MEDPREDICT CRYPTOPAY

ABSTRACT

In the evolving landscape of healthcare, efficient diagnosis and payment mechanisms play pivotal roles in enhancing patient care and operational efficacy. This paper introduces MedPredict CryptoPay, a novel system integrating disease prediction with cryptocurrency payment, underpinned by blockchain technology. It enables users to input symptoms for disease prediction, select specific healthcare professionals, and seamlessly pay consultation fees using cryptocurrencies. Leveraging advanced machine learning algorithms, the system accurately predicts diseases based on user-provided symptoms, facilitating timely medical intervention. The integration of blockchain ensures transparent, secure, and immutable transactions, fostering trust among stakeholders while safeguarding sensitive healthcare data. It represents a pioneering initiative at the intersection of healthcare, predictive analytics, and blockchain technology, promising transformative impacts on healthcare accessibility, efficiency, and security

OBJECTIVE

The main contributions of this work towards state-of-the-art models.

It is to develop an machine learning with medical expertise and utilizes blockchain technology for secure payment transactions. Specifically, the primary research objectives include:

Machine Learning Model Development: Develop and refine machine learning models that can accurately predict diseases from patient-reported symptoms, encompassing textual descriptions.

Secure Payments: Integrating blockchain and cryptocurrency technology to provide patients with a secure and transparent method of paying for medical service.

Cryptocurrency Integration: Explore the integration of various cryptocurrencies and blockchain technologies into the system, ensuring a seamless and user-friendly payment process for patients and healthcare providers.

FEATURES AND CHALLENGES

FEATURES AND CHALLENGES OF STATE-OF-THE-ART TECHNIQUES FOR THE INTRUSION

S.No	Authors and Journal Name and year of publication	Algorithm Used	Accuracy	Machine Learning	Blockchain	Payment
1	Rinkal Keniya, vruddhi shah et.al 2020	Weighted KNN	90.5%	✔	✘	✘
2	Dhanashri Gujar et.al 2021	Decision tree	89.75%	✔	✘	✘
3	Venkatesh Rallapalli et.al 2022	-	-	✘	✔	✘
4	Ramandeep Singh Sethi et.al 2023	Naïve Bayes	90.34%	✔	✘	✘
5	Rahul Deo Sah1 et.al 2021	SubSpace KNN	87.89%	✔	✘	✘
6	Our 2024	MultiNomial Naïve Bayes	91.5%	✔	✔	✔

Proposed MultiNomial Naïve Bayes for Disease prediction and Crypto Payment

1. Med predict crypto pay is the system that is used to predict the diseases from the symptoms which are give by the patients

2. .The system processes the symptoms provided by the user as input and disease is predicted.

3. User can select recommended doctor or any specific doctor and can pay the fees by using crypto currency with blockchain, after the payment is completed the patient and doctor can chat by using chat box.
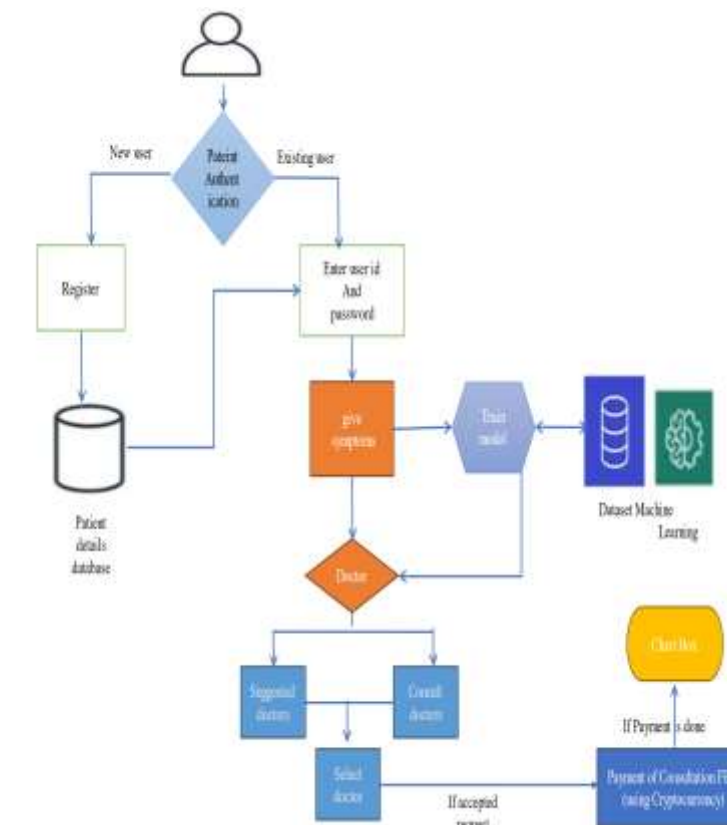

Fig.1 Block diagram

RESULTS

The integration of Med Predict Crypto Pay marks a significant leap forward in healthcare technology, revolutionizing diagnostic practices and financial transactions within the medical sector. Through the utilization of machine learning algorithms, the system predicts diseases accurately based on patient-reported symptoms, leading to enhanced diagnostic accuracy and timely medical intervention. Additionally, by incorporating blockchain technology, the platform ensures secure cryptocurrency transactions, bolstering user trust and privacy..

CONCLUSION

Med Predict Crypto Pay represents a pioneering leap forward in disease prediction, harnessing advanced machine learning to mitigate reliance on human expertise, thereby minimizing misdiagnosis risks and facilitating timely identification of health issues. By integrating blockchain-powered secure payments, the system ensures seamless transactions for patients, while equipping doctors with precise disease predictions to expedite treatment. This innovative fusion of technology transforms diagnostic practices, establishing a globally accessible healthcare platform. Emphasizing early detection and personalized care, Med Predict Crypto Pay prioritizes proactive healthcare interventions, ultimately enhancing patient outcomes and fostering a more efficient healthcare ecosystem. Through its groundbreaking approach, this system not only revolutionizes diagnostics but also sets a new standard for healthcare accessibility and effectiveness in the digital era.

REFERENCES

1) Kumar, A., Bharti, R., Gupta, D. and Saha, A.K., "Improvement in boosting method by using rustboost technique for class imbalanced data", in Recent Developments in Machine Learning and Data Analytics: IC3 2018, Springer., (2019), 51-66.

2) Stitt, F.W., 1993. The Problem-Oriented Medical Synopsis: a patient-centered clinical information system. In Proceedings of the Annual Symposium on Computer Application in Medical Care (p. 88). American Medical Informatics Association.

3) Akinode, J.L. and Oloruntoba, S.A., 2017. Design and implementation of a patient appointment and scheduling system. Department of Computer Science, Federal Polytechnic Ilaro Nigeria

4) Ismail, N. S., Shahreen Kasim, Y. Yah Jusoh, Rohayanti Hassan, and Ayu Alyani. "Medical appointment application." Acta Electronica Malaysia 1, no. 2 (2017): 5-9.

5) Liu, Jian, Wenting Li, Ghassan O. Karame, and N. Asokan. "Toward fairness of cryptocurrency payments." IEEE Security & Privacy 16, no. 3 (2018): 81-89.

6) Sukarno, Karmila Sari. "The use of cryptocurrency as a Payment Instrument." In 3rd International Conference on Law and Governance (ICLAVE 2019), pp. 366-370. Atlantis Press, 2020.

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