BATCH NO: 9

PROJECT TITLE: INTEGRATED DECENTRALISED MECHANISM IN BLOCKCHAIN BASED VOTING SYSTEM

ABSTRACT:

Block chain technology enhances the robustness of the voting process through its immutable vote storage mechanism, thereby reducing the threat of vote tampering and safeguarding the legitimacy of elections. This technology has been adopted by countries such as Germany, Russia, Estonia, and Switzerland for use in their e-voting systems. This study provides a comprehensive overview of the block chain-based e-voting systems currently being implemented by various countries and companies and proposed for academic researching is a central component of a country's political life cycle. Privacy, authentication and integrity of citizens' votes and their data are considered to be essential to any evoting program. In order to resolve these concerns, we propose a stable e-voting system based on the principles of block chain and machine learning. We use block chain to ensure the integrity and security of votes, machine learning model to detect intrusion in voting data centers and e-voting stations. In the proposed model, we use the concepts of personal and public block chain. The personal block chain is used for the purposes of voter registration and voting. The public block chain is used to maintain the integrity of the personal data of the voters by storing the root hash derived from the Merkle hash tree and revealing the results of the voting stations as soon as the voting process is completed. The proposed block chain-based e- voting system offers transparency, treasury, and confidence and prevents intrusion into the information exchange network..

Keywords: Blockchain, Security, Decentralization, Authentication, Transparency, Accountability, Data obfuscation, Distributed ledger technology, Encryption, Decryption Data collection