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Mental Health Disorder Anticpation Using ML and Blockchain

Apurva Wattamwar¹, Ashwini Gosavi², Suvidya Ubale³, Abhishek Turukmane⁴, Kaustubh Chaudhari⁵

Department of Computer Engineering Sinhgad College of Engineering, Pune, India

Abstract: In recent years, mental health has been one of the most ignored, yet critical, aspects of our overall well-being. This study proposes a system for a virtual mental health web-app due to financial, time, and space constraints, as well as a scarcity of resources. Mental illness is typically a snowball effect that demands regular monitoring and deliberate efforts to improve. This is possible with the help of a virtual mental health web-app. A conversation function, psychological examination, emotion recognition module, and mood improvement counselling system will all be included in the suggested web-app. We used a Decision Tree Classifier and Encryption. In terms of accuracy, our method outperformed the Decision Tree Classifier.

Keywords: Deep Learning, Machine Learning, Decision Tree Classifier, Encryption, Natural Language Processing, Mental Health

REFERENCES

- [1] R. Jadhav, V. Chellwani, S. Deshmukh and H. Sachdev, "Mental Disorder Detection: Bipolar Disorder Scrutinization Using Machine Learning," 2019 9th International Conference on Cloud Computing, Data Science & Engineering (Confluence), 2019, pp. 304-308, doi: 10.1109/CONFLUENCE.2019.8776913.
- [2] R. Katarya and S. Maan, "Predicting Mental health disorders using Machine Learning for employees in technical and non-technical companies," 2020 IEEE International Conference on Advances and Developments in Electrical and Electronics Engineering (ICADEE), 2020, pp. 1-5, doi: 10.1109/ICADEE51157.2020.9368923.
- [3] A. Teles et al., "Mobile Mental Health: A Review of Applications for Depression Assistance," 2019 IEEE 32nd International Symposium on Computer-Based Medical Systems (CBMS), 2019, pp. 708-713, doi: 10.1109/CBMS.2019.00143.
- [4] K. Park, M. Jung Kim, J. Kim, O. Cheon Kwon, D. Yoon and H. Kim, "Requirements and Design of Mental Health System for Stress Management of Knowledge Workers," 2020 International Conference on Information and Communication Technology Convergence (ICTC), 2020, pp. 1829-1832, doi: 10.1109/ICTC49870.2020.9289464.
- [5] O. Oyebode, F. Alqahtani and R. Orji, "Using Machine Learning and Thematic Analysis Methods to Evaluate Mental Health Apps Based on User Reviews," in IEEE Access, vol. 8,pp. 111141-111158, 2020, doi: 10.1109/ACCESS.2020.3002176.
- [6] J. Sun, X. Yao, S. Wang and Y. Wu, "Blockchain-Based Secure Storage and Access Scheme For Electronic Medical Records in IPFS," in IEEE Access, vol. 8, pp. 59389-59401, 2020, doi: 10.1109/ACCESS.2020.2982964.
- [7] S. Niu, L. Chen, J. Wang and F. Yu, "Electronic Health Record Sharing Scheme With Searchable Attribute-Based Encryption on Blockchain," in IEEE Access, vol. 8, pp. 7195-7204, 2020, doi: 10.1109/ACCESS.2019.2959044.
- [8] M. K. Hasan et al., "Lightweight Encryption Technique to Enhance Medical Image Security on Internet of Medical Things Applications," in IEEE Access, vol. 9, pp. 47731-47742, 2021, doi: 10.1109/ACCESS.2021.3061710.
- [9] X. Yang, T. Li, X. Pei, L. Wen and C. Wang, "Medical Data Sharing Scheme Based on Attribute Cryptosystem and Blockchain Technology," in IEEE Access, vol. 8, pp. 45468-45476, 2020, doi: 10.1109/ACCESS.2020.2976894.
- [10] J. Tao and L. Ling, "Practical Medical Files Sharing Scheme Based on Blockchain and Decentralized Attribute-Based Encryption," in IEEE Access, vol. 9, pp. 118771-118781, 2021, doi: 10.1109/ACCESS.2021.3107591.

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