Major Project Topic Details

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Topic: 1

Web3 and Blockchain-based Decentralised Social Connectivity web application

The "Web3 Social Network" is a decentralized social platform that prioritizes user privacy and data ownership. Leveraging blockchain technology, it ensures secure and transparent user interactions. The network features a user-driven profile system with encrypted content and an integrated cryptocurrency wallet, rewarding users for participation. The interface showcases a sophisticated, intuitive design with a dark mode theme, including a feed of blockchain-verified posts and token balances. This platform is a nexus for community engagement and content monetization through DApps and smart contracts, embodying the shift towards a user-empowered social media paradigm.

The core of this social network is user-centricity. Profiles are created and managed by individuals, not the platform. Posts and content shared by users are encrypted and can only be accessed by permitted parties. A key feature is the integration of a cryptocurrency wallet, enabling users to earn tokens for their contributions, which could include creating content, curating, or engaging with the community.

In the platform's interface, the focus is on a clean, intuitive design with a dark mode aesthetic that's easy on the eyes, reflecting the sophistication of the underlying technology. The dashboard is the central hub where users can view a feed of blockchain-verified posts, manage their connections, and track their token rewards.

Integration with various decentralized applications (DApps) will be seamless, and the platform will support smart contracts, allowing for innovative types of user interaction and content monetization. Whether it's voting on community guidelines or supporting a content creator through microtransactions, the power is in the hands of the network's users.

Provisional Tech stack

Frontend: React.js**,** Next.js**,** ethers.js or web3.js**,** Tailwind CSS
Blockchain: Solidity, Ethereum Mainnet and testnets
Backend: Node.js, MongoDB
Storage: IPFS
Identity: MetaMask, WalletConnect
Hosting/Deployment: Vercel or AWS, Cloudflare

Topic: 2

Crowdsourced Urban Planning Tool

The "Crowdsourced Urban Planning Tool" is an innovative cross-platform application that empowers city residents to actively participate in the development and refinement of their urban landscapes. This tool democratizes urban planning by enabling community members to contribute ideas, propose enhancements, and provide feedback on projects directly influencing their neighborhoods.

At its core, the application serves as a collaborative platform, incorporating GIS (Geographic Information Systems) data, to allow users to visualize their city's current infrastructure. It provides an intuitive interface where residents can suggest modifications, such as new parks, improved public transportation routes, or pedestrian zones. These proposals can be visualized in real-time, offering a tangible representation of potential changes.

Key features include interactive maps, virtual reality (VR) integrations for immersive experiences, and a robust proposal management system that organizes community input for city planners to review. The tool also promotes transparency by tracking the progression of urban projects from conception through to completion, and it fosters community engagement through gamification elements that reward active participation.

Compatible across multiple devices, this application ensures accessibility for all users, regardless of the device they use. By harnessing the collective insight of its citizens, the "Crowdsourced Urban Planning Tool" aims to create more livable, sustainable, and inclusive cities shaped by the very people who inhabit them.

Provisional Tech stack

Frontend: React Native, Redux or MobX (for state management), React Native Maps (for mapping functionality), Victory Native or React Native SVG Charts (for data visualization)

Backend: Node.js, Express.js, MongoDB or PostgreSQL (with PostGIS for geospatial data)

GIS (Geographic Information System): OpenLayers or Leaflet (accessible through a webview for more complex GIS tasks)

Real-time Collaboration: Firebase Realtime Database or Socket.IO

Topic: 3

Cultural Exchange Portal

The "Cultural Exchange Portal" is a vibrant online hub designed to bridge cultural divides and foster global understanding. This virtual space connects individuals from diverse backgrounds to share and celebrate their unique cultural heritages through language learning, culinary exploration, and immersive experiences.

Users can engage in language exchange partnerships, pairing with native speakers to practice and enhance their language skills in a real-world context. The portal also offers interactive cooking classes led by community members, allowing participants to discover authentic recipes and cooking techniques from around the world.

A standout feature is the virtual home tours, where users can invite others into their homes, showcasing local customs, architecture, and daily life. This intimate glimpse into different lifestyles enriches users' cultural awareness and appreciation.

The portal is not just a learning platform but also a community space that encourages dialogues, storytelling, and shared activities, making it an invaluable tool for promoting cultural understanding and education in an increasingly connected world.

Provisional Tech stack

Frontend: Next.js, React, Redux or Context API (for state management), Tailwind CSS

Backend: Node.js, Next.js

Database: MongDB, Mongoose(ODM)

Authentication: Next Auth, JSON Web Tokens (JWT)

Media Storage: AWS S3, Cloudinary

Real-time Communication: WebSockets or Socket.IO

Hosting/Deployment: Vercel