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CrowdFunding: Transparent and Secure Blockchain Donation System

**Prof. Suresh Reddy, Prof. Vrushali, Payal Waghela, Suresh Krishna Paulraj, Karan Thakur,
Aishwary Barmade**

Department of Computer Engineering, Suman Ramesh Tulsiani Technical Campus, Faculty of Engineering, Kamshet,
Pune, India

ABSTRACT: Crowd funding is a decentralized web3 app created to transform the crowd-funding world by using blockchain technology traditional crowdfunding platforms often have issues with transparency security and depend on middlemen which can damage trust between organizations and investors this project solves those problems by using smart contracts to automate the fund management process making transactions secure and transparent in crowd funding organizations looking for funding can share their proposals and investors can review and vote on them based on how much they've contributed with voting power (vpov) proportional to their investment this decentralized system gives investors more control over where their money goes and how decisions are made smart contracts ensure that funds are only released when specific conditions are met built with nextjs for the frontend and solidity for smart contracts and deployed on the sepolia testnet the platform provides a secure efficient and transparent alternative to traditional crowdfunding with metamask integration for safe login and transaction signing crowd funding combines decentralization with investor-driven decision-making creating a trust-free environment for funding organizations

I. INTRODUCTION

Blockchain technology has introduced decentralized alternatives to traditional crowdfunding eliminating middlemen and using smart contracts to ensure transparency projects like Daostack gitcoin and kickback had led their way in blockchain-based crowdfunding but each has its own challenges Daostack where stakeholders vote on money distribution however it mainly focuses on decision-making within decentralized organizations rather than involving the general public Gitcoin lets developers fund open-source projects using blockchain-based grants but its mainly geared toward software development limiting its application to other industries kickback requires event attendees to make small payments which are refunded if they show up while effective for events this model doesnt meet the needs of large-scale crowdfunding efforts

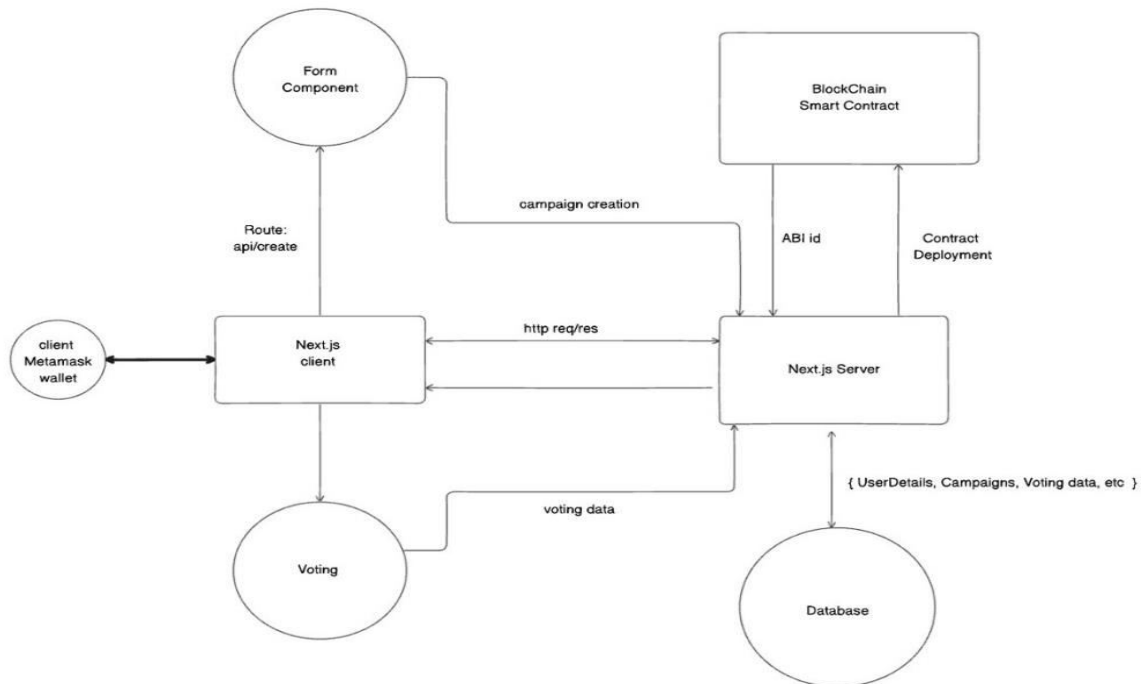
II. LITERATURE SURVEY

Numerous platforms for crowdfunding exist today, such as Kickstarter and GoFundMe, but they rely heavily on intermediaries and centralized control, which can lead to problems like fraud, delays, and lack of accountability

1. Crowdfunding platforms like Kickstarter and GoFundMe are often managed by centralized organizations, making them prone to issues like fraud and transparency concerns. The reliance on intermediaries can complicate trust between contributors and project creators.
2. These platforms control the flow of funds and project details, which can result in delays or lack of accountability for both fundraisers and donors. This centralization can limit the efficiency and reliability of the crowdfunding process.
3. Decentralized platforms such as DAOstack and Gitcoin utilize blockchain technology for governance and funding distribution, providing more transparency and security.
4. However, these platforms still lack a unified voting power mechanism that allows investors to actively participate in the decision-making process of funded organizations.

In conclusion, crowdfunding platforms that incorporate voting power (vPov) for investors present a more inclusive and transparent approach to fundraising. By giving investors a voice in critical decisions, these platforms foster a sense of ownership and accountability, creating a more democratic environment. This shift not only addresses the shortcomings of traditional centralized systems but also enhances the overall trust and engagement between contributors and project creators, leading to more successful and sustainable outcomes.

III. SYSTEM ARCHITECTURE



IV. METHODOLOGY

The decentralized crowdfunding system seeks to address the limitations of traditional, centralized platforms by leveraging blockchain technology. This methodology outlines the process for creating a platform where contributors and investors have greater control, transparency, and accountability. Blockchain and smart contracts will facilitate direct peer-to-peer transactions, allowing for more democratic involvement. Data Collection

a) Blockchain Integration:

- Use a blockchain to record every transaction and decision, ensuring transparency and traceability.
- Select a permissionless, scalable blockchain platform (e.g., Ethereum, Binance Smart Chain) for transaction recording and contract execution.

b) Smart Contracts:

- Develop smart contracts to govern transactions, payouts, and project milestones.
- These contracts will be automatically executed when predefined conditions (e.g., funding goals, project updates) are met.
- Investors will have the ability to vote on key decisions through tokens.

c) Voting Power (vPov):

- Investors' voting power is directly proportional to their investment, ensuring that those who contribute more capital have a larger say in decision-making.
- Voting will be integrated into the platform, allowing stakeholders to vote on whether certain milestones are met, approve changes, or suggest new features.

V. PROBLEM DEFINITION

Many projects face issues like misuse of funds, lack of accountability, and centralized control, which discourages potential backers from investing.

Crowd Funding aims to decentralize the funding process using smart contracts on the blockchain, ensuring that:

Funds are securely locked in smart contracts and only released based on predefined conditions. Transactions remain transparent, immutable, and publicly verifiable on the blockchain. Investors can track fund usage, increasing trust and accountability in the system.

VI. DISCUSSION AND RESULT

Key Benefits of the Proposed System

1. Access to Capital Without Traditional Funding

- No Need for Bank Loans or Investors: Crowdfunding allows you to raise funds without the burden of taking on debt or giving up equity.

2. Marketing and Exposure

- Organic Publicity: Successful crowdfunding campaigns often attract media attention, which can lead to more exposure and opportunities without additional marketing costs.

3. Lower Risk for Creators

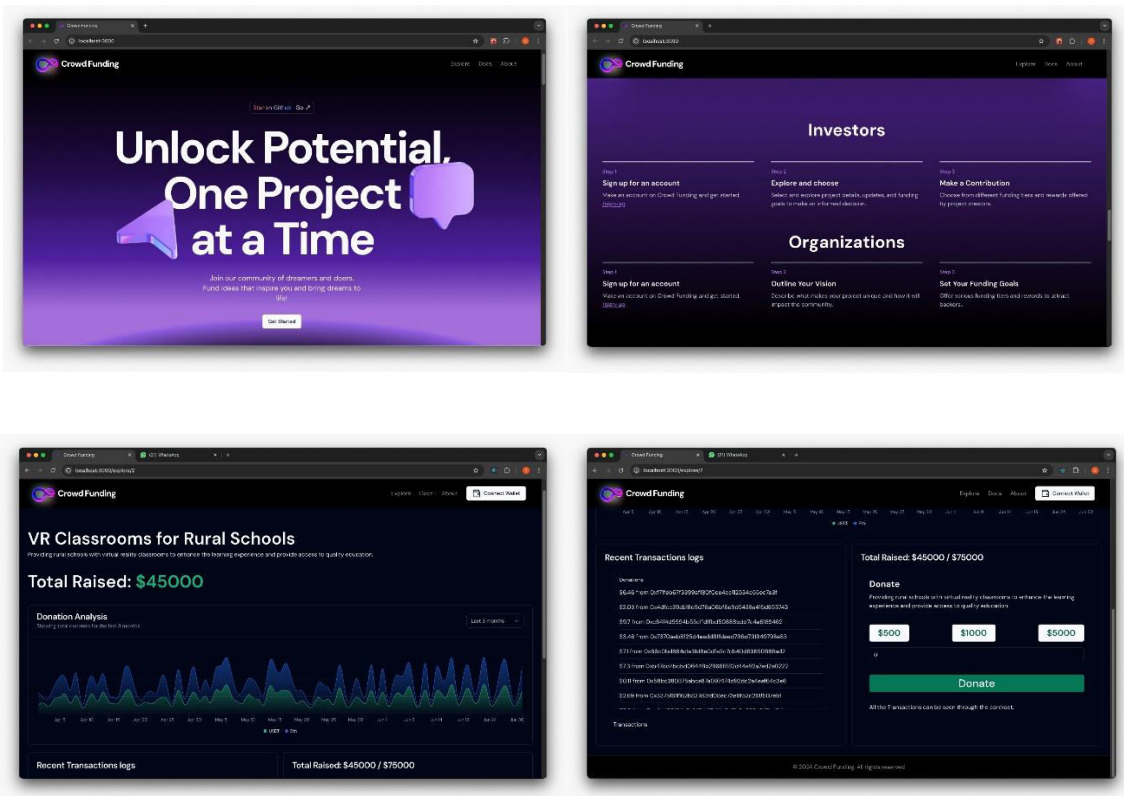
- Reduced Financial Pressure: As funds are raised progressively, you can use the money in phases, which makes scaling easier and less risky.

4. Creative Freedom and Control

- Maintain Ownership: Unlike traditional investors, crowdfunding allows you to retain full creative control over your project, without compromising your vision.

5. Potential for Long-Term Growth

- Ongoing Funding Opportunities: Even after your campaign ends, crowdfunding can provide an ongoing source of support, especially if you keep your backers engaged or turn them into long-term customers.



VII. CONCLUSION

The Crowd Funding platform addresses the problems of trust, transparency, and security in traditional crowdfunding platforms by utilizing blockchain technology and smart contracts. By providing voting power to investors, it ensures they have control over where and how their funds are used, creating a more democratic and interactive funding experience.

Future enhancements include:

- AI-based investment recommendations: Using AI to analyze proposals and recommend the best investment options.
- Multi-chain support: Expanding beyond Ethereum to other blockchain networks like Solana or Polygon to reduce gas fees and improve scalability.
- Governance tokens: Introducing tokens that represent a stake in the platform, allowing for broader governance rights.

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