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Crowdfunding Dapp Using Blockchain Technology

Prof S. M. Jawake, Sudarshan Pawar, Suyesh Sontakke, BhushanMohod, Vijay Kalore,

Abhishek Ganesh

Department of Computer Science and Engineering, Mauli Group of Institutions College of Engineering and

Technology, Shegaon, India

ABSTRACT: Crowdfunding is the usage of small amount of capital from a huge quantity of people that offers investment to a commercial enterprise assignment, for an entrepreneurship or for any social as well as scientific causes. Crowdfunding is already a rage within the western international locations and is now gaining immense reputation in India. In our mission we advocate a paradigm for growing crowdfunding, a project that caters us with the functionalities of a primitive level crowdfunding platform coupled with the capability benefits of blockchain technology. Decentralized crowdfunding is a growing trend in the world of finance that has the potential to revolutionize how businesses and entrepreneurs raise capital. In this paper, we introduce a decentralized crowdfunding dapp that allows users to participate in crowdfunding campaigns securely and transparently. We discuss the advantages of decentralized crowdfunding, including greater access to capital, transparency, and accountability. We propose a solution to known challenges through the use of smart contracts and blockchain technology. Our dapp leverages the power of decentralized networks to provide a secure and transparent crowdfunding platform that can help project creators/entrepreneurs raise the capital they need to bring their ideas to life.

KEYWORDS: Crowdfunding, Decentralized Blockchain, Donations, Transparency.

I. INTRODUCTION

Blockchain technology has the potential to revolutionize crowdfunding by introducing greater transparency, security, and efficiency to the process. Crowdfunding is a process where startups or individuals can raise funds from a large number of people, typically via the internet. Crowdfunding has gained significant popularity in recent years, with platforms such as Kickstarter, Indiegogo, and GoFundMe becoming household names. However, traditional crowdfunding platforms have several limitations, including high fees, limited access, and centralized control meaning they are controlled by a single entity, which can lead to high fees, limited access to capital, and concerns about transparency and accountability. Crowdfunding using Blockchain, on the other hand, offers a more democratic way of funding projects. A crowdfunding Dapp, or decentralized application, is a type of software application that is built on a blockchain network and allows users to participate in crowdfunding campaigns. These Dapp operate on decentralized blockchain networks, which means that they do not rely on a centralized authority to manage transactions or store data. This makes them more secure, transparent, and efficient than traditional crowdfunding platforms.

Here are a few ways in which blockchain technology can be used for crowdfunding:

Decentralization: One of the most significant advantages of blockchain technology is its ability to enable decentralization. This means that a crowdfunding platform can be built on a decentralized blockchain network, eliminating the need for a central authority or middleman. With a decentralized platform, individuals can directly contribute funds to a project, and the funds are held securely in smart contracts.

*Smart Contracts***:** Smart contracts are self-executing contracts that are stored on a blockchain. They can automate many of the processes involved in crowdfunding, such as releasing funds to a project when certain milestones are met,

and automatically sending refunds to contributors if the project fails to meet its goals. This can help to reduce the risk of fraud and increase transparency in the crowdfunding process.

Tokenization: Tokenization is the process of creating digital tokens that represent a specific asset or utility. In the context of crowdfunding, tokens can be used to represent ownership of a project, access to its products or services, or a share of the revenue generated by the project. This can make it easier for startups to raise funds, as it provides a way for contributors to directly invest in the project and receive a tangible return on their investment.

Transparency: Blockchain technology can provide greater transparency in the crowdfunding process by allowing contributors to track the progress of a project and see how their funds are being used. This can help to build trust between the project creators and their contributors, which is essential for a successful crowdfunding campaign.

Community Participation: Crowdfunding Dapp often relies on community participation to succeed. This means that contributors can provide feedback on the project, share it with their networks, and help to promote it through social media or other channels.

Overall, blockchain technology has the potential to significantly improve the crowdfunding process by providing greater security, transparency, and efficiency. While they are still a relatively new technology, they offer a promising alternative to traditional crowdfunding platforms.

II. LITERATURESURVEY

Crowdfunding is the practice wherein a crowd of human beings make investments (meagre amounts) which might culminate to a big quantity of capital to fund for a specific reason or sponsor a specific assignment.

With the advent of DEFI, there has been a rise in developing Dapps for different use cases, some notable papers that have influenced our creation include "Blockchain-based Crowdfunding Platforms: A Study of Key Success Factors" by SoufianeTrabelsi, et al. (2019): The paper analyzes the key success factors for blockchain-based crowdfunding platforms, including trust, transparency, and smart contract automation. The authors argue that blockchain technology can enhance crowdfunding by improving transparency, reducing transaction costs, and enabling direct peer-to-peer transactions.

"Blockchain-based Crowdfunding: A Decentralized Platform for Investors and Entrepreneurs" by Amir H. Gandomi and Murtadha A. Alsaadi (2019): The paper presents a decentralized crowdfunding platform that utilizes blockchain technology to enable secure and transparent transactions. The authors argue that blockchain-based crowdfunding can reduce the risk of fraud, increase transparency, and eliminate the need for intermediaries.

"Blockchain-based Crowdfunding Platforms: A Review of the Literature and Future Directions" by Sebastian Kortmann and Moritz Schneider (2019): The paper provides a comprehensive review of the literature on blockchain-based crowdfunding platforms, including their benefits and challenges. The authors argue that blockchain technology can enable greater transparency, reduce transaction costs, and facilitate cross-border transactions. However, they also note that regulatory challenges and the lack of a standardized tokenization framework are potential barriers to adoption.

"Blockchain-based Crowdfunding: The Next Generation of Crowdfunding and Its Impact on Society" by Stephen G. Haines, et al. (2018): The paper explores the potential impact of blockchain-based crowdfunding on society, including its potential to democratize investment opportunities and empower marginalized communities. The authors argue that blockchain technology can enable greater access to capital, reduce the influence of intermediaries, and promote greater trust and transparency.

Aforementioned papers demonstrate that blockchain-based crowdfunding has the potential to revolutionize the crowdfunding industry by enhancing transparency, reducing transaction costs, and eliminating intermediaries. However, they also highlight the challenges of regulatory compliance, user adoption, and the need for standardization.

With continued development and adoption, crowdfunding Dapps have the potential to transform the way we fund projects and support social causes.

III. METHODOLOGY

Here is the overview on the process that the Crowdfunding Dapp follows:

Campaign Creation:
- Creator creates a Campaign on the Dapp and sets a funding goal and deadline. A smart contract is automatically created for the same.

Funding:
- Investors browse through the available campaigns and contribute to the one that fits their choice. The contributed funds are stored in the smart contract.

Goal reached:
- If the funding goal is reached before the deadline, the smart contract automatically releases the funds to the project owner. The funds can be transferred to the owner's wallet or an external account.
- If the funding goal is not reached before the deadline, the smart contract automatically refunds the contributed funds to the investors. The refund is sent to the investors' wallets or an external account.

Dispute Resolution:
- In the case of a dispute, the smart contract can be programmed to initiate a dispute resolution process.
- The dispute resolution process can be managed by a third-party arbitrator or a decentralized arbitration system.
  Feedback and Reputation:
- After the project is completed, the investors can provide feedback and ratings for the project owner. The feedback and ratings can be used to determine the project owner's reputation on the platform.

This flowchart represents a simplified version of a decentralized crowdfundingDapp. In practice, our Dapp may incorporate additional features, such as the ability to offer rewards to investors, integration with social media platforms, and support for multiple cryptocurrencies.

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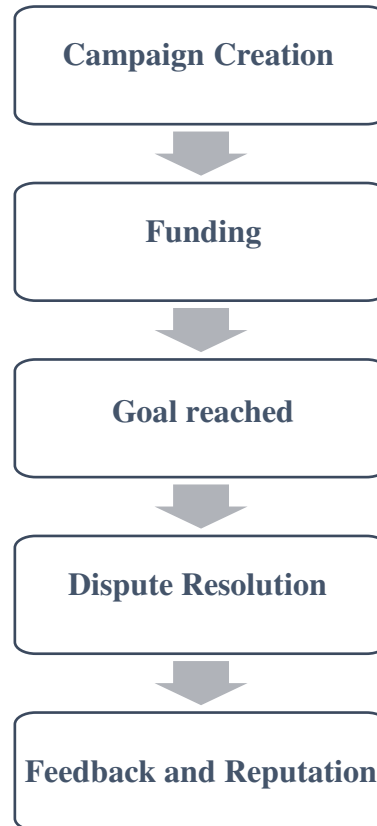
IV. CONCLUSION

Crowdfunding Dapps have the potential to revolutionize the way that individuals and organizations access funding and support for their plan. By leveraging blockchain technology and smart contracts, our Crowdfunding Dapp will enable transparent, decentralized, and secure crowdfunding campaigns that are accessible to a global audience. Our Dapp aims to offer a promising solution to the limitations of traditional crowdfunding platforms. By leveraging blockchain technology, we seek to create a trustless, transparent, and secure fundraising platform that can disrupt traditional crowdfunding and the broader financial industry. With lower fees, global access, and transparent transactions, a more equitable and accessible fundraising environment can be created. As the technology continues to evolve, decentralized crowdfunding dApps will hold a high stake in the way we fund and support social impact initiatives.

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📱 9940 572 462 🟢 6381 907 438 ✉ ijircce@gmail.com