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Blockchain Technologies

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Abstract: *Blockchain technology has proven to be particularly effective at securely processing distributed transactions. They may be used to handle bitcoin coins and smart contracts, among other things. Blockchain has lately being investigated for data science applications. This study looks at blockchain technology and how it can be used in data science and cyber security. Blockchain allows for the transmission of value at a minimal cost, allowing data from smart devices to be used to generate economic value. The goal of this study is to create a high-performance blockchain platform that uses technologies such distributed network architecture, intelligent device node mapping, and the PBFT-DPOC consensus algorithm to achieve intelligent device decentralisation. The impact of network delay on blockchain forking behavior, as well as probable violations of the six confirmations convention for transaction approval, are investigated in this research. We reduce the blockchain's data structure to speed up our simulations and avoid the massive processing necessary in proof-of-work systems (POW). We demonstrate that the six confirmations standard is sensitive to peer-to-peer network delay through simulation, as well as how quickly it is violated with a lower difficulty of POW mining.*

Keywords: Blockchain technology

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