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Decentralized E-Voting System Using Blockchain Technology

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Abstract: Elections form the foundation of contemporary democratic systems. Yet, traditional voting mechanisms often face issues related to trust and susceptibility to manipulation. This study investigates the capabilities of decentralized electronic voting systems enhanced by blockchain technology and Aadhaar-based OTP verification. By utilizing the security, transparency, and unchangeable nature of blockchain along with the strong identity validation provided by Aadhaar OTP, the proposed system seeks to transform the current voting process. It effectively tackles significant problems of conventional voting, such as electoral fraud and distrust, through the use of smart contracts, verified voter identities, and cryptographic safeguards.

Keywords: Blockchain, Decentralized Voting, Electoral System, Aadhaar OTP, Distributed Technology, EVM



