

CODECEUL-CMPILIUS DE CODECEUL CMPILIUS DE CODECEUL

Category Code: C1

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

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Institute Name: Vivekanand Education Society's Institute of Technology























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:

- <u>User Dashboard</u> built using Next.js 15 for a seamless and interactive experience.
- <u>Smart Contract Deployment</u> 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.
- <u>Decentralized Career Portfolio</u> where skills, projects, certificates, and mentorship sessions are stored on IPFS and verified on the blockchain.

Innovation (Showstopper)

1. Al-Driven Mentorship:

- Leverages Large Language Models (LLMs) to provide individualized career advice.
- Real-time skill gap analysis and adaptive learning paths.
- Al-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.			













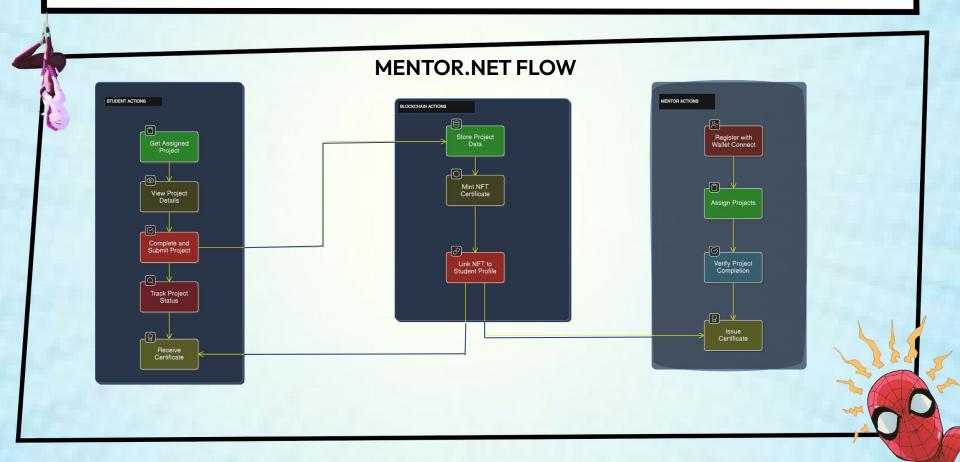




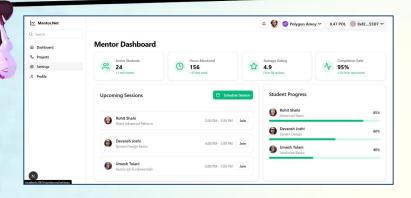


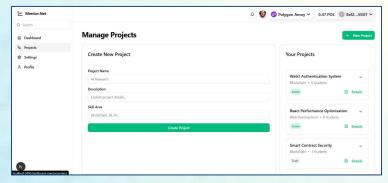


Use Case Diagram



Implementation ScreenShots

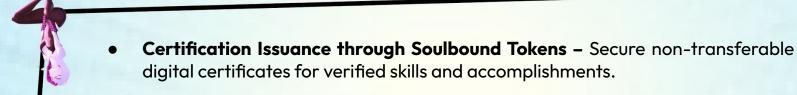




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Portfolio Summary						
our verified decentralized assets						
3	2		2	2		
Skills	Projects		Certificates	Memorship Ses	sions	
Verified on Blockchain		IPFS Links		Skill Endorsements		
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0	React Advanced Patterns Nove skill certified			2 days ago		GraphOL Fundamentals Recommended skill based on your profile Start Learning		
D	Completed assessment with a score of 923 Al Career Guidance Session Memorship session with Al Career Guide.	; Skill NFT has been added to your wallet.		3 days ago	D Tec	hnical Interview Prep edule a session with Interview Coach Al Book Session		
		reated a personalized learning plan for data s	cience.			stend Architecture community learning resources		
2	Defi Dashboard Project Project milestone completed Completed the UI implementation. Ready for	r review and feedback from Technical Mentor		5 days ago	Quick Links	Yiew Resources		
		View All Activity				Roadman		

Future Objectives



- **Al-Driven Mentor-Student Matching** Smart recommendations based on skills, interests, and career goals.
- Al-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.