**Title**: Developer Requirement Document for Crowdfunding DApp Enhancement

**Project Overview**: We are developing a decentralized application (DApp) designed to facilitate transparent and secure crowdfunding initiatives using blockchain technology. The platform enables users to create and support fundraising campaigns in a decentralized, trustless environment. The core infrastructure—including smart contracts, home page, and campaign creation functionality—is already in place.

**Objective**: We are seeking a proficient full-stack blockchain developer or a specialized development team with deep expertise in Solidity, Web3.js, and React.js to advance the platform. This phase involves building out additional user interfaces, refining existing components, and strengthening integration between the smart contract and the user interface.

# **Technical Requirements**:

## Smart Contract Integration (Solidity)

* + Audit and optimize the current smart contract codebase for performance and security.
  + Validate proper event emission for seamless frontend interaction.
  + Incorporate incremental enhancements, such as campaign categorization, badges, or expanded withdrawal conditions.
  + Conduct thorough testing using Hardhat to simulate edge cases and ensure contract reliability.

## Blockchain Interaction (Web3.js)

* + Maintain robust wallet connectivity and transaction handling.
  + Implement reliable smart contract calls to retrieve campaign details and handle contributions.
  + Extend event-based listeners to improve real-time frontend responsiveness.
  + Ensure graceful handling of wallet/network changes, transaction rejections, and account switches.

## Frontend Development (React.js)

* + Existing Pages (Completed):  
    - Home Page
    - Campaign Creation Page
  + New Pages (To Be Developed):  
    - Campaign Detail Page – Display comprehensive campaign data, funding progress, and contribution interface.
    - User Dashboard – Provide personalized views for campaign creators and contributors, including history and campaign management.
    - Admin Panel (Optional) – Dashboard for administrative oversight and moderation capabilities.

* + Enhancements:  
    - Improve overall UI/UX for responsiveness, accessibility, and performance.
    - Integrate campaign filtering, sorting, and keyword-based search functionalities.
    - Apply consistent design principles and reusable component architecture.
  + Technologies:  
    - React.js with Javascript
    - Preferred: Zustand or Redux for state management
    - Optional: TailwindCSS for styling

## Deployment & Quality Assurance

* + Verify contract deployment on Ethereum testnets (e.g., Goerli, Sepolia).
  + Host the frontend using modern deployment platforms (Vercel, Netlify, AWS S3).
  + Develop and maintain automated integration and end-to-end tests.
  + Implement monitoring, analytics, and error tracking tools (e.g., Sentry, LogRocket).

## Documentation & Workflow

* + Maintain up-to-date technical documentation, including smart contract ABIs and frontend setup.
  + Provide a clean and reproducible development environment.
  + Utilize GitHub for source control, collaboration, code reviews, and issue tracking.
  + Establish regular communication cadence to provide progress updates and address blockers.

# **Required Skills**:

* Advanced proficiency in Solidity and smart contract development on Ethereum
* Strong frontend development experience using React.js and JavaScript
* Proficiency in Web3.js or ethers.js for blockchain integration
* Hands-on experience with Hardhat for contract testing and deployment
* Familiarity with Git, version control workflows, and Agile methodologies

# Preferred Qualifications:

* UI/UX design capabilities
* Understanding of decentralized storage solutions (e.g., IPFS)
* Experience with The Graph protocol, ENS, or Layer 2 scaling networks
* Exposure to smart contract security best practices and analytics tools

# **Contact & Application Instructions**:

Qualified candidates who are enthusiastic about decentralized technologies and crowdfunding innovation are encouraged to apply. Please include the following in your submission:

* GitHub or GitLab profile with relevant repositories
* Portfolio of previous DApp or blockchain-related work
* Brief cover note outlining your interest in the project and relevant experience

We look forward to collaborating with passionate developers to shape the future of decentralized crowdfunding.