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A Literature Review on Data Monetization using Smart Contracts

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Abstract: *Blockchain technology is poised to changenearly every facet of our digital lives. Blockchain can be said as an immutable, and decentralized database. Data stored in the blockchain cannot be tampered, making it secure. Also, being decentralized, no central entity controls the blockchain, ensuring reliability. So, the datacan be stored publicly, such that anyone could read the data. This vast availability of data could enable data scientists to perform various analytics over the large amount of data. This could result in many useful insights in many fields. But, when sensitive data such as healthcare data and reports are to be stored in the blockchain, it could raise several privacy issues. Medical reports or personal information cannot be stored in a way that anyone could access them. Thus, this paper suggests a way to store and perform analytics over sensitive data in blockchain. In this paper homomorphic encryption is used to store the sensitive data in blockchain. Computed results from homomorphic encryption on ciphertexts are encrypted. When the encrypted result is decoded, it produces a result that is identical to what would have happened if the operations had been carried out in plaintext. Thus, critical data are encrypted and stored in the blockchain, data analytics are performed over them, without knowing the actual data. Thus, the proposed system provides privacy of the data stored publicly and could also profit the data scientists with access to large amount of real time data directly from the owners of the data*

Keywords: Blockchain technology, homomorphicencryption, health care data, data analytics

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