



Startup Achiever: Fundraising Platform Using Blockchain

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Abstract: Start-up Achiever is a blockchain-based crowdfunding platform that connects investors directly to start-ups without the use of a middleman. This decentralized approach eliminates centralized authority systems and payment transfer between two parties, making the entire process more efficient and secure. Start-ups can upload their pitches and develop smart contracts that allow contributors to govern the money invested and project creators and investors to efficiently raise and reserve financing. This platform enables any start-up to raise money, regardless of their location or size, and allows investors to invest in projects they believe in. Crowdfunding platforms like Start-up Achiever are becoming increasingly popular as they provide a convenient and innovative way of raising funds to finance different kinds of projects and ventures, including startups.

Index Terms - Fundraising, Blockchain, Startup, Transaction, Smart Contract, Crypto Currency

I. INTRODUCTION

A. What Is Blockchain?

At a high level, a blockchain is a digital ledger that is used to record transactions. However, what makes blockchain technology unique is the way in which it achieves security, transparency, and decentralization. When a transaction is made on a blockchain network, it is verified and validated by a network of computers, called nodes, rather than a central authority. The transaction is then grouped with other transactions to form a block, and the block is added to the blockchain in a specific order.

Each block in the chain contains a unique digital signature, or hash, that verifies the integrity of the data in the block. This hash is generated using a mathematical algorithm that takes into account the data in the block as well as the hash of the previous block in the chain. By linking each block to the previous one in the chain, the blockchain creates an immutable and tamper-proof record of all transactions on the network.

Because the blockchain is maintained by a distributed network of nodes, it is extremely secure and resistant to hacking and fraud. In order to tamper with the blockchain, an attacker would need to compromise a majority of the nodes on the network, which is very difficult to do. This makes the blockchain a trusted and transparent system for recording and verifying transactions.

B. What is crowdfunding?

Crowdfunding is a method of raising funds for a project or venture by soliciting small contributions from a large number of people, typically via the internet. It is a form of crowdsourcing, which harnesses the collective efforts of a large group of people to achieve a common goal.

Crowdfunding typically takes place on specialized online platforms, where creators can set up a campaign to raise money for their project. The campaign will typically include a description of the project, the funding goal, and a timeline for when the funds will be used.

Backers can then contribute funds to the project in exchange for rewards, such as early access to the product, exclusive merchandise, or a mention in the credits. Crowdfunding campaigns can be either donation-based or investment-based, depending on the nature of the project and the platform used.

Crowdfunding has become an increasingly popular way for entrepreneurs, artists, and non-profit organizations to raise money and connect with their audience. It provides a low-cost and low-risk way for creators to test the market for their idea and build a community of supporters.

However, crowdfunding campaigns can also be challenging to execute successfully. They require careful planning, marketing, and management to attract and retain backers. In addition, the success of a crowdfunding campaign often depends on factors such as the size and engagement of the creator's network, the timing and duration of the campaign, and the overall market demand for the project.

C. Blockchain as a tool for Crowdfunding

Blockchain technology has emerged as a powerful tool for crowdfunding, providing a secure, transparent, and decentralized platform for raising funds for projects and ventures. By leveraging the features of the blockchain, crowdfunding campaigns can overcome many of the limitations and risks of traditional fundraising methods.

One of the key benefits of using blockchain for crowdfunding is the increased security and trust that it provides. Blockchain-based crowdfunding platforms use smart contracts, which are self-executing contracts that enforce the terms of the agreement between the creator and backers. Smart contracts ensure that funds are only released when certain conditions are met, such as reaching the funding goal or delivering on a milestone.

Blockchain-based crowdfunding also offers increased transparency, as all transactions and contributions are recorded on the blockchain and can be audited by anyone. This transparency helps to build trust between creators and backers, as it ensures that funds are being used as intended and that the project is making progress towards its goals.

D. Our Contributions

Our aim while working on this ambitious project was to first identify and then rectify the current hinderances that obstruct the free flow of funds to innovative entrepreneurs despite the apparent aid introduced via funding platforms which definitely challenged the monopoly of venture capitalists in the field of business. One pertinent drawback that caught our eye was how these platforms failed to forge trust and oftentimes charging an entry fee or a share of the donations rendered entrepreneurs sceptical of seeking help. Employing the blockchain technology then was our means to tackle these issues.

The Blockchain technology adopted for Start-up Achiever, apart from being cost effective, also helps facilitate financial trust for it maintains a regular record of all transactions. Not only that, the absence of a lower limit while investing reduces the risk of potential loss which in turn invites more people to invest and fairly distributes financial responsibility. In simplified terms it is analogous to removing the middleman from the trading business and establishing a direct contact between the producer and the buyer via suitable platform. Additionally, we also added the plagiarism check feature which shall ensure that the authenticity of the source idea is maintained and funds reach the right start-up and healthy competition is promoted across businesses.

II. LITERATURE REVIEW

The three main players in crowdfunding are investors, crowdfunding platforms, and entrepreneurs. They each have different responsibilities and goals. The initial flow begins with ideas being proposed, financing requests being made through crowdsourcing sites, and then investors are promised returns. Investors will consider the investment potential presented by startups before committing to invest. It takes a platform that serves as a mediator to connect investors and companies.

A. Platform for tracking charitable donations using blockchain

“Platform for Tracking Donations of Charitable Foundations based on Blockchain Technology” by Hadi Saleh, Sergey Avdoshin and Azamat Dzhonov offers an explanation of how the blockchain-based network for tracking donations would be implemented. Based on blockchain technology, the platform recommends operational transparency to donors, charitable organisations, and recipients. The charity platform offers a clear path for donations, allowing users and contributors to keep tabs on where, when, and to whom resources for charity funding are going.

B. Crowdfunding fraud prevention using blockchain

“Crowdfunding fraud prevention using blockchain” by Shivansh Pandey, Dhipraj Pandey, Shivam Goel and Subodh Bansla describes one of the main problems with most crowd financing sites, which is that contributors are not given any control over the funds they have contributed. The article addresses this challenge faced by the existing online crowdfunding platforms by leveraging the Ethereum network and smart contracts. It is suggested to use a smart contract-based system to coordinate all of the operations involved in a crowdfunding campaign. Using the Rinkeby Test Network, fundraising campaigns have allowed the suggested method to be evaluated.

“Venturing Crowdfunding using Smart Contracts in Blockchain” proposed by Nikhil Yadav and Sarasvathi V, is a decentralised system that enables investors to fund projects using smart contracts, ensuring that contributors have complete control over their invested funds and that investors as well as project creators can successfully raise money for the project. This paper presents a solution which combines two smart contracts, the first one keeps all the projects and the second one performs the transactions for individual projects. The principal actors across all crowdfunding platforms are the project manager, contributors, vendors, smart contract, spending request, and voting system. The Solidity compiler is used to compile the smart contract into a form that can be deployed on the Ethereum blockchain. All transactions are carried out via Metamask, a wallet that is accessible through a browser.

III. PROPOSED METHOD

Module 1 : Creation and Deployment of Smart Contract

To put in force the crowdfunding platform, a clever settlement is wanted which needs to be written in Solidity language. Then that is compiled and deployed with inside the Ethereum blockchain the usage of Solidity compiler in Remix IDE. Metamask that is a Chrome browser extension is used to make all of the transactions. Procedure for constructing an investment platform:

Step 1: Creation of smart contract.

Step 2: Compilation of the smart contract to obtain the bytecode and application binary interface (ABI).

Step 3: Deployment of bytecode to the Ethereum blockchain.

A. Creation of smart contract These are the functions that we will be able to implement through our smart contracts.

1. Start Project — we need to be capable of begin a brand new crowdfunding venture, in conjunction with putting its info like purpose quantity, etc.
2. View Projects — we should be able to retrieve our existing project details and display it
3. Fund Project — we need to be capable of fund an present venture with Ether 21
4. Retrieve Funds—withinside the case wherein a venture does now no longer meet its purpose quantity, and is beyond its deadline, funders need to be capable of retrieve their contributed funds.

Module 2 : Authentication using Auth0.

Auth0 is a flexible, drop-in method to upload authentication and authorization offerings for your applications. We can keep away from the cost, time, and chance that include constructing your very own method to authenticate and authorize users.

Module 3 : Project Creation and Funding

- To start a project, user has to register himself as project manager and fill in the details of startup.
- If user wants to be registered as an investor, then he must enter the details asked before investing in any projects.
- To create a project, click on start a project and enter Name of the startup, description about the project, amount and duration of the funding.
- All live projects are listed under Fund or Start a project.
- To fund, contributors can enter the amount, click on fund, select donation-based funding or equity based funding. Confirm the processing amount and complete the transaction.
- An Acknowledgement mail will be sent once the funding is completed depending upon the type of funding chosen by the user. We have used Smtpps to send acknowledgement. mails.

IV. ARCHITECTURE DIAGRAM

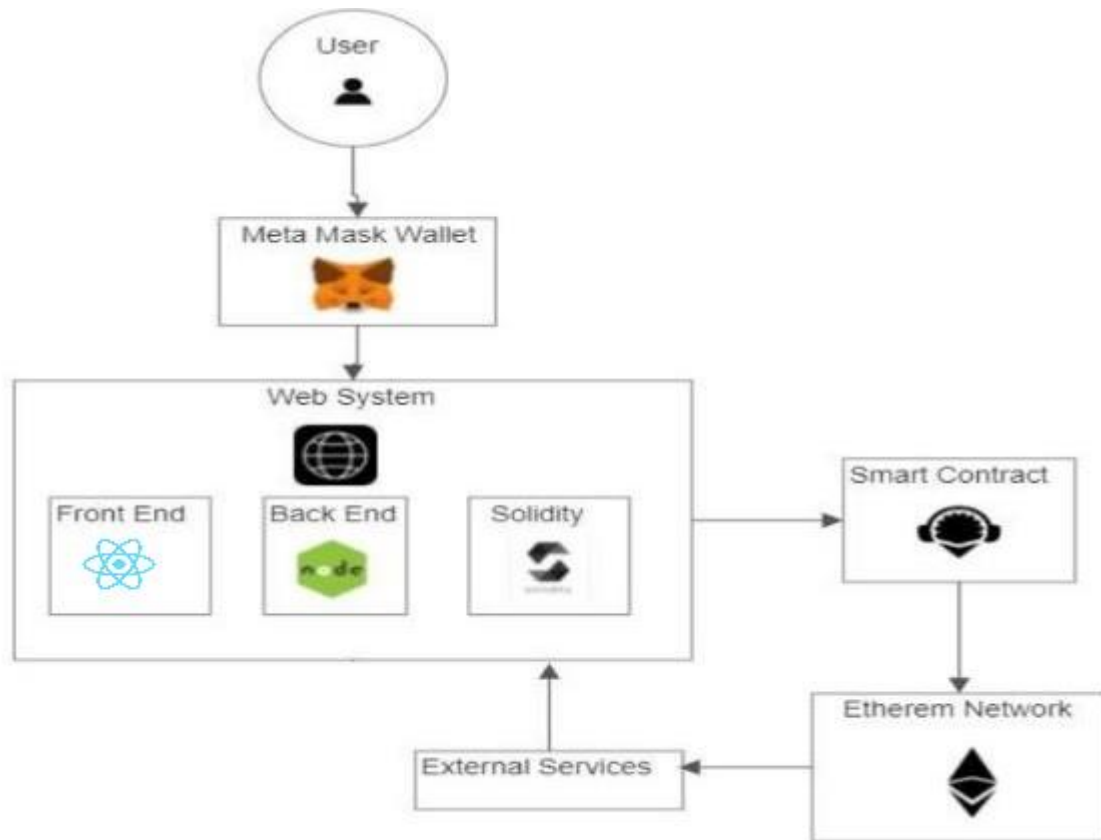


Fig. 1. The architecture of the proposed system

V. SYSTEM DESIGN

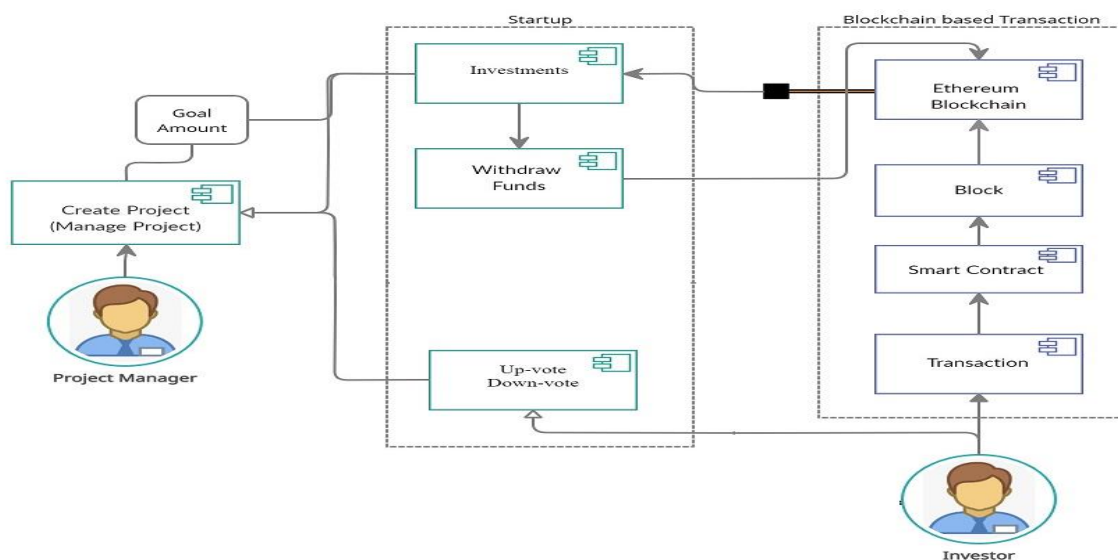


Fig. 2. Flow Diagram of the proposed system

1. Entrepreneur: They can create campaigns on the platform.

2. Investor: They can invest in campaigns.

The crowdfunding platform would include:

1. Create Campaign: The entrepreneur initiates the creation of a new campaign by providing campaign details.

2. Browse Campaigns: Both entrepreneurs and investors can browse and view existing campaigns.

3. Invest Funds: The investor can contribute funds to a specific campaign.

VI. RESULTS

The result for a fundraising platform based on blockchain for startups can be positive, as it can provide a more secure, transparent, and decentralized platform for raising funds for projects and ventures. By leveraging the features of the blockchain, crowdfunding campaigns can overcome many of the limitations and risks of traditional fundraising methods.

Using blockchain technology for crowdfunding can provide increased security and trust by using smart contracts to enforce the terms of the agreement between the creator and backers. It also offers increased transparency, as all transactions and contributions are recorded on the blockchain and can be audited by anyone.

Furthermore, blockchain-based crowdfunding can be more accessible and efficient than traditional methods, as backers can contribute funds from anywhere in the world, using cryptocurrency or other digital assets. This can eliminate the need for intermediaries such as banks or payment processors, reducing transaction fees and increasing the speed and efficiency of the fundraising process.

However, the success of a crowdfunding campaign also depends on factors such as the size and engagement of the creator's network, the timing and duration of the campaign, and the overall market demand for the project. Therefore, careful planning, marketing, and management are essential for executing a successful crowdfunding campaign using blockchain technology.

VII. SCREENSHOTS OF PROPOSED MODEL

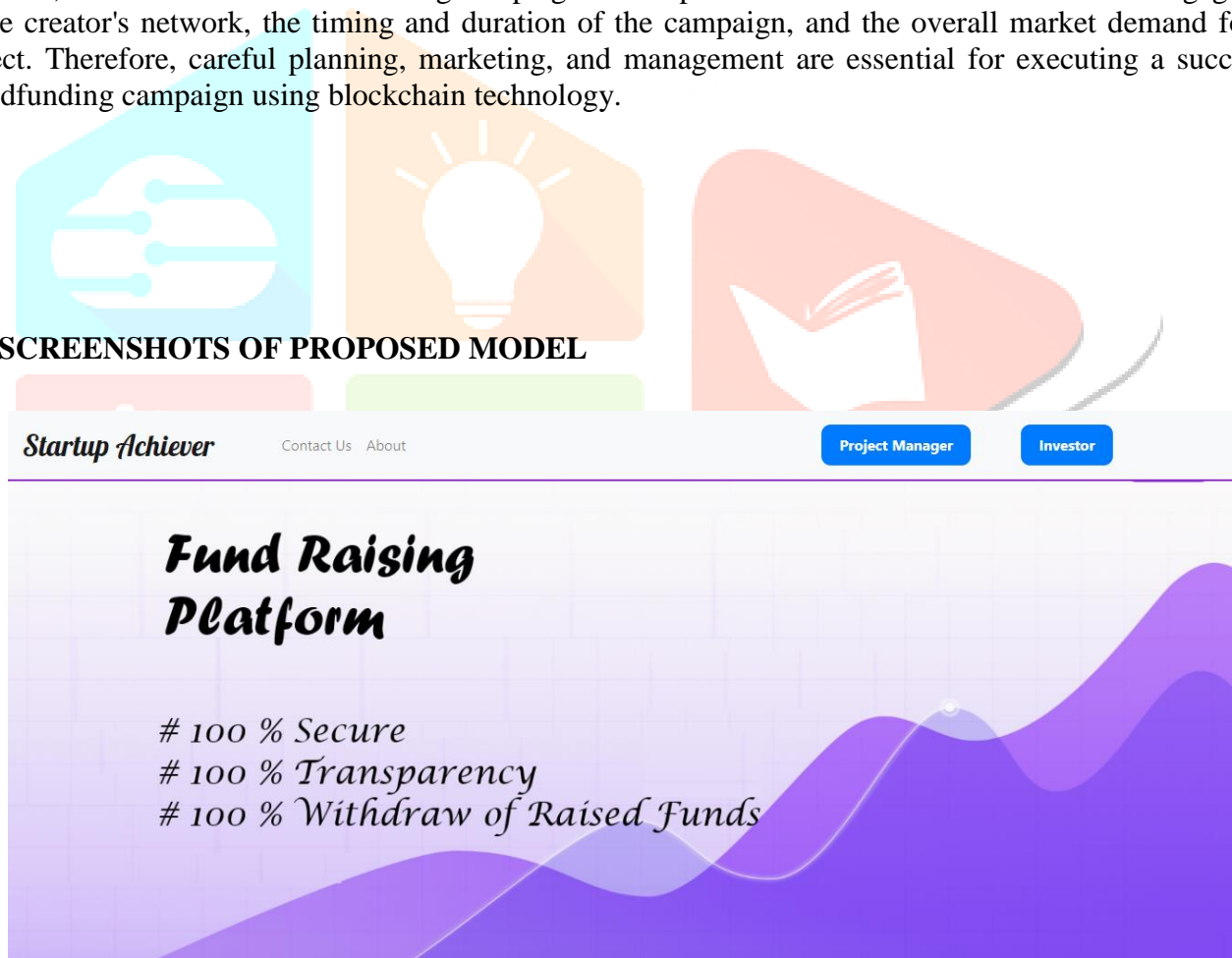


Fig 3. Home Page



Fig 4. Investor Dashboard

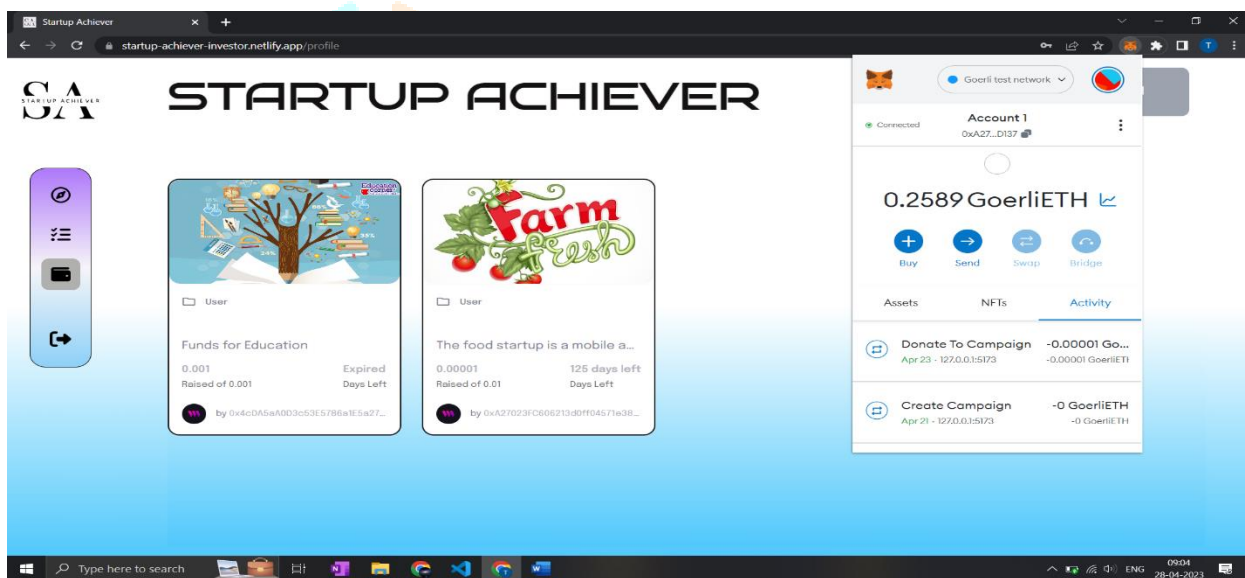


Fig 5. Project Manager Dashboard

VIII. REFERENCE

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