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ONLINE DEPRESSION DETECTION APPLICATION

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ABSTRACT

In this project we are detecting depression from users post, user can upload post in the form of text file, image file or audio file, this project can help peoples who are in depression by sending motivated messages to them. Now-a-days peoples are using online post services to interact with each other compare to human to human interaction. So by analysing users post this application can detect depression and send motivation messages to them. Administrator of this application will send motivation messages to all peoples who are in depression. To detect depression we are using SVM (support vector machine) algorithm which analyse users post and give result as negative or positive. If users express depression words in post then SVM detect it as a negative post else positive post.

I.INTRODUCTION

The "Online Depression Detection Application" aims to address the pressing need for accessible mental health support by providing an innovative digital platform for early detection and intervention of depression. Depression is a prevalent mental health condition affecting millions worldwide, yet many individuals struggle to recognize its symptoms or seek timely assistance due to various barriers such as stigma, lack of awareness, or limited access to mental health professionals. This project endeavors to bridge these gaps by leveraging technology to deliver a user-friendly and confidential platform where individuals can self-assess their mental well-being, receive personalized

feedback, access resources, and connect with appropriate support services. By harnessing the power of machine learning algorithms and psychological assessments, the application offers a reliable and proactive approach to identify individuals at risk of depression and provide them with the necessary guidance and support to manage their mental health effectively. Through this initiative, we aim to empower individuals to take control of their mental well-being and break the silence surrounding depression, ultimately fostering a healthier and more supportive community.

II.EXISTING SYSTEM

- detecting depression from users post, user can upload post in the form of text file, image file or audio file, this project can help peoples who are in depression by sending motivated messages to them. Now-a-days peoples are using online post services to interact with each other compare to human to human interaction.
- we aim to analyze Facebook data to detect any factors that may reflect the depression of rel-evant Facebook's users. Various machine learning techniques are employed for such purpose. Considering the key objective of this study, the following are subsequent research challenges addressed in paper.
- As users express their feeling as a post or comments in the Face-book platform, sometimes their posts and comments refer to as emotional state such as 'joy', 'sadness', 'fear', 'anger', or 'surprise' .

III.PROPOSED SYSTEM

- To implement this project we are using python Speech Recognition API which will read text from audio files and then SVM will analyse that text to detect depression, user can also upload images via post and python Tesseract OCR (Optical Character Recognition) API can read text from uploaded image and then SVM will detect depression from that text, User can upload post in text file also.
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Advantages

- Security
- Communcation .

IV.LITERATURE REVIEW

1.Analysis on Tweets Towards COVID-19 Pandemic: An Application of Text-Based Depression Detection,Abdelrahman Kaseb; Omar Galal; Dina Elreedy,Abstract:

Early depression detection is crucial for both people at risk and the whole society. After the COVID-19 pandemic, the depression level is expected to get higher. Social media is an affluent source of users' opinions and feelings that can be used to detect depression. Depression detection from users' tweets is a challenging task that many researchers have tried to tackle recently as it depends on the whole tweet context. This work introduces a machine learning-based approach for depression detection from tweets. We first obtained a tweets depression detection dataset and use it to train different machine learning and deep learning models for depression detection. We trained some classical machine learning models, then we also fine-tuned the state-of-the-art transformer-based pre-trained language models like BERT, RoBERTa, MobileBERT, and DistilBERT. Our best model was RoBERTa gaining a 78.85 percent F1-score on the test set. This model has then been used to pseudo-label two different datasets of about 4.35 million tweets from about 1 million Twitter users related to COVID-19 and vaccination to gain more deep insights on COVID-19 effect on the depression level of social media users. We show that depression level got doubled from four percent to eight percent from the beginning to the end of March 2020. Depression also increased after nearly two years to reach 15 percent in December 2021. The boosting of the level of depression should be taken into consideration by mental health institutions.

2. Cost-Sensitive Boosting Pruning Trees for Depression Detection on Twitter,Lei Tong; Zhihua Liu; Zheheng Jiang; Feixiang Zhou; Long Chen; Jialin Lyu; Xiangrong Zhang,Depression is one of the most common mental health disorders, and a large number of depressed people commit suicide each year. Potential depression sufferers usually do not consult psychological doctors because they feel ashamed or are unaware of any depression, which may result in severe delay of diagnosis and

treatment. In the meantime, evidence shows that social media data provides valuable clues about physical and mental health conditions. In this paper, we argue that it is feasible to identify depression at an early stage by mining online social behaviours. Our approach, which is innovative to the practice of depression detection, does not rely on the extraction of numerous or complicated features to achieve accurate depression detection. Instead, we propose a novel classifier, namely, Cost-sensitive Boosting Pruning Trees (CBPT), which demonstrates a strong classification ability on two publicly accessible Twitter depression detection datasets. To comprehensively evaluate the classification capability of CBPT, we use additional three datasets from the UCI machine learning repository and CBPT obtains appealing classification results against several state of the arts boosting algorithms. Finally, we comprehensively explore the influence factors for the model prediction, and the results manifest that our proposed framework is promising for identifying Twitter users with depression.

V.MODULES

- User Authentication: Module for user registration, login, and authentication to ensure the security and privacy of user data.
- Depression Assessment: Module to conduct psychological assessments and surveys to evaluate the user's mental health status and identify symptoms of depression.
- Machine Learning Model: Module that implements machine learning algorithms to analyze user responses and predict the likelihood of depression based on various factors.
- Data Storage and Management: Module to store and manage user data securely, including assessment results, user profiles, and interaction history.
- User Interface: Module responsible for the design and development of the application's user interface, ensuring a user-friendly experience for easy navigation and interaction.
- Notification and Alert System: Module to send notifications and alerts to users based on assessment results, reminders for self-care activities, and access to support resources.

- Resource Center: Module to provide users with access to educational materials, self-help resources, coping strategies, and information about mental health support services.
- Admin Panel: Module for administrators to manage user accounts, monitor application usage, and access analytics and insights generated by the application.
- Integration with Support Services: Module to integrate with external mental health services, such as counseling hotlines, online therapy platforms, or local mental health clinics, to facilitate referrals and access to professional support.
- Feedback and Reporting: Module to collect user feedback, generate reports on application usage and effectiveness, and continuously improve the application based on user input and data analysis.

VI.CONCLUSION

In conclusion, the "Online Depression Detection Application" represents a significant step forward in the realm of mental health support and intervention. By harnessing the power of technology and machine learning, this project offers a proactive solution for early detection and management of depression, addressing the pressing need for accessible mental health resources. Through user-friendly interfaces and confidential assessments, individuals can self-assess their mental well-being, receive personalized feedback, and access resources to support their mental health journey. The application's integration with support services and robust data management ensures that users can connect with professional help when needed and receive the necessary guidance and assistance. Ultimately, by empowering individuals to take control of their mental health and fostering a supportive community, the "Online Depression Detection Application" strives to make a meaningful impact in improving mental well-being and reducing the stigma surrounding depression.

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