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Securefund Crowdfunding Using Blockchain

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Abstract: ***The rise of crowdfunding as an alternative way of raising funds has revolutionized the way entrepreneurs, investors, and businesses interact. However, crowdfunding platforms are plagued with various challenges such as trust issues, lack of transparency, and intermediary fees. Blockchain technology has emerged as a potential solution to these problems, providing a decentralized and transparent platform that eliminates intermediaries, increases trust and reduces transaction costs. This research paper aims to explore the concept of crowdfunding using blockchain, its benefits, and the challenges that come with its implementation. The study will focus on the impact of blockchain on crowdfunding, the various blockchain-based crowdfunding models, and their effectiveness. The research will also examine the regulatory framework for blockchain-based crowdfunding and its impact on the growth of the industry. The findings of this study will provide valuable insights into the potential of blockchain technology to transform the crowdfunding industry and open up new avenues for entrepreneurs and investors alike.***
Keywords: Transparency, Crowdfunding platforms, Smart-contracts, Tokenization, Fundraising.

I. INTRODUCTION

Crowdfunding has gained immense popularity in recent years as an alternative way of raising funds for entrepreneurs and startups. Crowdfunding platforms enable entrepreneurs to reach out to a large number of potential investors and raise funds for their projects. However, crowdfunding platforms are not without their challenges, including high intermediary fees, lack of transparency, and trust issues. Blockchain technology has emerged as a potential solution to these challenges, providing a decentralized and transparent platform that eliminates intermediaries, increases trust, and reduces transaction costs.

Blockchain technology is a distributed ledger technology that allows multiple parties to maintain and verify a database of transactions without the need for a central authority. Blockchain technology has been adopted in various industries, including finance, healthcare, and supply chain management. The use of blockchain in crowdfunding has the potential to transform the industry, making it more efficient and accessible to a wider range of investors. Crowdfunding has emerged as a popular method for startups, small businesses, and even individuals to raise funds for various projects or ventures. It involves collecting small contributions from a large number of people through online platforms. Crowdfunding platforms have become an important source of funding for various projects such as charitable causes, creative projects, real estate development, and business startups. According to Statista, the global crowdfunding market size was valued at $13.9 billion in 2020 and is expected to reach $25.8 billion by 2025. However, despite the popularity of crowdfunding, there are still some challenges associated with the traditional crowdfunding process. One of the major challenges is the lack of transparency and accountability in the process. There have been instances where fraudulent activities have taken place on crowdfunding platforms, and investors have lost their money. Moreover, the traditional crowdfunding process is also characterized by high transaction fees and long processing times, which can deter investors from participating in crowdfunding campaigns. The use of blockchain in crowdfunding can help to ensure transparency, security, and accountability in the process. Moreover, blockchain-based crowdfunding can reduce transaction fees and processing times, making it more accessible and attractive for investors. In this research paper, we will explore the concept of crowdfunding using blockchain technology. We will examine the benefits of using blockchain in crowdfunding and discuss the challenges associated with the implementation of blockchain-based crowdfunding. We will also examine some of the successful examples of blockchain-based crowdfunding projects and analyze their impact on the crowdfunding industry. The research paper is organized as follows. In the next section, we will provide a brief overview of crowdfunding and the challenges associated with the traditional crowdfunding process. In section 3, we will introduce blockchain technology and its potential benefits in the crowdfunding process. Section 4 will examine some of the successful examples of blockchain-based crowdfunding projects and their impact on the crowdfunding industry. In section 5, we will analyze the challenges associated with the implementation of blockchain-based crowdfunding. Finally, we will conclude the research paper by summarizing the key findings and discussing the future potential of blockchain-based crowdfunding. Overall, the use of blockchain technology in crowdfunding has the potential to revolutionize the crowdfunding industry by providing a more secure, transparent, and efficient platform for crowdfunding. The implementation of blockchain-based crowdfunding can help to overcome the challenges associated with traditional crowdfunding, and open up new opportunities for startups, small businesses, and individuals to raise funds for their projects.

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II. RELATED WORK

There have been numerous studies on crowdsourcing and decentralised apps. This section goes into further detail on current crowdfunding research. Interactive donation and permission request forms were created by Benila et al. to make it simple for campaign creators and contributors to launch and support campaigns (Ordanini et al., 2011). The donor will be able to keep track of the money they got since the blockchain will record every transaction and archive it as a block. The transaction process is visible as a result. Any outside impact in this kind of system is quite plausible. In order for the campaigns to be effective, the creators need to come up with ideas that could appeal to a large audience and design interactive forms.

Muneeza et al. contributed to the expansion of the literature on financial technology (Gleasure and Morgan, 2017). By describing how crowdsourcing promotes financial inclusion, this was accomplished. This study intends to demonstrate the benefits of financial inclusion and how blockchain will speed up the growth of crowdfunding. One of the first studies of crowdsourcing in Malaysia was done here. Many journals, newspapers, and industry reports have been critically analysed on the subject. Six well-known platforms were examined to examine how crowdfunding has changed in Malaysia. According to the study's conclusions, crowdfunding can be used to promote financial inclusion, and blockchain will eventually make platform operators' issues less of a problem.

According to Bhogan et al. (Knezevic, 2013), the e-tendering process can be kept secure by ensuring that the tendering organisation cannot alter the tender because it is built on the blockchain and cannot view the bid until a deadline has passed. The mechanism also forbids bidders from reading or changing the bids submitted by other organisations. E-tendering is widely employed in the modern world. It is more efficient than the standard paper-based tendering procedures. The most important security measures are those that are based on legal requirements. The TTP serves the functions of a bank or another financial institution in their model. Another task assigned to it is to verify the main and tenders. Rawat et al. released a thorough and comprehensive examination of the blockchain-enabled smart contracts to function as a catalyst for additional study in this area (Chiu and Koeppl, 2017). A smart contract is nothing more than a security code added to a smart contract. It contains licences that are defined in the law and specify the conditions that must be met in order to fulfil the contract's responsibilities. A few time constraints in the model allow for the addition of contract deadlines. The blockchain-based paradigm has made it more cost-effective, decentralised, transparent, and unchangeable. In Collins' 2016 publication, the Shaji et almethod, which will act as a bridge between landowners and farmers, was proposed. Farmers will find it easier to borrow land from landlords thanks to this system. A few variables need to be considered before leasing land, include availability, due to the lack of understanding in farming and agriculture. Even when a landlord and farmer work together on a land loan, outside parties frequently become involved to learn more about the property. The resulting methodology makes sure that the farmers and landlords control every aspect of the process independently.

III. PROPOSED WORK

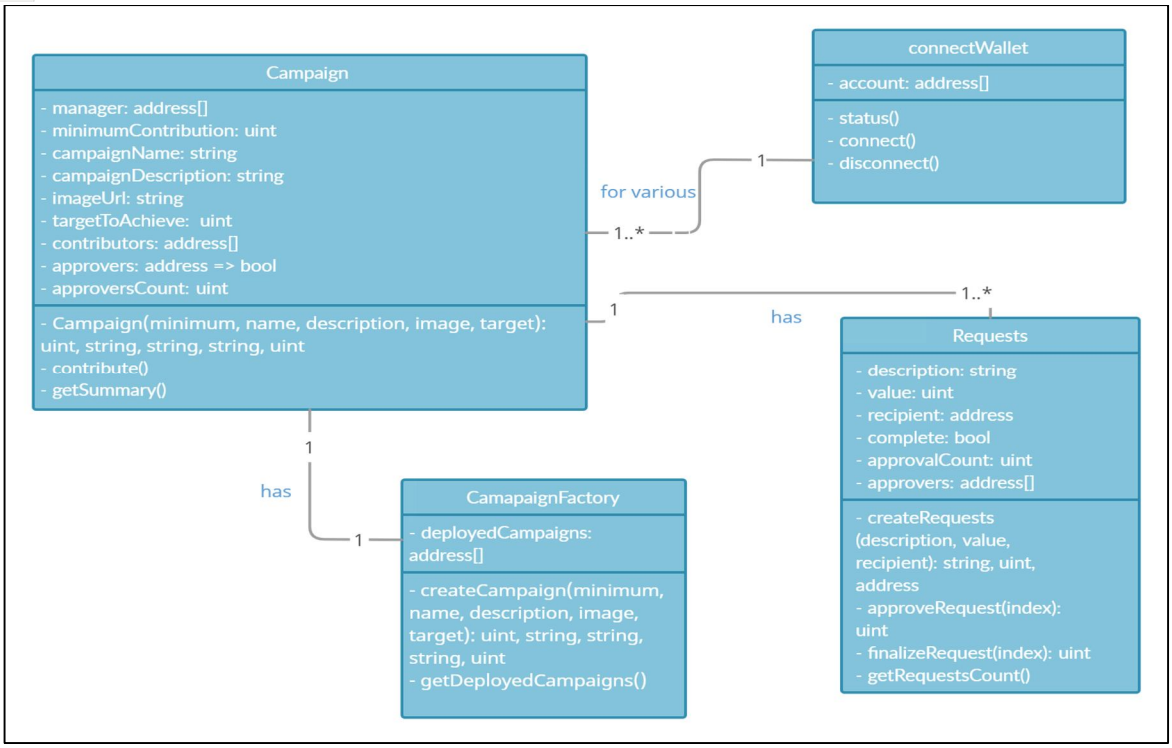
In recent times, there has been a surge in interest for both bitcoin and crowdfunding on the internet. By utilizing blockchain technology, it is possible to eliminate the inherent risks associated with both bitcoin and crowdfunding. Through the implementation of smart contracts, all funds raised can be pooled together into a collection of campaign-related gifts, and released to the beneficiary only when specific conditions are met, with approval required from the majority of the donors.

The proposed paradigm was tested using Ethereum, a distributed network based on blockchain technology. Ethereum's native currency, ether, was utilized in the testing process, and the network's decentralized virtual machine, EVM, enabled the execution of the program on public nodes.

For the money to be transferred to the customer, the following processes must be completed:

1) The fund raiser will create a new campaign and publish a campaign on the site.
2) The website will display all of the initiatives.
3) The investor will search the website for the campaign he or she want to support.
4) Now, based on how much he or she is contributing. The fund initiator's minimal contribution determines whether he or she is regarded a supporter or a regular donor.
5) In order for the fund raiser to get funds, he or she must obtain approval from the fund's donor.
6) Once more than half of the supporters have approved the transaction, it will be sent straight to the initiator without the participation of any intermediary.

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In distributed systems, new transactions are added through a process known as mining, which involves the creation of a hash value that is smaller than the desired value. Miners compete with each other to solve mathematical problems and provide a hash value, with the reward being either tokens or transaction fees. To validate the miner's investment of time and resources, a proof-of-work algorithm is typically applied. After solving the problem, the miner must wait for a period before the transaction is validated and added to the block, and only then will they receive credit for the reward.

IV. RESULTS AND DISCUSSION

The decentralized platform was constructed using the Ethereum blockchain, where investors finance a project by sending tokens from their metamask account to the project initiator account, with each transaction being recorded on a blockchain block. If a project raises the full desired amount within the specified timeframe, it is deemed successful; otherwise, the investors can receive their money back via the backtracking approach.

This webpage displays campaigns and the minimum amount required to meet the funder's needs. Investors have access to the target amount and the backtracking option, allowing them to retrieve their funds if the goal is not met. The creators of the campaigns must demonstrate creativity and innovation to showcase their initiatives in a unique way that enhances their credibility. Funders can contribute any amount they wish, with a minimum investment requirement stated for each project. Investors are free to explore any open project, review its details, and invest at their discretion, with the frequency of visits having no impact on the amount of their contribution.

The campaign creator's objective is to raise funds for a worthy cause, with the crowdfunding site obligated to release all funds to the creator if the campaign reaches its target within the specified time period. Campaign creators make a request to the platform to host their campaign and provide essential features, such as transparency and efficiency. The platform charges a nominal fee only if the campaign is successful.

V. CONCLUSION

In conclusion, this research paper has examined the potential of using blockchain technology in the context of crowdfunding. The study has found that blockchain has several benefits over traditional crowdfunding methods, including increased transparency, improved security, and reduced costs. By leveraging blockchain technology, crowdfunding platforms can create a more efficient, trustworthy, and accessible fundraising environment for entrepreneurs and investors alike.

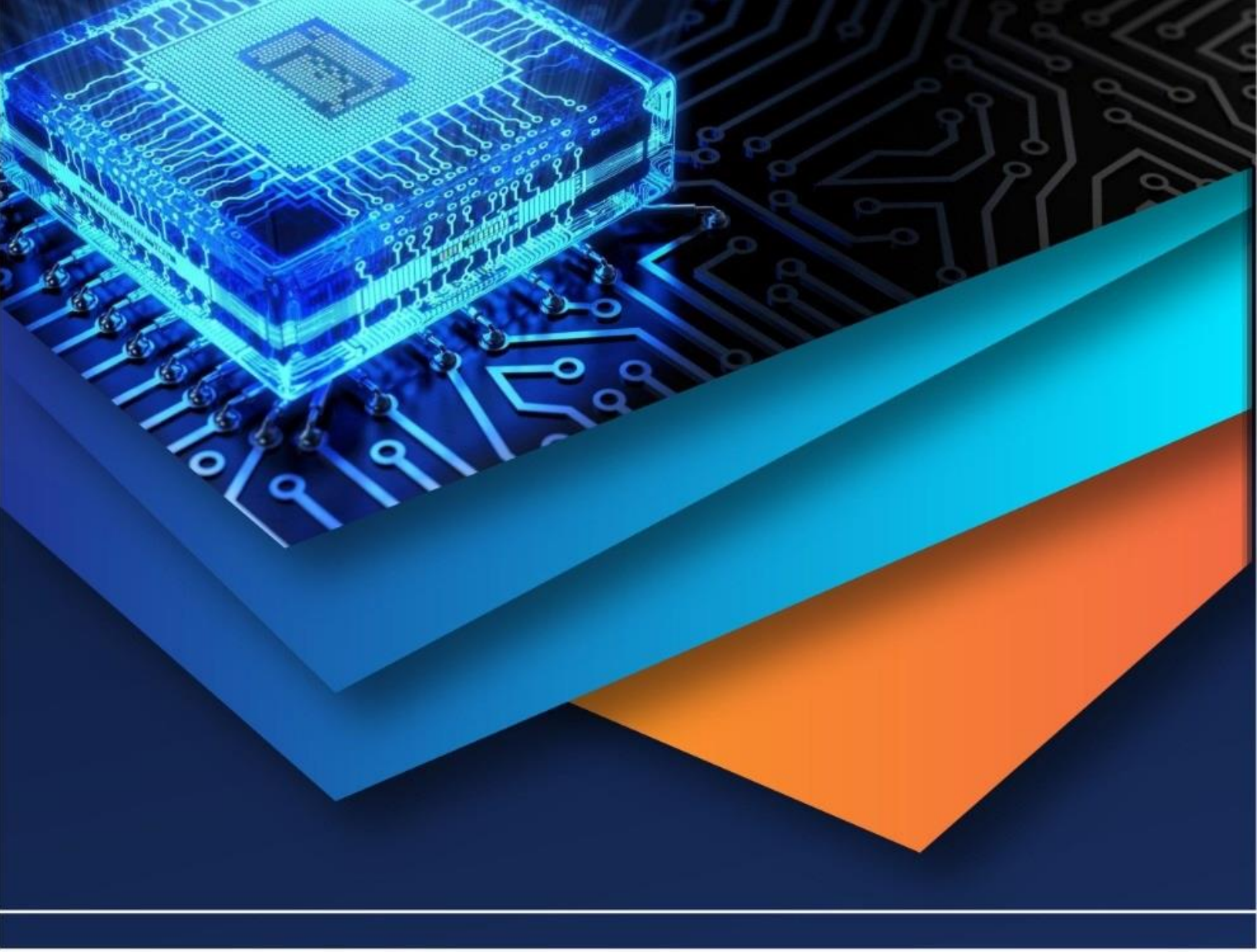
The crowdfunding platforms can successfully implement the blockchain technology to streamline the crowdfunding process, providing entrepreneurs with access to capital and investors with opportunities to invest in promising projects.

However, the research paper also acknowledges that there are still some challenges associated with using blockchain for crowdfunding. These include regulatory hurdles, technical complexities, and potential scalability issues. Addressing these challenges will require a concerted effort from industry stakeholders, including regulators, developers, and investors.

Overall, the research paper concludes that blockchain-based crowdfunding has enormous potential to transform the way entrepreneurs raise capital and investors participate in early-stage projects. As the technology continues to mature and evolve, it is likely that we will see even more innovative use cases emerge, creating new opportunities for entrepreneurs and investors alike.

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