. Karampampa Korinna et al. [3] describes a depressed person's surroundings, including their family background, their job demands, and in the worst cases, suicide attempts, affects them on a daily basis. the majority of individuals today express their feelings and opinions through sending messages on Facebook, Instagram, Twitter, and other social media

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platforms. In order to gauge the severity of depression, we will analyse data from user-submitted text messages individually, in the basis of we can identify the depression.[14][10].R. L. S. and J. B. W. W. Kurt Kroenke al, [10] describes the detecting depression levels based on the Reddit dataset using a deep learning system. People's texts and online postings will be analysed by the trained model, and after that, we'll use an algorithm to figure out what stage of depression each person is in. Depression Early Detection with CLEF eRisk 2017. With a high degree of prediction accuracy, we can determine the severity of depression using machine learning. [13][11].International Health Policy Programme. Burden of Disease Thailand[3] al, proposed the depression is a serious disorder that will make mental health problems worse. Currently, it affects most people who are under stress at job, school, college, and in their personal life. Major Depressive Disorder is another term for it, along with other conditions. Due to the pandemic condition, which causes the majority of people to experience depression, it is now a common illness. [27][5][17].K. S. S. Phattharayuttawat, T. Ngamthipwattana [6] al, proposed they feel it will make them seem mad, people are reluctant to discuss this illness. Other health issues, including heart disease, are more prevalent among sad people. Analy0sis of data from the user's social networking site is being done to gauge their level of unhappiness. By employing this technique, we can identify whether a user is depressed or not. We are using a machine learning approach based on the training dataset to conduct model selection, validation, and data preparation concepts in order to categorise the data based on user input text messages.[8].World Health Organization, "Depression and other common mental disorders: global health estimates,".[2][25]the development of international social media messaging platforms, or the way that everyone today utilises their social media platform to convey their people's ideas, sentiments, emotions, fears, and successes through user posts messages. Manjunatha HT, Ajit Danti, Arunkumar KL, Rohith D"`[17] al, proposed the technology has advanced, and as a result, things like the Internet of Things and artificial intelligence are now a part of our daily lives. On social media sites like Twitter, Facebook, Instagram, Reddit, and WhatsApp, among others, they may share information and express their thoughts using lengthy phrases, quotations, or images. Sharing opinions and information on social media is an excellent way to keep those confined to their homes distracted and make their lives more comfortable during epidemic situations.[6][15].

III. METHODOLOGY

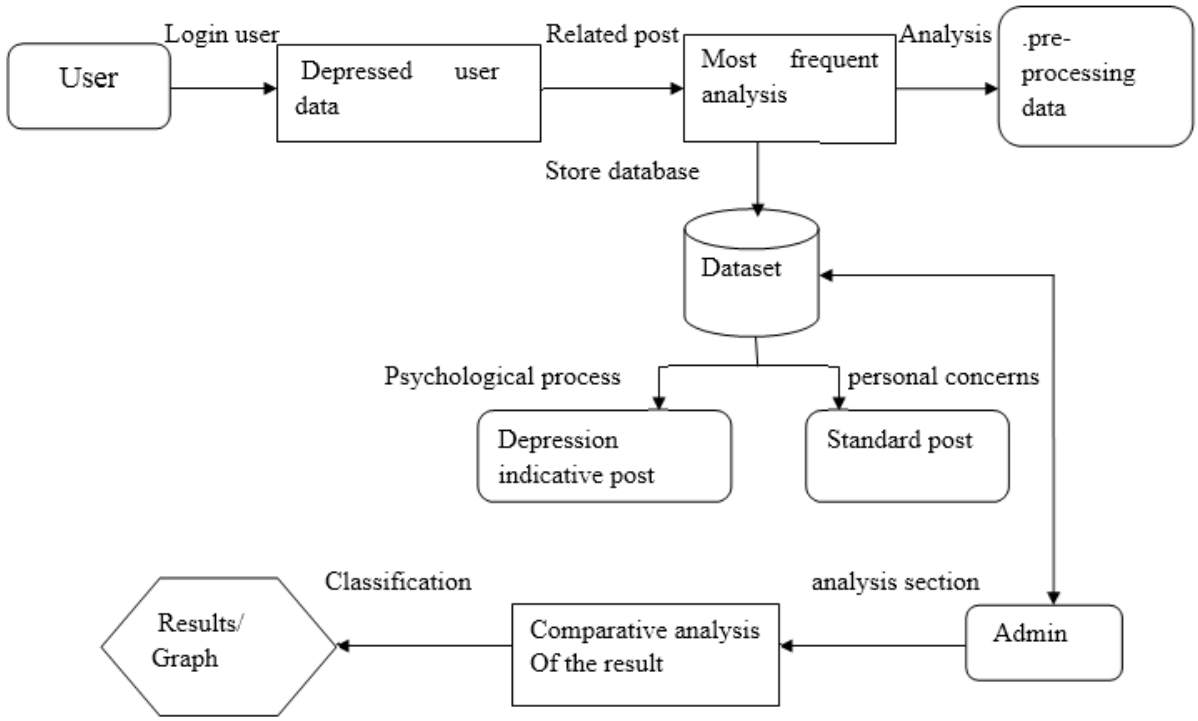

Fig 1: Showing the block diagram of depression

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In this paper, users must sign in using accurate login information and post messages based on that information. The paper administrator must then pre process the datasets to predict the message's stage and classify which posts—such as those mentioning depression—fall under indicative and standard posts so that we can plot the resulting graph.

Proposed methodology consisting of

User

- Depression user data
- Most frequent analysis/standard post
- Pre-processing data
- Dataset classification
- Depression indicative post
- Standard post

Admin

- Comparative analysis of the results
- Result graph

3.1 Depression User Data

The user must provide the right username and password in order to access the post message page. In the absence of it, incorrect credentials will be shown.

3.2 Most Frequent Analysis/Standard Post

Depression user data user can post the message, we are detecting depression levels using the train dataset. The dataset contains a wide variety of post message types, including suggestive posts, regular posts, job-related postings, posts from friends and relatives, etc.

3.3 Pre-processing Data

Differentiating between the psychological state and mental health illnesses is done using a variety of procedures to determine the severity of depression. We are using regular expression concepts to gauge the intensity of melancholy based on user social media postings.

3.4 Data Classification

Social media channels may be used to spread the message. Based on user messages, administrators can assess the severity of sadness for a message. On the basis of train datasets, it will create predictions. We must first review the data, after which we must clean it up by eliminating any undesirable components using a data preparation technique. After using regular expression principles, we must determine the degree of melancholy.

3.5 Comparative Analysis of the Results

Administrator users must provide the correct information to acquire access, and only then will they be able to determine the level of sadness based on specific post messages from users.

3.6 Result Graphs

Based on the user's post message in the admin module, we may investigate using graphical techniques.

IV. EXPRIMENT RESULTS

People from all around the world frequently suffer from mental disease. Similar to Reddit users, we are detecting the severity of depression using the train dataset. In that dataset, there are many different kinds of post messages, including suggestive posts, regular posts, job-related postings, posts from friends and relatives, and more. A social graph model is used to create a depressed interaction graph G_ that minimises the gap between the real and depressed interaction graphs. The input (actual) social media data is used to extract an interaction graph G. How social network actors communicate with one another is represented by an interaction graph. The identification of social media entities and their interactions

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leads to the construction of an interaction graph with a vertex set V for the entities, an edge set E for the interactions, and an attribute set A for both the vertex (entity) attributes and the edge (interaction) attributes.

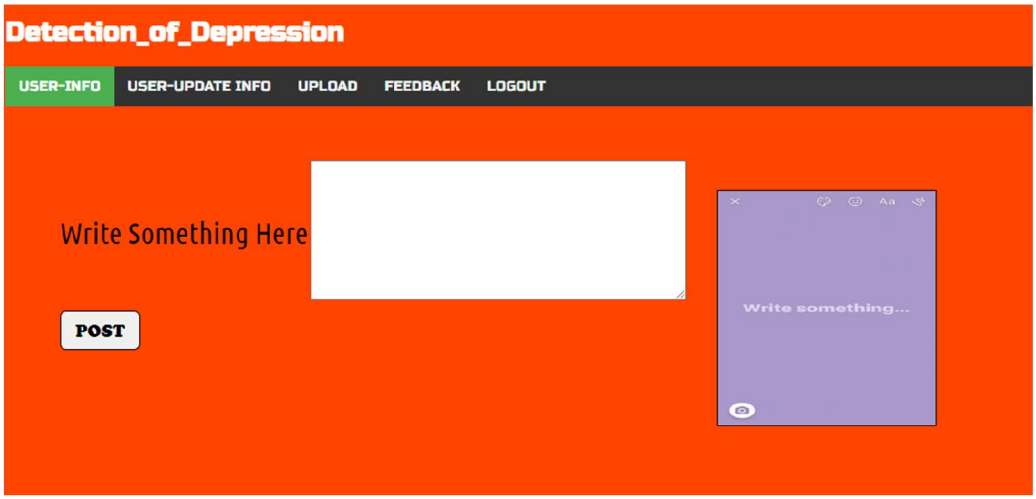

Fig 2: User post the message here

NAME	EMAIL	POST	WHICH TYPE
Kasthuri	kasthurikasthu7@gmail.com	Not good	Standard Posts
Kasthuri	kasthurikasthu7@gmail.com		indicative Posts
Kasthuri	kasthurikasthu7@gmail.com	Hurt	indicative Posts
Kasthuri	kasthurikasthu7@gmail.com	Tired due to work	Job
Kasthuri	kasthurikasthu7@gmail.com	She asked her friend to help for her project	Friends
Kasthuri	kasthurikasthu7@gmail.com	feeling sad	Depression
abhi	abhi@123	not feeling well	Depression
abhi	abhi@123	heart break	Free
abhi	abhi@123	tension	indicative Posts
Kasthuri	kasthurikasthu7@gmail.com	work pressure	indicative Posts
Kasthuri	kasthurikasthu7@gmail.com	exam fail	indicative Posts

Fig 3: Admin can see the results

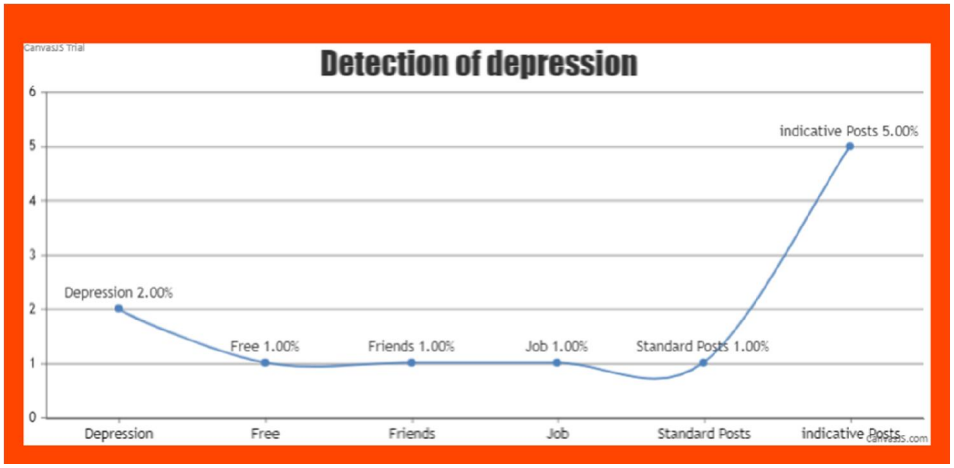

Fig 4: Measure the depression in graphs

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V. CONCLUSION

In this project, the amount of depression will be determined using regular expression concepts. We used the Reddit trained dataset to analyse the data for this. Similar to Reddit users, we are detecting the severity of depression using the train dataset. In that dataset, there are many different kinds of post messages, including suggestive posts, regular posts, job-related postings, posts from friends and relatives, and more. Based on the user messages, administrators can estimate a message's depression degree. Predictions will be based on train datasets. Once we've employed regular expression principles, we need to determine the degree of melancholy. In the future, we will be able to calculate depression levels by analysing a sizable amount of datasets and using deep learning concepts. Convolution neural networks may be used to analyse enormous volumes of data using the tensor flow library packages method with neurons. Using that method, we can divide data users into depressed and non-depressed customers. To identify different stages of depression, we may keep an eye on how much depression there is on the website. Future research will do away with the language restriction in this model and consider more than one language as a sample.

REFERENCES

[1]. A. Halfin, "REPORTS Depression: The Benefits of Early and Appropriate Treatment © Ascend Media," no. November, pp. 92– 97, 2007.

[2]. B. W. Conti D, "The economic impact of depression in the workplace. J Occup Med 1994; 36: 983–988."

[3]. "Charernboon T. Measures and screening tests for depression in Thailand: A user's guide. Thammasat Med J 2011; 11(4): 667-676."

[4]. "International Health Policy Programme. Burden of Disease Thailand 2013." [Online]. Available:http://www.searo.who.int/thailand/news/technical-factsheetdepression-thai.pdf?ua=1.

[5]. J. B. Karampampa Korinna, Borgstrom Fredrik, "Servier | Economic burden of depression on society | Medicographia," Medicographia, 2011.

[6]. K. S. S. Phattharayuttawat, T. Ngamthipwattana, "The Norm Profile for 'The Thai Mental Health Questionnaire.

[7]. "Kongsuk T, Supanya S, Kenbubpha K, Phimtra S, Sukhawaha S, Leejongpermpoon J. Services for depression and suicide in Thailand. WHO South-East Asia J Public Health. 2017;6(1):34–38."

[8]. M. H. Foundation, "Physical health and mental health." ,

[9]. Patriciomarquez, Shekharsaxena, and Professorarthurkleinman, "OUT OF THE SHADOWS Making Mental Health a Global Development Priority Enquiriesandpre-registration: WHOFocalPoint: Working Group's Chair," no. April, 2016.

[10]. R. L. S. and J. B. W. W. Kurt Kroenke, "The PHQ-9 Validity of a Brief Depression Severity Measure."[Online].Available: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1495268/

[11]. [Statista, "Most popular reasons for internet users worldwide to use social media as of 3rd quarter 2017." [Online]. Available: https://www.statista.com/statistics/715449/social-media-usagereasons-worldwide/.

[12]. Statista, "Penetration of leading social networks in Thailand as of 3rd quarter 2017." [Online].Available:https://www.statista.com/statistics/284483/thailand-social-networkpenetration/.

[13]. World Health Organization, "Depression and other common mental disorders: global health estimates," World Heal. Organ., pp. 1–24, 2017.

[14]. World Health Organization, "Depression Fact Sheets," WHO. [Online]. Available: http://www.who.int/news-room/factsheets/detail/depression.

[15]. Manjunatha HT and AjitDanti. "A Novel Approach for Detection and Recognition of Traffic Signs for Automatic Driver Assistance System Under Cluttered Background" - Recent Trends on Image Processing and Pattern Recognition, Springer Nature Singapore, Pte Ltd. 2019, RTIP2R 2018, CCIS 1035, pp. 1–8, 2019, ISBN 978-981-13-9181-1 DOI -https://link.springer.com/chapter/10.1007/978-981-13-9181-1_36.

[16]. Manjunatha HT and Ajit Danti. "Detection and Classification of Potholes in Indian Roads using Wavelet Based Energy Modules"IEEE- **978-1-5386-9319-3/19 © 2019 ,SCOUPS Nature**

[17]. Manjunatha HT, Ajit Danti, Arunkumar KL, Rohith D" Indian Road Lanes Detection Based on Regression and clustering using Video processing Techniques", 3rd International Conference on Recent Trends in Image

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ISSN (Online) 2581-9429
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Processing and Pattern Recognition (RTIP2R,2020). Dr. Babasaheb Ambedkar Marathwada University, Aurangabad. Springer, Scopus Indexed 3rd and 4th January 2020. **Springer Nature Singapore Pte Ltd. 2021 K. C. Santosh and** [18].B. Gawali (Eds.): RTIP2R 2020, CCIS 1380, pp. 1–14, 2021. https://doi.org/10.1007/978-981-16-0507-9_17

[18]. Arunkumar K L, Ajit Danti, Manjunatha H, "Classification of Vehicle Make Based on Geometric Features and Appearance-Based Attributes Under Complex Background" , Springer 1035 (CCIS), pp 41-48

[19]. K L Arunkumar, Ajit Danti, "A Novel Approach For Vehicle Recognition Based On The Tail Lights Geometrical Features In The Night Vision", International Journal of Computer Engineering and Applications, Volume XI

[20]. Manjunatha HT, Arunkumar K L, Ajit Danti, "A Novel Approach for Detection and Recognition of Traffic Signs for Automatic Driver Assistance System Under Cluttered Background", Springer 1035 (CCIS), pp 407-419

[21]. KL Arunkumar, A Danti, HT Manjunatha, "Estimation of vehicle distance based on feature points using monocular vision", IEEE 8816996 (2019), 1-5

[22]. KL Arunkumar, A Danti, HT Manjunatha, D Rohith, "Classification of Vehicle Type on Indian Road Scene Based on Deep Learning", Springer, Singapore 1380 (2021), 1-10

[23]. Indian Road Lanes Detection Based on Regression and clustering using Video Processing Techniques, HT Manjunatha, A Danti, KL ArunKumar, D Rohith Springer, Singapore 1380 (CCIS), 193-206

[24]. Recognition of Vehicle using geometrical features of a tail light in the night vision, Arunkumar K L, Ajit Danti, National Conference on Computation Science and Soft Computing (NCCSSC-2018)

[25]. Manjunatha HT and AjitDanti," Indian traffic sign board recognition using Normalized Correlation Method", International Journal of Computer Engineering and Applications (IJCEA), Volume XII, Issue III, March 18, ISSN 2321-3469

[26]. Manjunatha HT and AjitDanti, "Segmentation of Traffic Sign Board in a cluttered background using Using Digital Image Processing", National Conference on Network Security, Image Processing and Information Technology, March 2017.

[27]. K L Arunkumar and Ajit Danti. H T Manjunatha, D Rohith "Classification of Vehicle Type on Indian Road Scene Based on Deep Learning": Recent Trends on Image Processing and Pattern Recognition, Springer Nature Singapore Pte Ltd. 2021, RTIP2R 2020, CCIS 1380, Springer, pp. 1–10, 2021.