Dept. of Computer Science and Engineering (Data Science)

Adichunchanagiri Institute of Technology, Chikkamagaluru

Major Project Synopsis

TITLE: Decentralized Voting System using Blockchain

Problem Statement: To design and implement a secure, decentralized voting system that utilizes blockchain technology for transparency and immutability, with DigiLocker API integration for voter identity verification. The system should be accessible via web and mobile platforms.

Description: The project aims to build a blockchain based voting system using Ethereum, where each vote is securely recorded on the blockchain. The system integrates DigiLocker to verify voter identity using official government documents. Smart contracts ensure that voters can vote only once, and all records are immutable. The platform will support both web and mobile applications, allowing voters to participate securely from anywhere. This modern approach addresses security, transparency, and accessibility challenges of traditional voting systems.

Expected Outcomes: A working voting system that ensures secure, verifiable, and tamper-proof elections. The system will offer transparent voting processes, prevent double voting, and verify voters via DigiLocker. It will increase trust and participation in elections through mobile and web access.

Technologies and Tools:

- **Languages**: Solidity, Hardhat, JavaScript
- **Frameworks**: React.js, Node.js, Express.js
- **Blockchain Tools**: MetaMask, Solidity, Hardhat
- **Database:** PostgreSQL
- **APIs:** Mock DigiLocker API (for identity verification)

Team Members:

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Signature of the Guide with date **Signature of the Coordinator with date**