

A Voting System with Blockchain Technology

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Abstract: A voting system based on blockchain technology is an innovative method to ensuring secure and transparent elections. As a distributed ledger technology, blockchain can do away with the need for middlemen and offer a decentralised architecture that makes secure and open vote counting possible. Each vote in a voting system based on a blockchain is recorded as a transaction on the blockchain, which cannot be changed or interfered with. Through the use of cryptography, the voter's identity is made anonymous, and the blockchain's consensus algorithm ensures the validity of the vote. In addition, a blockchain-based voting system can be made even more secure by incorporating biometric authentication, which guarantees that only authorised users are permitted to cast ballots. To identify a person, biometric identification uses distinctive physical or behavioural traits like fingerprints, iris scans, or facial recognition. Voters in a blockchain-based voting system can securely authenticate their identity and guarantee that their vote is counted correctly by employing biometric authentication. Because their identity can be checked in real-time against the recorded biometric data, the use of biometric authentication can also deter people from trying to cast multiple ballots or pose as other voters.

Keywords: Blockchain, Voting System, Biometric Authentication, Security

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