Analysis of Depression Level for User Using Social Media Post

Afroz Mulani[1] Aakanksha Ingale[2] Ashwini Jagtap[3] Kiran Gaikwad[4]
[1,2,3,4]Student
[1,2,3,4]Department of Computer Engineering
[1,2,3,4]Zeal College of Engineering and Research, Pune, India

Abstract— Depression is a disabling disorder that takes in a number of forms. Although there are several treatments options for depression, predicting whether or not a person is suicidal is challenging. As a result, a plethora of models for predicting depression in individuals have been created, with this article focusing on three of the most frequently used: WEKA classifiers and methods for machine learning Suicidal individuals are not only mentally unfit, but also physically unfit. It degrades people's quality of life. Additionally, depression would not have to be severe to have an effect on a person's life. We assessed the reliability of three critical approaches used in those tests. Following a thorough review of machine learning classifiers, feature reduction mechanisms, cross validation techniques, and risk factors, it was determined that the Bayes net Classifier was the most accurate and efficient approach for Percentage Split testing. Numerous data sets can be used to assess the predictive model's accuracy. To increase accuracy, additional techniques for predicting depression should be studied in the future. The words SVM, machine learning, and tweeter upgrade are included in this article.

Keywords: Depression, Social Media

I. INTRODUCTION

Depression is aggravated by mental health tension, which happens when an individual's failure to deal with life's demands exceeds their capacity to cope. Two types of roadblocks exist. For eg, moderate depression has a negative affect on one's life. Depression is a benign psychiatric condition that impairs an individual's capacity to cope. Depression that persists for an extended period of time may result in mental health disorders as well as the onset of a number of diseases. Depression has a detrimental impact on individuals' relationships, financial situations, physical wellbeing, and professional careers. Depression has been attributed to a wide range of health conditions, the most severe being cardiovascular disease. To determine the level of anxiety conveyed in Twitter tweets, the QT, RR, and EDR cycles are used (Twitter tweet De-rived Respiration). To differentiate nervous patients from those who are not, the QT interval must be lengthened. Depression has a detrimental effect on the nervous system. To our knowledge, no research on the use of machine learning and bio signals for depression diagnosis has been completed, and the literature on the subject is scant. Despite the fact that numerous businesses and organizations have implemented mental wellbeing services to improve corporate culture, the epidemic persists. We want to investigate the causes of depression in working adults and to recognize the signs that have a direct effect on depression levels using machine learning models.

II. LITERATURE SURVEY

Hooda Madhurima First Aashie a Detection has been a critical issue that affects people in a variety of ways. Although there are various treatments available to support depressed patients, predicting others who are suffering but ignorant is difficult. As a result, models for predicting depression in individuals are being created, and this article will address three of the more common models: Classifiers focused on WEKA and deep learning; imaging and machine learning techniques; and risk factors Not only are suicidal individuals mentally unfit, but they are also emotionally unfit. It has a variety of negative consequences for people's quality of life. Additionally, depression would not have to be severe in order to impact a person's life. Numerous depression prediction studies have been undertaken, comparing the three key methods to assess which is the most accurate. Following an evaluation of machine learning classifiers, feature reduction techniques, cross validation techniques, and risk factors, it was determined that the Bayes net Classifier was the most efficient and precise solution for percentage split analysis. The reliability of the quantitative model can be calculated using a number of datasets. In the future, additional techniques for predicting depression could be sought to increase accuracy.

David Sztaho, and Klara Vicsi are among the cast members. Possibilities Sadness (Depression) and Parkinson's often starts with a tremor in one hand. Other symptoms are slow movement, stiffness and loss of balance. Currently, Speech synthesis is a mentally demanding and time-consuming process. As a consequence, individuals with mental or psychiatric disorders like Parkinson's disease or depression have a separate voice from the general pulsation. As is typical of them, they speak rate is less and they pronounce is less. This modifications make the speech product monotonous and slow down the pace at which it improves. The effect about sadness and Parkinson's disease upon the ratio of transitory Parts is investigated in this research. In addition, 321 speech samples were studied, including fit, stressed, and Parkinson's unhealthy speechifire. The transient parts of their voice were detected using an automated transient detection method, and the ratio of the transient parts (RoT) was determined depending on the detection. The mean value of RoT in depressed and Parkinson's unhealthy speechifire was observed to be 9-10% lower than in stable speechifires. The RoT was used as the primary insert in categorization tests, as well as yielded positive solution, with an accuracy about 81 percent in distinguishing among well and not well speechifires. It was investigated the speech ts (RoT) about well and ill Talkers. The transitory bits were detected using an automated recognition system that recognizes major and unexpected changes in voice. These sporadic speech fragments are most often seen during voice changes as a result about unification.

Talkers with degenerative disabilities can retain difficulty articulating correctly, especially when it comes to unstressed, in which one of the major difficult facets about talk procedure. As a result, everyone belief that the transitory role of irspeech differ from those of secure speakers in duration. This study looked at 190 oration test out of well people, 55 oration test out of stressed people, and 76 oration test out of people with Parkinson's disease. The average sense in the RoT of non-healthy speakers was discovered to be.

Prajakta Bhalchandra Kulkarni Adolescent Clinical Depression Detection by Face[3]. Currently, Depression is a crippling, often undiagnosed disease that affects people all over the world. In 2017, at least 300 million people were affected by depression, according to the World Health Organisation (WHO). In India, the prevalence of depression among adolescents varies between 0.3 and 1.2 percent. As a result, their lives will be adversely affected. Workplace stress, the death of a loved one, and tension are all factors that can lead to depression. Depression can manifest itself in a variety of ways. Symptoms include hopelessness, anxiety, and a lack of confidence in any occupation, and weight loss or gain. Depression progresses as the stress stage lasts more than one to two weeks. Depression affects a person's social life, wellbeing, suicidal thoughts, and mental health in a number of ways. If the stage of depression is detected early enough, the person may be saved. Persistent depression is described as depression that progresses from mild to severe levels. We propose a risk-free, quick, and more efficient method of detecting depression than seeing a doctor in this article. A depression detection mechanism was developed using two algorithms: the Fisher vector algorithm and the LTrP. Images are defined and marked using Fisher vectors. The Gaussian mixture model is used (GMM). Fisher vector encoding is highly effective in terms of computing. Furthermore, for the linear classifier, it provides the best output. A person's brow was subjected to these algorithms. LTrP is used to retrieve features. The proportions of a central pixel are compared to those of neighboring pixels, and a magnitude as well as a tetra pattern is returned. To get a more accurate classification result, Fisher vector encoding is used. Bow's flaws, which can be summed up in a few sentences, were eliminated with Fisher vector encoding. LTrP, on the other hand, overcomes the drawbacks of the Local binary pattern while improving efficiency. This sort generates the labels 'Depressed' and 'Not depressed.

Tao, senior Member (IEEE), Mingyue Niu, Student Member (IEEE), Bin Liu Member (IEEE), JianZheng Lian, Huang, and Student Member (IEEE).Multi modal Spatio temporal personification for Automated Sadness Measure Observation [4Currently, According to physiological studies, there exist several dissimilarity in talk and face activities within stressed and well separates. On the basis of that Reality, everyone suggest a new Spatio-Temporal Attention-Convolutional Neural Network (STA-CNN) network and a Self-Attention Mechanism (Multi-Modal Attention Function fusion [MAFF] strategy for obtaining a multi-modal characterization about sadness signs and forecast Separate sadness levels. The talk volume scale/videotape is broken into certain-length sections With fed in the STA network (CNN network), this not only incorporates special and temporary details viaconcentration processes, but still conserve audio and video structure related to sadness detection. The output of the STA network's last full connection layer is used to remove the audio/video segment-level functionality. Second, this paper employs the Eigen advancement collective procedure to abstract the modifications of each extents of the audio and video section-level features and incorporate them into the audio and video level function. Finally, the MAFF is used to generate a dynamic fusion method with modal complementary information, which is then used to approximate depression severity using a support vector regression predictor. Proof from the AVEC2014 and AVEC2013 sadness datafiles supports the relevance of our own technique.: Jian Shen1,, Yuan Yao1 Shengjie Zhao 1,Yue Wang1, Lei Feng. A novel sadness observation technique based on pervasive EEG and EEG breaking criterion [5]. As present Sadness is a medical condition marked by persistently low mood conditions in the depressed human being. According to a World Health Organization (WHO) study, depression will be the second leading cause of illness endangering human life by 2020, making early detection, diagnosis, and treatment of depression critical to saving human health and life. A simple and efficient depression detection and identification Technique is critical for reduce the damage caused by sadness as well as early identification, diagnosis, and treatment of depression. We present a novel approach for pervasive EEG-based identification and diagnosis of depression using resting state eye-closed EEG data from scalp electrodes Fp1, Fpz, and Fp2 that are closely linked to emotion and were obtained using a three-electrode pervasive EEG collection device in t Pervasive EEG data from 170 subjects (81 suicidal patients and 89 normal subjects) were collected whilst they were sleeping with their eyes closed. The ubiquitous EEG data is then analyzed with a Support Vector Machine (SVM), which has an average precision of 83.07 percent. Following the Friedman Test and the post-hoc two-tailed Nemenyi Test, we propose a separating criterion for widespread EEG. The results of the data analysis tests demonstrate that the suggested method for detecting and diagnosing speech is reliable and simple, and that the ubiquitous three-electrode EEG selection device has a broad variety of applications in the detection and diagnosis of depression.

III. PROBLEM DEFINITION

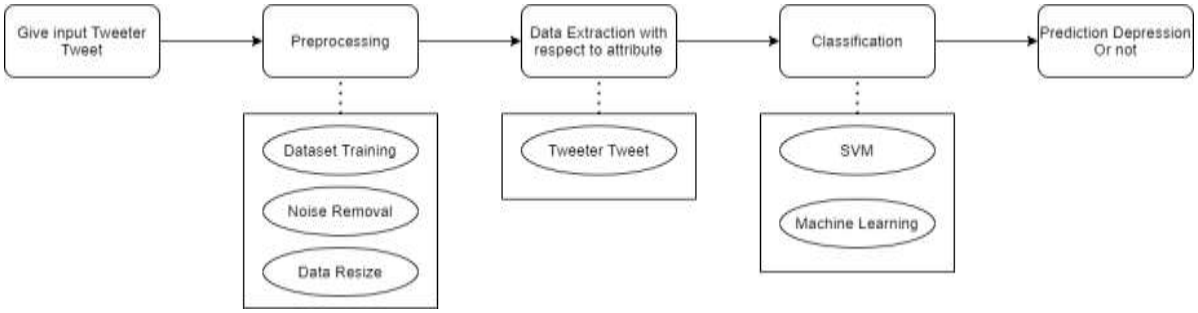
This initiative has a web application. Social networking messages (Facebook) are taken into account in this project. Social Network Sites (SNS) are a data hub and filtering platform for categorizing users based on user-generated content (UGC). The user's depression level is graded into various levels using machine learning algorithms such as Naive Bayes, and a doctor's position near the user's location is given.

IV. PROPOSED SYSTEM

The system architecture is used to design and develop a web application that makes it simple and straightforward to gather information about a user's depression levels, as well as statistics about physicians in the user's place. The extraction class can allow use of the Facebook Graph API to collect textual data from the social media platform. The

Preprocessing class is used to do preliminary processing on the extracted information. Consistent, accurate data that has been preprocessed to account for missing or replicated attributes is needed. For the data mining approach to perform optimally, it must be complete and reliable. Tokenization, lower case encoding, word stemming, and word exclusion are all methods for preprocessing data. The term frequency (tf) was determined to determine the frequency at which a term occurs. The user is on Facebook in the proposed plan, and the system decides whether or not the user is depressed based on his Facebook messages and other quaternaries supplied by the system. If individuals are not on Facebook, they must depend on the system's quaternaries to assess if they are depressed or not.

V. SYSTEM ARCHITECTURE



VI. EXPLANATION OF SYSTEM ARCHITECTURE:

1) Prepossessing: In this module, the machine will process the input. The data-set will be educated by the prepossessing computer, which will delete the noisy parts of the input. After which you can resize the ata-set.
2) Feature Extraction: In this module user will give Twitter tweet that attribute give to machine.
3) Classification: SVM Algorithm is used to identify user testing values using a train data set (support vector Machine Algorithm). Machine Learning can determine whether or not a person is stressed based on their input. Here, we use machine learning with SVM to improve accuracy (support vector Machine Algorithm).

VII. ALGORITHM INTERFERENCE

Mastering machine learning algorithms is not a myth. The majority of newcomers start with regression. It's quick to read and use, but does it achieve our goal? Most emphatically not! And there's a lot more to it than just Regression. Consider machine learning algorithms to be a set of swords, swords, arrows, bows, and daggers. You have a lot of substance at your allocation, but you must learn how to use them properly. Consider 'Regression' to be a sword capable of slicing and dicing data but incapable of dealing with highly ordered data. Assist the vector Machines, on the other hand, are like a sharp knife: they can be even more and accurate in building machine learning models on larger datasets. A support vector machine (SVM) is a supervised machine learning model that uses classification algorithms for two-group classification problems. After being given sets of named training data for each form, SVM models will categorize new text. So you're working on a text classification issue. The extended SVM classifier works by drawing a straight line between two classes. All data points on one side of the line will be labeled as one class, and all data points on the opposite side will be labeled as the second.

VIII. CONCLUSION & FUTURE SCOPE

In this study, various Depression tracker models were fitted with several Twitter tweets. QT and RR are examples of features. This method of detecting Twitter tweet signal agitation can aid in determining a person's psychological and physical fitness, allowing him or her to take the necessary measures. It was also discovered that the more properties we have in the model, the more detailed it gets.

REFERENCES

[1] Y. Kwon and N. Lobo, Age classication from facial images, in Proc. IEEE Conf. Comput. Vis. Pattern Recognit., Seattle, WA, USA, Jun. 1994, pp. 762767.
[2] Y. Kwon and N. Lobo, Age classication from facial images, Comput. Vis. Image Understand., vol. 74, no. 1, pp. 121, 1999.
[3] W.B. Horng ,C.P.Lee,andC.W.Chen,Classification of age groups based on facial features, Tamkang J. Sci. Eng., vol. 4, no. 3, pp. 183192, 2001.
[4] J. Hayashi, M. Yasumoto, H. Ito, Y. Niwa, and H. Koshimizu, Age and gender estimation from facial image processing,in Proc. 41stSICEAnnu. Conf., vol. 1. Osaka, Japan, Aug. 2002, pp. 1318.
[5] A. Lanitis, C. Taylor, and T. Cootes, Toward automatic simulation of aging effects on face images, IEEE Trans. Pattern Anal. Mach. Intell., vol. 24, no. 4, pp. 442455, Apr. 2002.
[6] Bhattacharyya, R., & Basu, S. (2018). India Inc looks to deal with rising stress in employees.Retrieved from The Economic Times
[7] OSMI Mental Health in Tech Survey Dataset, 2017 from Kaggle
[8] Van den Broeck, J., Cunningham, S. A., Eeckels, R., & Herbst, K. (2005). Data cleaning: detecting, diagnosing, and editing data abnormalities. PLoS medicine, 2(10), e267.
[9] Shwetha, S, Sahil, A, Anant Kumar J, (2017) Predictive analysis using classification techniques in healthcare domain, International Journal of Linguistics & Computing Research, ISSN: 2456-8848, Vol. I, Issue. I, June-2017.

