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BLOCKCHAIN BASED MULTI DISEASE PREDICTION USING SUPPORT VECTOR MACHINE ALGORITHM

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Abstract

The advent of Blockchain (BC) technology has become a remarkable, most revolutionary, and growing development in recent years. BT's open platform stresses data protection and anonymity. It also guarantees data is protected and valid through the consensus process. BC is mainly used in money-related exchanges; now it will be used in many domains, including healthcare; This paper proposes efficient Blockchain-based secure healthcare services for disease prediction. Diabetes and cardio diseases are considered for prediction. Initially, the patient health information is collected from Fog Nodes and stored on a Blockchain. The Machine learning algorithm is initially applied to the patient health records. Finally, diabetic and cardio diseases are predicted using classification based Support Vector Machine (SVM) algorithm. To evaluate the performance of the proposed work, an extensive experiment and analysis were conducted on data from the real world healthcare. The accuracy is achieved in better number in the prediction performance than the existing. The experimental results show that the proposed work efficiently predicts the disease.

Keywords:Support Vector Machine (SVM) algorithm, Fog Nodes

I. Introduction

Blockchain is one of the most innovative technologies and a digital wallet which retains track of transactions and events occurring across the network, and whose integrity is ensured via a peer-to-peer computing network, not by any centralized entity that might eliminate the risk of a single central point. It is composed of structured documents organized in a block structure that includes transaction batches and previous key hash. Every block is chronologically linked, and the data on the Blockchain network is unchallengeable Any users have individual access rights in a blockchain network to allow transactions that are modified throughout the framework, known as consensus protocol. For inserting transactions, a blockchain uses SHA256 hash. The NSA creates that, which is 64 characters large. All transactions are registered in a blockchain network though not modifying or manipulating the public ledger; Both transfers are distributed to various users across the network to transfer and update the data; a blockchain network may be duplicated toa separate venue, for example, within the same ability or healthcare distribution network, or as part of a regional or global data exchange system. A secure and privacy-conserving blockchain-based PHI networkingscheme was proposed for improving diagnosis in e-Health scheme. Private and consortium Blockchain is developed through the creation of their information structures and consensus mechanisms. The private ledger manages the PHI while the ledger community keeps a database of the robust indexes of the PIII.In recent years, healthcare practices across the country have accelerated their digital transformation efforts to modernize their operations, bake more efficiency into their workflows and processes, and deliver stronger patient experiences. While this digital evolution is a good and necessary thing, it also exposes practices to some significant challenges. As more of our healthcare processes transition to digital formats, providers need to be vigilant about security threats in healthcare.

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