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Depression Detection using AI, ML and NLP

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Abstract: Suicide is one of the most serious social health issues that exist in today's culture. We can refer suicidal thoughts to act of killing yourself intentionally. It can be used as a suicide risk measure. India is among the top countries among in the world to have annual suicide rate. Social networks have been developed as a first-rate factor for its users to communicate with their interested friends and proportion their captions, photos, and videos reflecting their moods, emotions, and sentiments. To increase and put in force a version which takes a facial expression image as an enter and symptoms. Based on that, it predicts if the patient is suffering from anxiety, depression or not. We can train version using photographs of various emotions in it & will use it for prediction. Image captioning can be accomplished after prediction for higher visualization of report. We will also use text mining (NLP) technique on various inputs taken in the form of audio and video to convert it into text. At final, we can make final choices based on above two techniques. And with this, we will be able to generate a detailed dashboard of user disease status and his history. With the help of all this data we can design webapp for above system. We will use CNN algorithm for speed up detection of depressed character instances and approach to become aware of high-quality answers of mental health troubles. We suggest system learning method as an efficient and scalable technique. We document an implementation of the proposed method. We have evaluated the efficiency of our proposed technique the usage of a set of various psycholinguistic features. We show that our proposed method can extensively improve the accuracy and category blunders price.

Keywords: CNN, Depression, Suicide rate, Emotions

REFERENCES

- [1]. A. Haque, M. Guo, A. S. Miner, and L. Fei-Fei, "Measuring depression symptom severity from spoken language and 3d facial expressions,"
- [2]. J. R. Williamson, D. Young, A. A. Nierenberg, J. Niemi, B. S. Helfer, and T. F. Quatieri, "Tracking depression severity from audio and video based on speech articulatory coordination," Computer Speech & Language, vol. 55, pp. 40–56, 2019.
- [3]. Mandar Deshpande, Vignesh Rao "Depression Detection using Emotion Artificial Intelligence."
- [4]. Madhurima Hooda, Aashie Roy Saxena, Dr. Madhulika, Babita Yadav -" A Study and Comparison of Prediction Algorithms for Depression Detection among Millennials: A Machine Learning Approach"
- [5]. F. P. Polly and S.K. Shil, "Detection and classification of HGG and LGG brain tumor using machine learning", International Conference on Information Networking, 2018
- [6]. Nilesh Bhaskar Rao Bahadure, Arun Kumar Ray and Har Pal Thethi," Image Analysis for MRI Based Brain Tumor Detection and Feature Extraction Using Biologically Inspired BWT and SVM", Hindawi International Journal of Biomedical Imaging volume 2017.
- [7]. Zeynettin Akkus, Alfiia Galimzianova, Assaf Hoogi, Daniel L. Rubin and Bradley J. Erickson, "Deep Learning for Brain MRI Segmentation: State of the Art and Future Directions" J Digit Imaging DOI 10.1007/s10278-017- 9983-4, 2017
- [8]. Israel D. Gebru, Xavier Alameda-Pineda, Florence Forbes and Radu Horaud, "EM Algorithms for Weighted-Data Clustering with Application to Audio-Visual Scene Analysis "IEEE Transactions on Pattern Analysis and Machine Intelligence, vol. xx, no. y, 2016.
- [9]. D. Suresha and N. Jagadisha, "Detection of Brain Tumor using Image Processing", Fourth International Conference on Computing Methodologies and communication, 2020

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- [10]. Ashfaq Hussain and Ajay Khunteta," Semantic segmentation of brain tumor from MRI images and SVM Classification using GLCM (Gray Level Co-occurrence Matrix) features", Second International Conference on Inventive Research in Computing Application, 2020
- [11]. Natural Language Processing Future Chandhana Surabhi. Implementing College Enquiry chatbot. K
- [12]. Programming challenges of Chatbot: Current and Future Prospective AM Rahman, Abdullah Al Mamun, Alma Islam

DOI: 10.48175/IJARSCT-8339

- [13]. Evaluating Natural Language Understanding Services for Conversational Question Answering Systems.
- [14]. Daniel Braun, Adrian Hernandez Mendez, Florian Matthe's, Manfred Langen.