



CODECELL-CMPN,VESIT

SYRUS HACKATHON 2025

Category Code : C1

Problem Statement Title : MentorNet - AI-Powered Web3 Decentralized Mentorship Platform.

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Idea / Approach details (& implemented features)

Idea / Approach :

The project aims to create a decentralized mentorship platform using AI and blockchain for trust, transparency, and skill validation. It connects students with verified mentors, provides AI-driven guidance, and ensures fraud-proof skill certification, fostering an accessible and secure learning ecosystem.

Implemented Features :

- User Dashboard built using Next.js 15 for a seamless and interactive experience.
- Smart Contract Deployment using Solidity and the Polygon(Amoy) testnet for secure and efficient transaction .
- Mentor Authentication with Wallet Connection using Wagmi and RainbowKit ensuring decentralized identity verification.
- Decentralized Career Portfolio where skills, projects, certificates, and mentorship sessions are stored on IPFS and verified on the blockchain.



Innovation (Showstopper)



1. AI-Driven Mentorship :

- Leverages Large Language Models (LLMs) to provide individualized career advice.
- Real-time skill gap analysis and adaptive learning paths.
- AI-generated real world projects with expert feedback loops.

2. Decentralized Platform :

- Constructed on the Web3 architecture with Mentor DAO.
- Community-involved administration utilizing token-based motivation for mentors.
- Transparent and immutable mentor-student interactions.

3. Blockchain-Based Certification :

- Transparent monitoring of learning progress and work achievements.
- Improved believability is enhanced through tamper-e

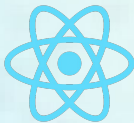
4. Soulbound Token Integration :

- NFT-based skills qualification not transferable and unique to each user.
- Ensures authentic and verifiable proof of skills and achievements.
- Encourages confidence and trust in mentorship ecosystem.



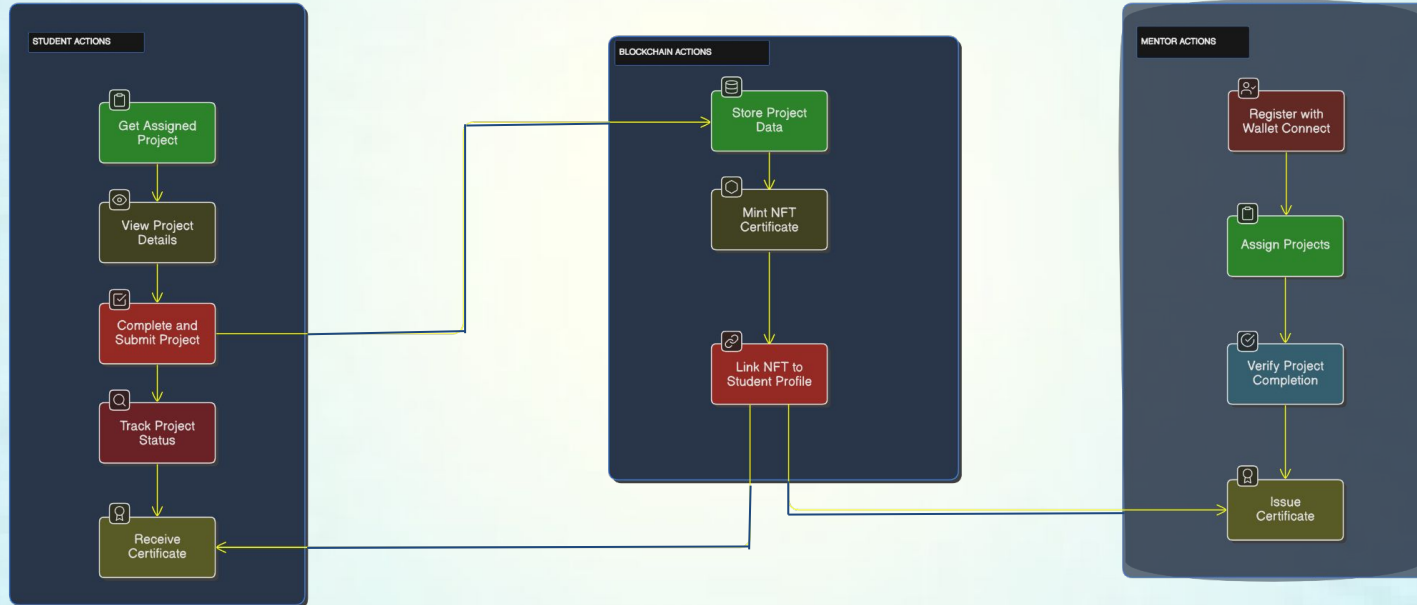
Tech Stack

Category	Tech Used
Frontend	Next.js 15, React 19, Tailwind CSS, shadcn/ui, Framer Motion.
Backend	Next.js Api Routes, Supabases [PostgreSQL] , Prisma Orm.
Blockchain	Solidity, Hardhat, Alchemy, Pinata (IPFS) & OpenZeppelin.
DevOps & Deployment	Vercel, Docker, Amazon EC2.



Use Case Diagram

MENTOR.NET FLOW





Future Objectives

- **Certification Issuance through Soulbound Tokens** – Secure non-transferable digital certificates for verified skills and accomplishments.
- **AI-Driven Mentor-Student Matching** – Smart recommendations based on skills, interests, and career goals.
- **AI-Powered Industry Trend Analysis** – Real-time insights into job market trends to guide career decisions.
- **Token Based Incentives** – Earn tokens for learning mentoring and completing milestones.
- **Crypto Rewards for Mentors** – Recognizing contributions with blockchain-based rewards.

