EchoFeedback

The project uses Unichain Sepolia testnet to implement a decentralized feedback system, ensuring secure and immutable data storage.

CONTENT

PROBLEM STATEMENT

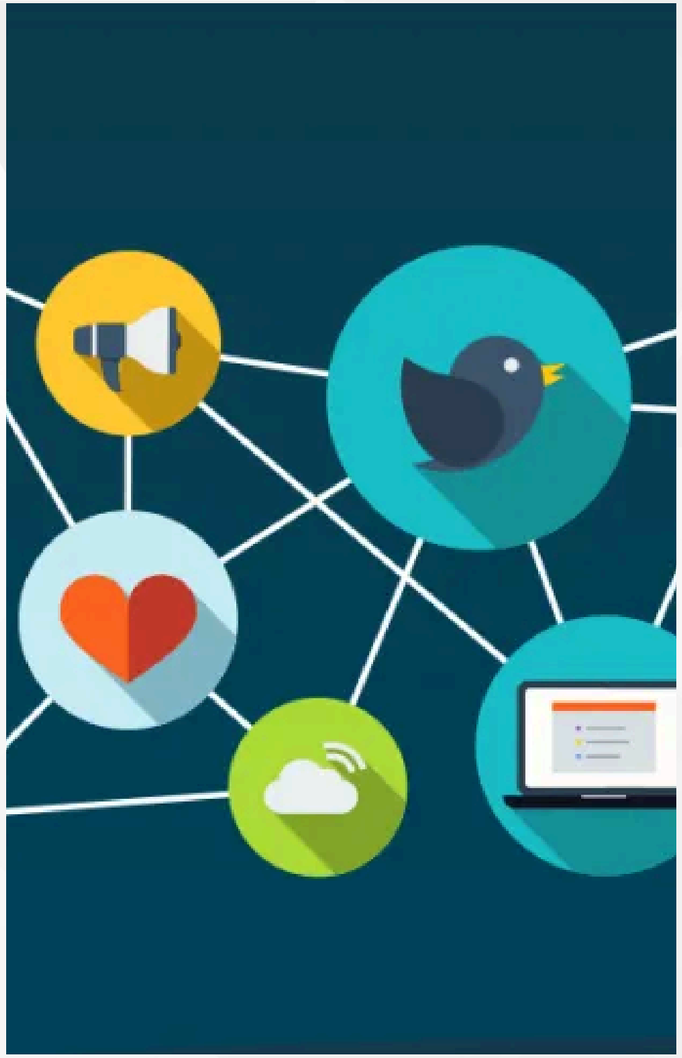
- **Centralization and Intermediaries :** Dependence on intermediaries (faculty, administrators) for feedback collection and validation leads to delays, biases, and a lack of transparency.

- **Data Manipulation and Integrity :** Feedback records are vulnerable to alteration or loss due to manual handling or centralized storage, necessitating a secure solution to preserve data integrity.

- **Trust and Transparency :** Students and faculty demand a system they can trust, with clear transparency in the processes of feedback collection, storage, and analysis.

SUMMARY

- **Problems :** Centralized systems lead to delays, biases, and lack of trust, while feedback data is prone to due to manual handling and insecure storage.
- **Core Objectives :** To eliminate intermediaries, secure feedback data on the blockchain, and create a trustable, transparent feedback management system for students and faculty.
- **Execution Steps :** The project involves compiling and deploying smart contracts on Unichain Sepolia Testnet and setting up a React-based frontend for user interaction with the blockchain.

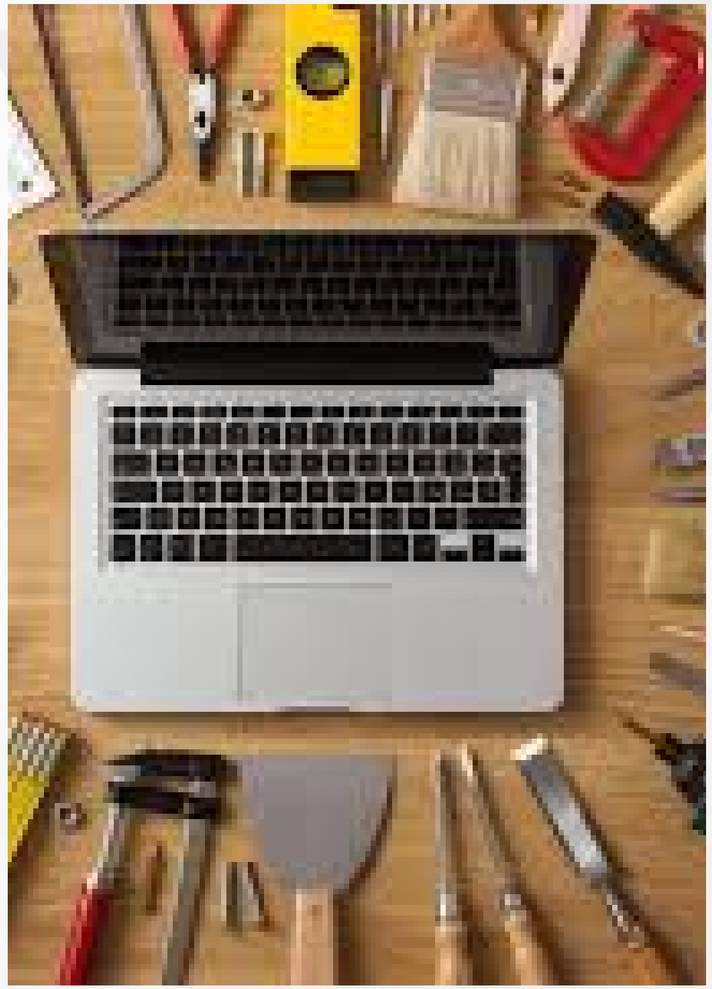


TOOLS/TECHNOLOGIES USED

- **Unichain Sepolia Testnet:** For decentralized and secure feedback storage and testing before mainnet deployment.
- **Solidity:** For writing and managing smart contracts to handle feedback data.
- **Hardhat:** For compiling, deploying, testing, and debugging smart contracts.
- **Alchemy:** For seamless blockchain API services and interaction with the Unichain Sepolia Testnet.
- **React:** For building the frontend.

PROJECT GOALS

- **Modern Dashboard:** Create a visually appealing, social media-inspired dashboard for network devices.
- **Comprehensive Metrics Overview:** Provide detailed metrics for each network node.
- **User-Friendly Interface:** Implement a user-friendly interface with social media features like posts, comments, and likes.
- **AI/ML Integration**: Use AI/ML to generate insights and summaries of node statuses.



ACHIEVEMENTS

- Deployed the smart contract on **Unichain Sepolia testnet** for secure and immutable feedback storage.
- Developed a **React**-based website allowing students to submit feedback using the faucet.
- Created an **admin** dashboard to retrieve and view student feedback.
- Displayed feedback alongside **timestamps** for transparency and accountability.

FUTURE SCOPE

- **Feedback Analysis with PySpark:** While blockchain handles decentralized storage, PySpark can still be useful for analyzing large amounts of feedback data off-chain, especially for generating reports and insights based on aggregated feedback over time.
- **LLM for Feedback Summaries:** Utilize Large Language Models (LLM) to analyze and summarize feedback, extracting key themes and trends from the data stored on Unichain.
- **Expanded Unichain Features:** Explore additional Unichain features like scalability improvements, advanced smart contract capabilities, or integrating oracles for external data input, which could enhance feedback collection and analysis without needing external cloud infrastructure.

THANK YOU

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