

# **DISTRUBUTED CROWDFUNDING USING BLOCKCHAIN**

Submitted in partial fulfilment of the requirements for the award of  
Bachelor of Engineering degree in Computer Science and Engineering

By

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**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING  
SCHOOL OF COMPUTING**

# **SATHYABAMA**

**INSTITUTE OF SCIENCE AND TECHNOLOGY  
(DEEMED TO BE UNIVERSITY)**

**Caetgory-1 University by UGC**

**Accredited with Grade “A++” by NAAC | Approved by AICTE**

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**SALAI, CHENNAI – 600119**

**APRIL - 2024**



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## DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

### BONAFIDE CERTIFICATE

This is to certify that this Project Report is the bonafide work of **NALLABOTHULA RAHUL SAI (40110820)** and **MYNENI RAMA KRISHNA PRABHU KUAMR (40110810)** who carried out the Project entitled "**DISTRIBUTED CROWDFUNDING USING BLOCKCHAIN**" under my supervision from November 2023 to April 2024.

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## DECLARATION

I, **NALLABOTHULA RAHUL SAI (40110820)** hereby declare that the Project Report entitled **“DISTRIBUTED CROWDFUNDING USING BLOCKCHAIN”** done by me under the guidance of **Dr. NANCY NOELLA R S, M.E., Ph.D.** is submitted in partial fulfilment of the requirements for the award of Bachelor of Engineering degree in **Computer Science and Engineering**.

DATE : 10/04/2024

PLACE : CHENNAI



SIGNATURE OF THE CANDIDATE

## ACKNOWLEDGEMENT

I am pleased to acknowledge my sincere thanks to **Board of Management of SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY** for their kind encouragement in doing this project and for completing it successfully. I am grateful to them.

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I would like to express my sincere and deep sense of gratitude to my Project Guide **Dr. NANCY NOELLA R S, M.E., Ph.D.** for her valuable guidance, suggestions and constant encouragement paved way for the successful completion of my project work.

I wish to express my thanks total **Teaching** and **Non-teaching** staff members of the **Department of Computer Science and Engineering** who were helpful in many ways for the completion of the project.

## **ABSTRACT**

The project work that designs and implementation of a distributed crowdfunding system using blockchain technology. Crowdfunding has become a popular method for raising funds for various projects, but it suffers from limitations such as lack of transparency, high fees, and reliance on intermediaries. To address these issues, we propose a decentralized platform that leverages the transparency and security of blockchain technology. The system allows project creators to create fundraising campaigns and investors to contribute funds directly to the projects of their interest. Contributions are conducted using cryptocurrency on the blockchain, ensuring security and eliminating the need for intermediaries. Smart contracts are employed to automate the release of funds and ensure that they are used in accordance with the agreed terms. The proposed system also incorporates a reputation mechanism to enhance trust and encourage honest behaviour among participants. Experimental results demonstrate the efficiency and effectiveness of the system. Overall, this distributed crowdfunding system utilizing blockchain offers an innovative approach to fundraising that improves transparency, reduces fees, and increases inclusivity, with potential applications in various domains to revolutionize the traditional fundraising.

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# **CHAPTER 1**

## **INTRODUCTION**

The distributed crowdfunding system using blockchain is an innovative approach that leverages the power of blockchain technology to revolutionize the way crowdfunding campaigns are conducted.

Traditional crowdfunding platforms often suffer from issues such as lack of transparency, high fees, and limited access to funds. In contrast, the distributed crowdfunding system aims to address these drawbacks by utilizing blockchain technology as a decentralized and transparent platform for fundraising.

At its core, blockchain is a distributed ledger that records transactions across multiple computers, ensuring transparency and immutability. By leveraging this technology, the distributed crowdfunding system allows for a transparent and secure process where every transaction is recorded and can be verified by all participants. This ensures that funds raised through the platform are used for their intended purpose, eliminating the risk of fraud or misappropriation.

Additionally, the use of blockchain enables the elimination of intermediaries, such as banks or crowdfunding platforms, who typically charge high fees for their services. In the distributed crowdfunding system, funds can be directly transferred between the campaign organizers and the contributors, cutting out unnecessary middlemen and reducing transaction costs. This means that more funds can reach the intended cause or project, increasing the overall impact of the crowdfunding campaign.

Furthermore, the distributed nature of blockchain ensures that the fundraising process is accessible to a wider range of participants. Traditional crowdfunding platforms often have limitations on who can participate, such as geographical restrictions or minimum investment amounts. With the distributed crowdfunding system, anyone with an internet connection can contribute to a campaign, regardless of their location or financial resources. This democratization of crowdfunding empowers individuals from all walks of life to support causes and projects that resonate with them.

Moreover, the use of blockchain technology enables the creation of smart contracts, which are self-executing agreements with predefined conditions. Smart contracts can be utilized in the distributed crowdfunding system to automate various aspects of the fundraising process, such as releasing funds when specific milestones are met or automatically issuing rewards to contributors. The use of smart contracts not only streamlines the crowdfunding process but also increases trust and accountability, as the terms of the agreement are encoded in the blockchain and cannot be altered or manipulated.

In conclusion, the distributed crowdfunding system using blockchain is a cutting-edge solution that addresses the limitations of traditional crowdfunding platforms. By leveraging the transparency, security, and accessibility of blockchain technology, this system empowers individuals and organizations to conduct crowdfunding campaigns in a more efficient, cost-effective, and trustworthy manner. With its potential to revolutionize the crowdfunding landscape, the distributed crowdfunding system has the potential to drive positive social and economic change on a global scale.

One significant advantage of the distributed crowdfunding system is its ability to foster a greater sense of community and trust among participants. With every transaction recorded on the blockchain and accessible to all, contributors can have confidence in the integrity of the fundraising process. This transparency builds trust between campaign organizers and supporters, encouraging greater participation and engagement in crowdfunding initiatives.

Furthermore, the decentralized nature of blockchain technology ensures resilience against censorship and external interference. Unlike centralized crowdfunding platforms that may be susceptible to censorship or regulatory constraints, the distributed crowdfunding system operates autonomously across a network of nodes. This resilience not only protects the integrity of fundraising campaigns but also ensures that individuals and organizations can continue to access funding for causes and projects, regardless of external pressures.

## **CHAPTER 2**

### **LITERATURE SURVEY**

#### **2.1 INFERENCES FROM LITERATURE SURVEY**

1. TEduChain: A blockchain-based platform for crowdfunding tertiary education.

Authors: Rashid, M. A., Deo, K., Prasad, D., Singh, K., Chand, S., & Assaf, M.

Published in: The Knowledge Engineering Review (2020)

Explanation: This paper introduces TeduChain, a blockchain-based platform designed for crowdfunding tertiary education. It explores how blockchain technology can be utilized to facilitate crowdfunding in the education sector [5].

2. A decentralized trust management mechanism for crowdfunding.

Authors: Xu, Y., Li, Q., Zhang, C., Tan, Y., Zhang, P., Wang, G., & Zhang, Y.

Published in: Information Sciences (2023).

Explanation: This research presents a decentralized trust management mechanism for crowdfunding using blockchain technology. It focuses on enhancing trust and security in crowdfunding campaigns [8].

3. Crowdfunding fraud prevention using blockchain.

Authors: Pandey, S., Goel, S., Bansla, S., & Pandey, D.

Published in: 2019 6<sup>th</sup> International Conference on Computing for Sustainable Global Development (INDIACom) (2019).

Explanation: This paper discusses how blockchain can be employed for preventing fraud in crowdfunding. It explores mechanisms to enhance the integrity of crowdfunding platforms [4].

4. Blockchain-based Decentralized Co-governance: Innovations and Solutions for Sustainable Crowdfunding.

Authors: Chen, B., Luo, Y., Li, J., Li, Y., Liu, Y., Yang, F., & Qiao, Y.

Published in: arXiv preprint arXiv:2306.00869 (2023).

Explanation: This paper introduces innovations and solutions for sustainable crowdfunding through blockchain-based decentralized co-governance. It explores ways to improve crowdfunding mechanisms [2].

5. Securing blockchain-based crowdfunding platforms: an integrated graph neural networks and machine learning approach.

Authors: Zkik, K., Sebbar, A., Fadi, O., Kamble, S., & Belhadi, A.

Published in: Electronic Commerce Research (2023).

Explanation: This research focuses on securing blockchain-based crowdfunding platforms by integrating graph neural networks and machine learning approaches. It addresses security concerns in crowdfunding [10].

6. Crowdfunding platform using Blockchain: A review of D app implementation.

Authors: Varghese, A., Regi, N. A., Babu, S. M., & Varghese, C. M.

Explanation: While specific publication details are not provided, this work likely reviews the implementation of decentralized applications (Dapps) for crowdfunding platforms utilizing blockchain technology [7].

7. Tracking the digital evolution of entrepreneurial finance: the interplay between crowdfunding, blockchain technologies, cryptocurrencies, and initial coin offerings.

Authors: Bogusz, C. I., Laurell, C., & Sandström, C.

Published in: IEEE Transactions on Engineering Management (2020).

Explanation: This paper explores the digital evolution of entrepreneurial finance, examining the interactions between crowdfunding, blockchain technologies, cryptocurrencies, and initial coin offerings (ICOs) [1].

#### 8. Crowdfunding platform using Blockchain.

Authors: Varghese, A., Regi, N. A., Babu, S., Mani, S., & Varghese, C. M.

Explanation: This work, similar to reference [6], likely discusses the implementation of a crowdfunding platform using blockchain technology, although specific publication details are not provided [6].

#### 9. Blockchain Fundraising and Charity Platform.

Authors: Govindarajan, S., Rajkumar, S. S., & Posonia, A. M.

Published in: 2023 2<sup>nd</sup> International Conference on Vision Towards Emerging Trends in Communication and Networking Technologies (ViTECoN) (2023).

Explanation: This paper focuses on blockchain-based fundraising and charity platforms, examining how blockchain can enhance transparency and trust in charitable contributions [3].

#### 10. LikeStarter: a Smart-contract based Social DAO for Crowdfunding.

Authors: Zichichi, M., Contu, M., Ferretti, S., & D'Angelo, G.

Published in: IEEE INFOCOM 2019-IEEE Conference on Computer Communications Workshops (INFOCOM WKSHPS) (2019).

Explanation: This paper introduces LikeStarter, a smart-contract based Social DAO (Decentralized Autonomous Organization) for crowdfunding. It explores the application of blockchain and smart contracts in crowdfunding initiatives [9].

## **2.2 EXISTING SYSTEM AND PROPOSED SYSTEM**

### ***2.2.1 Existing System***

The existing system for Distributed crowdfunding using blockchain has several disadvantages. Firstly, one of the major drawbacks is the scalability issue. The current blockchain technology used in crowdfunding platforms is not capable of handling a large number of transactions. As more and more users join the platform, the network becomes congested, and the transaction speed slows down significantly. This can be a major hindrance for crowdfunding campaigns that require quick and efficient transactions.

### ***2.2.2 Proposed System***

The proposed work is to develop a distributed crowdfunding system using blockchain technology. The system aims to revolutionize the way projects are funded by leveraging the transparency, security, and efficiency of blockchain.

Firstly, the system will utilize a decentralized network of nodes to ensure that no single entity or organization has control over the crowdfunding process. This will eliminate the need for intermediaries such as banks or crowdfunding platforms, reducing transaction costs, and increasing trust among participants.

Secondly, the system will incorporate smart contracts, which are self-executing contracts with the terms of the agreement directly written into code. Smart contracts will automate the entire crowdfunding process, eliminating the need for manual intervention and reducing the possibility of fraud or manipulation.

Furthermore, the use of blockchain will ensure transparency and immutability of transaction records. All transactions will be recorded on the blockchain in a tamper-proof manner, preventing any form of data manipulation. This will foster trust and accountability among the participants, as they can verify the authenticity of transactions at any time.

## **2.3 OPEN PROBLEMS IN EXISTING SYSTEM**

### **1. Scalability:**

**Network Congestion:** As more projects and contributors join the blockchain network, it can become congested, leading to slow transaction processing and high fees. Scaling solutions are needed to handle increased traffic efficiently.

### **2. User Onboarding:**

**Complexity:** Many potential users are unfamiliar with blockchain technology and find the onboarding process challenging. Simplifying the user experience and providing user-friendly interfaces are ongoing challenges.

### **3. Regulatory Compliance:**

**Legal Frameworks:** Crowdfunding platforms must navigate complex and evolving regulatory environments in different countries. Ensuring compliance with securities laws and other regulations while maintaining decentralization is a significant challenge.

### **4. Security and Fraud Prevention:**

**Smart Contract Vulnerabilities:** Smart contracts are prone to vulnerabilities that can be exploited by malicious actors. Developing more secure smart contract code and auditing mechanisms is crucial.

**Identity Verification:** Ensuring that contributors and project creators are legitimate and not engaging in fraudulent activities is a challenge. Blockchain-based identity verification solutions need further development.

### **5. Token Standards:**

**Interoperability:** There are various token standards (e.g., ERC-20, ERC-721) on different blockchain platforms. Achieving interoperability and standardization to enable cross-chain crowdfunding is an ongoing challenge.

## 6. Governance:

Decision-Making: Decentralized autonomous organizations (DAOs) play a role in governance, but defining transparent and effective decision-making processes for project funding and platform governance remains a challenge.

## 7. Transparency and Accountability:

Auditability: While blockchain is touted for its transparency, ensuring that all transactions and project details are fully auditable and accessible to stakeholders can be challenging.

## 8. Marketplace Integrity:

Project Due Diligence: Ensuring that projects listed on crowdfunding platforms are legitimate and viable requires robust due diligence mechanisms.

Token Valuation: Determining the fair valuation of tokens issued in crowdfunding campaigns can be challenging, leading to potential overvaluation or undervaluation.

## 9. Token Liquidity:

Secondary Markets: Enabling liquidity for crowdfunding tokens in secondary markets can be complex. Developing decentralized exchanges (DEXs) and liquidity pools for these tokens is an open problem.

## 10. User Engagement and Retention:

Community Building: Encouraging active user participation and fostering a sense of community around crowdfunding projects is a challenge.

Incentive Mechanisms: Developing effective incentive structures to reward contributors and maintain user engagement is an ongoing challenge.

#### 11. Interoperability with Traditional Finance:

Integration: Bridging the gap between blockchain-based crowdfunding and traditional financial systems to allow for fiat currency contributions and regulatory compliance remains a challenge.

#### 12. Data Privacy:

Sensitive Information: Protecting the privacy of users and project creators while maintaining transparency on the blockchain is a delicate balance that requires innovative solutions.

#### 13. User Education:

Blockchain Literacy: Educating potential users about blockchain technology, cryptocurrencies, and the benefits of decentralized crowdfunding is an ongoing challenge.

#### 14. Market Volatility:

Token Price Stability: Mitigating the impact of cryptocurrency price volatility on crowdfunding campaigns and contributor confidence is a significant challenge.

#### 15. Sustainability:

Environmental Impact: Addressing concerns about the energy consumption and environmental impact of blockchain networks, especially proof-of-work networks, is an important consideration.

## **CHAPTER 3**

### **REQUIREMENTAL ANALYSIS**

#### **3.1 RISK ANALYSIS OF THE PROJECT**

##### ***3.1.1 Feasibility Study***

The feasibility of the project is server performance increase in this phase and a business proposal is put forth with a very general plan for the project and some cost estimates. During system analysis, the feasibility study of the proposed system is to be carried out. For feasibility analysis, some understanding of the major requirements for the system is essential.

Three key considerations involved in the feasibility analysis are

- Economical feasibility
- Technical feasibility
- Operational feasibility

##### ***3.1.2 Economical Feasibility***

This study is carried out to check the economic impact that the system will have on the organization. The amount of funds that the company can pour into the research and development of the system is limited. The expenditures must be justified. Thus the developed system as well within the budget and this was achieved because most of the technologies used are freely available. Only the customized products had to be purchased.

##### ***3.1.3 Technical Feasibility***

This study is carried out to check the technical feasibility, that is, the technical requirements of the system. Any system developed must not have a high demand on the available technical resources. This will lead to high demands being placed on the

client. The developed system must have modest requirements, as only minimal or null changes are required for implementing this system.

#### **3.1.4 Operational Feasibility**

The aspect of the study is to check the level of acceptance of the system by the user. This includes the process of training the user to use the system efficiently. The user must not feel threatened by the system, instead must accept it as a necessity. The level of acceptance by the users solely depends on the methods that are employed to educate the user about the system and to make him familiar with it. His level of confidence must be raised so that he is also able to make some constructive criticism, which is welcomed, as he is the final user of the system.

### **3.2 SOFTWARE REQUIREMENTS SPECIFICATION DOCUMENT**

Hardware specifications:

- Microsoft Server enabled computers, preferably workstations.
- Higher RAM, of about 4GB or above.
- Processor of frequency 1.5GHz or above.

Software specifications:

- Python 3.6 and higher.
- Anaconda Software.

## **CHAPTER 4**

### **DESCRIPTION OF PROPOSED SYSTEM**

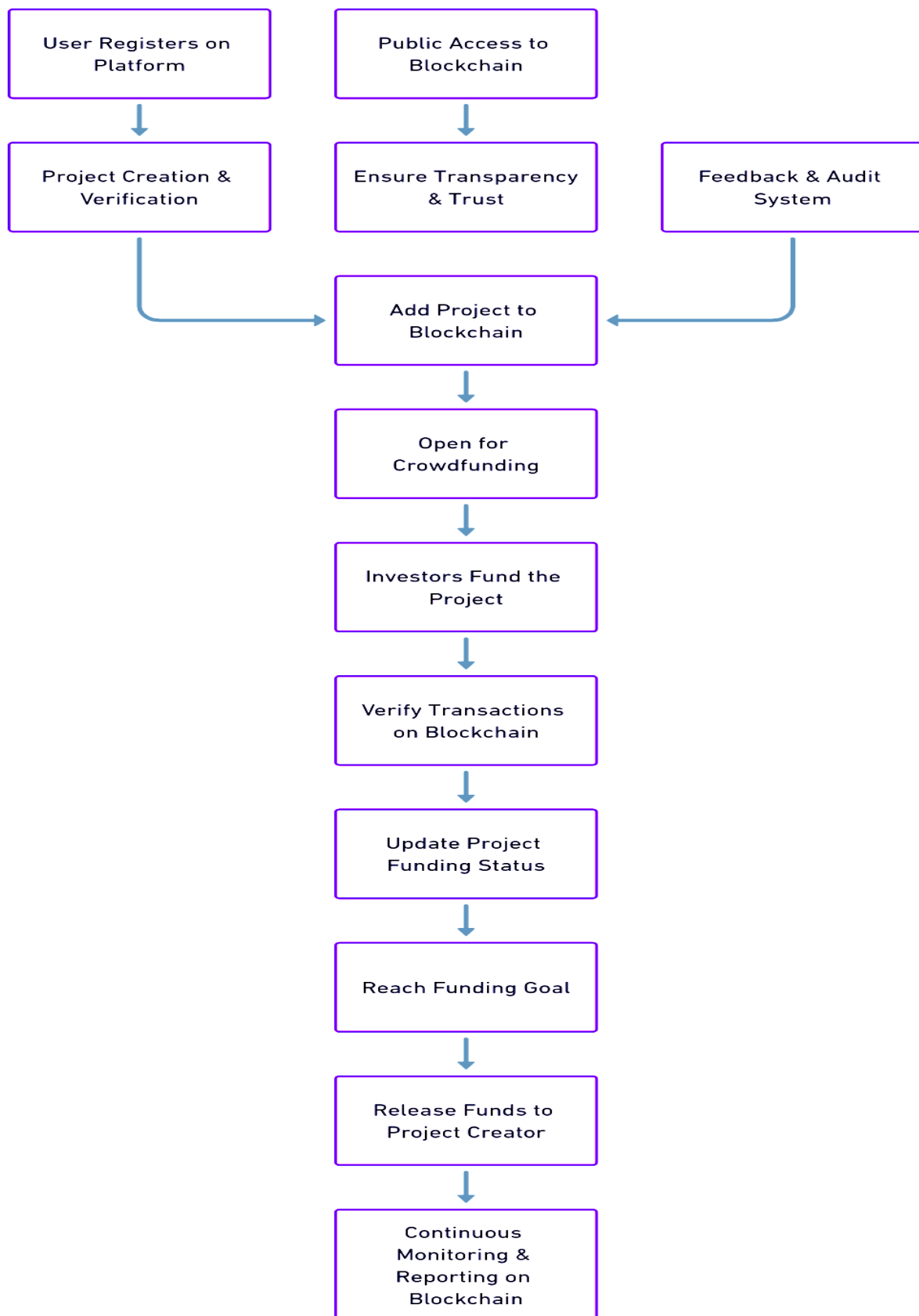
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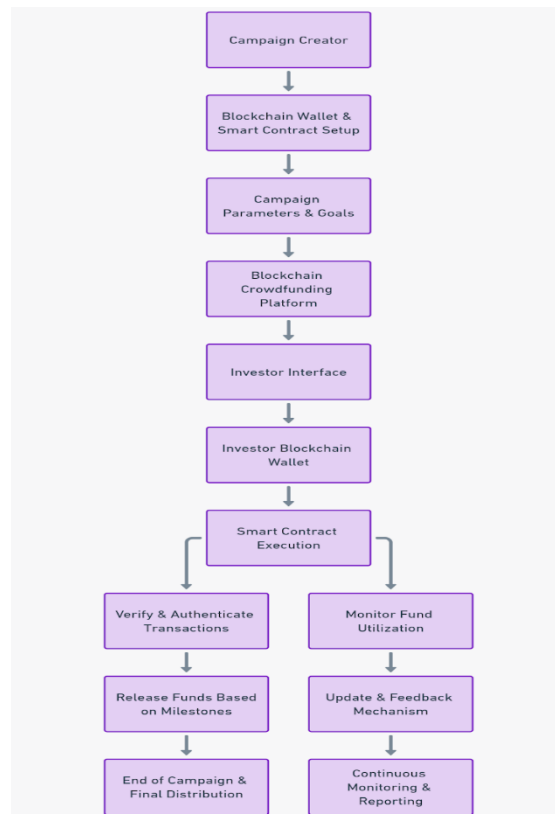
Secondly, the system will incorporate smart contracts, which are self-executing contracts with the terms of the agreement directly written into code. Smart contracts will automate the entire crowdfunding process, eliminating the need for manual intervention and reducing the possibility of fraud or manipulation.

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#### 4.1 FLOW CHART



**Fig 4.1 Flow Chart**



**Fig 4.2 Flow Chart Design**

## 4.2 SELECTED METHODOLOGY OR PROCESS MODEL

### 4.2.1 User Management Module:

This module is responsible for the management of user accounts in the distributed crowdfunding system. It includes functionalities such as user registration, login, and profile management. Users can register by providing their personal details and creating a unique username and password. The module ensures the security of user information by implementing encryption techniques and authentication mechanisms. It also handles user roles and permissions, allowing for different levels of access based on user type (e.g., project creators, backers, administrators). The module provides features for users to update their profiles, including adding or modifying personal information, profile pictures, and payment preferences. Additionally, it maintains a transaction history for each user, enabling them to track their contributions and rewards.

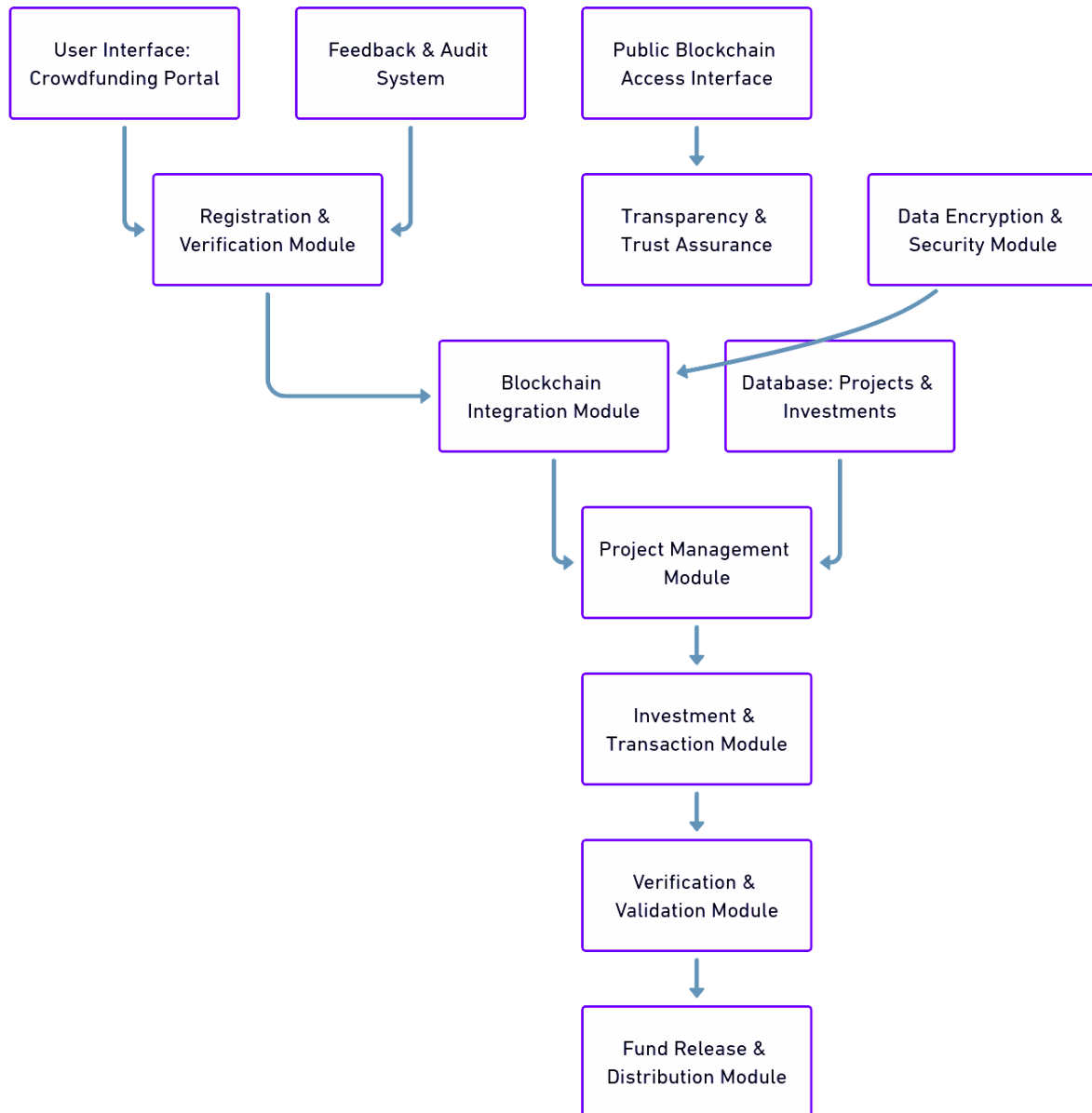
#### ***4.2.2 Project Management Module:***

This module focuses on the management of crowdfunding projects within the distributed system. It allows users, specifically project creators, to create and publish their projects, set funding goals, and define project timelines. The module verifies and approves project submissions based on certain criteria, such as project viability and compliance with platform regulations. Once a project is approved, it is featured on the platform for backers to discover and fund. The module provides tools for project creators to add project descriptions, images, video presentations, and reward tiers for backers. It also facilitates communication between project creators and backers, enabling them to ask questions, provide feedback, and receive updates. The module tracks the progress of each project, displaying real-time data on the amount of funds raised, percentage of the goal achieved, and remaining time.

#### ***4.2.3 Payment and Transactions Module:***

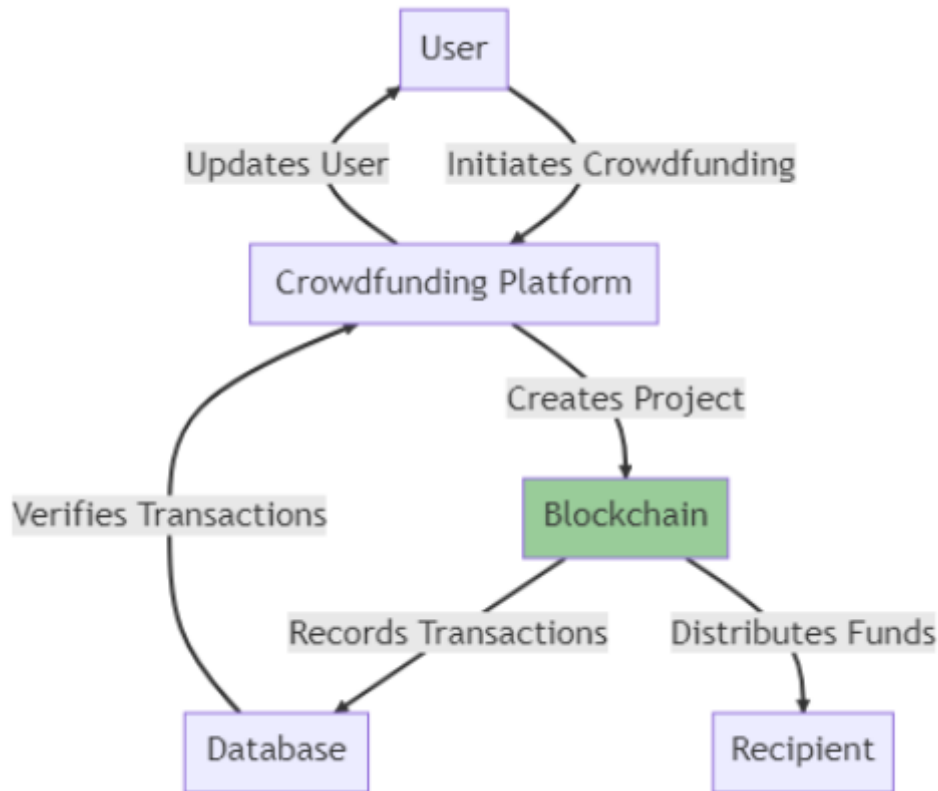
This module handles the financial aspects of the distributed crowdfunding system, ensuring secure and transparent transactions between backers and project creators. It integrates blockchain technology to establish trust and immutability in payment processes. The module enables backers to make contributions to projects using various payment options, such as credit/debit cards, digital wallets, or cryptocurrencies. It also ensures that funds are securely transferred from backers to project creators, reducing the risk of fraud or misappropriation. The module verifies the authenticity of transactions and updates the project's funding status accordingly. It generates transaction records, including details of the amount contributed, transaction IDs, and timestamps. The module also manages the distribution of rewards to backers once the project reaches its funding goal, ensuring a fair and efficient reward mechanism.

### 4.3 ARCHITECTURE / OVERALL DESIGN OF PROPOSED SYSTEM



**Fig 4.3 System Architecture**

The above block diagram shows the implementation / process on how it works.



**Fig 4.4 Architectural Design**

#### **4.4 DESCRIPTION OF SOFTWARE FOR IMPLEMENTATION AND TESTING PLAN OF THE PROPOSED MODEL / SYSTEM**

To implement this model, execution of the program is done through Google colab. Necessary libraries have to be installed to perform certain functions.

##### **4.4.1 DESCRIPTION OF PROGRAMMING LANGUAGE AND SOFTWARE**

###### *PYTHON*

Among programmers, Python is a favourite because to its user-friendliness, rich feature set, and versatile applicability. Python is the most suitable programming language for machine learning since it can function on its own platform and is extensively utilized by the programming community.

Machine learning is a branch of AI that aims to eliminate the need for explicit programming by allowing computers to learn from their own mistakes and perform

routine tasks automatically. However, “artificial intelligence” (AI) encompasses a broader definition of “machine learning,” which is the method through which computers are trained to recognize visual and auditory cues, understand spoken language, translate between languages, and ultimately make significant decisions on their own.

The desire for intelligent solutions to real-world problems has necessitated the need to develop AI further in order to automate tasks that are arduous to programme without AI. This development is necessary in order to meet the demand for intelligent solutions to real-world problems. Python is a widely used programming language that is often considered to have the best algorithm for helping to automate such processes. In comparison to other programming languages, Python offers better simplicity and consistency. In addition, the existence of an active Python community makes it simple for programmers to talk about ongoing projects and offer suggestions on how to improve the functionality of their programs.

## *ANACONDA*

Anaconda is an open-source package manager for Python and R. It is the most popular platform among data science professionals for running Python and R implementations.

There are over 300 libraries in data science, so having a robust distribution system for them is a must for any professional in this field. Anaconda simplifies package deployment and management. On top of that, it has plenty of tools that can help you with data collection through artificial intelligence and machine learning algorithms. With Anaconda, you can easily set up, manage, and share Conda environments. Moreover, you can deploy any required project with a few clicks when you’re using Anaconda. There are many advantages to using Anaconda and the following are the most prominent ones among them: Anaconda is free and open-source. This means you can use it without spending any money. In the data science sector, Anaconda is an industry staple. It’s open-source too, which has made it widely popular. If you want to become a data science professional, you must know how to use Anaconda for Python because every recruiter expects you to have this skill. It is a must-have for data science.

It has more than 1500 Python and R data science packages, so you don’t face any compatibility issues while collaborating with others. For example, suppose your

colleague sends you a project which requires packages called A and B but you only have package A. Without having package B, you wouldn't be able to run the project. Anaconda mitigates the chances of such errors. You can easily collaborate on projects without worrying about any compatibility issues. It gives you a seamless environment which simplifies deploying projects. You can deploy any project with just a few clicks and commands while managing the rest. Anaconda has a thriving community of data scientists and machine learning professionals who use it regularly. If you encounter an issue, chances are, the community has already answered the same. On the other hand, you can also ask people in the community about the issues you face there, it's a very helpful community ready to help new learners. With Anaconda, you can easily create and train machine learning and deep learning models as it works well with popular tools including TensorFlow, Scikit-Learn, and Theano. You can create visualizations by using Bokeh, Holoviews, Matplotlib, and Datashader while using Anaconda.

### *How to Use Anaconda for Python*

Now that we have discussed all the basics in our Python Anaconda tutorial, let's discuss some fundamental commands you can use to start using this package manager.

### *Listing All Environments*

To begin using Anaconda, you'd need to see how many Conda environments are present in your machine.

```
conda env list
```

It will list all the available Conda environments in your machine.

### *Creating a New Environment*

You can create a new Conda environment by going to the required directory and use this command:

```
conda create -n <your_environment_name>
```

You can replace `<your_environment_name>` with the name of your environment. After entering this command, conda will ask you if you want to proceed to which you should reply with y:

```
proceed ([y])/n)?
```

On the other hand, if you want to create an environment with a particular version of Python, you should use the following command:

```
conda create -n <your_environment_name> python=3.6
```

Similarly, if you want to create an environment with a particular package, you can use the following command:

```
conda create -n <your_environment_name> pack_name
```

Here, you can replace `pack_name` with the name of the package you want to use.

If you have a `.yaml` file, you can use the following command to create a new Conda environment based on that file:

```
conda env create -n <your_environment_name> -f <file_name>.yaml
```

We have also discussed how you can export an existing Conda environment to a `.yaml` file later in this article.

### *Activating an Environment*

You can activate a Conda environment by using the following command:

```
conda activate <environment_name>
```

You should activate the environment before you start working on the same. Also, replace the term `<environment_name>` with the environment name you want to activate. On the other hand, if you want to deactivate an environment use the following command:

```
conda deactivate
```

### *Installing Packages in an Environment*

Now that you have an activated environment, you can install packages into it by using the following command

```
conda install <pack_name>
```

Replace the term <pack\_name> with the name of the package you want to install in your Conda environment while using this command.

### *Exporting an Environment Configuration*

Suppose you want to share your project with someone else (colleague, friend, etc.). While you can share the directory on Github, it would have many Python packages, making the transfer process very challenging. Instead of that, you can create an environment configuration .yml file and share it with that person. Now, they can create an environment like your one by using the .yml file.

For exporting the environment to the .yml file, you'll first have to activate the same and run the following command:

```
conda env export ><file_name>.yml
```

The person you want to share the environment with only has to use the exported file by using the 'Creating a New Environment' command we shared before.

### *Removing a Package from an Environment*

If you want to uninstall a package from a specific Conda environment, use the following command:

```
conda remove -n <env_name><package_name>
```

On the other hand, if you want to uninstall a package from an activated environment, you'd have to use the following command:

```
conda remove <package_name>
```

### *Deleting an Environment*

Sometimes, you don't need to add a new environment but remove one. In such cases, you must know how to delete a Conda environment, which you can do so by using the following command:

```
conda env remove --name <env_name>
```

The above command would delete the Conda environment right away.

## **CHAPTER 5**

### **RESULT AND DISCUSSION**

The “Distributed Crowdfunding Using Blockchain,” presents a pioneering crowdfunding platform that harnesses the power of blockchain technology. This decentralized network enables project creators to raise funds transparently and securely, while contributors gain visibility into fund allocation and project progress. Smart contracts automate fund disbursement based on predefined milestones, ensuring trust and accountability. Blockchain’s immutable ledger safeguards against fraud and provides an auditable transaction history.

By eliminating intermediaries, this system democratizes fundraising, making it accessible to a global audience and offering an efficient and trustworthy solution for startups, social initiatives, and entrepreneurs seeking financial support and community engagement.

The implemented distributed crowdfunding systems demonstrated enhanced transparency, reduced fees, and increased contributor confidence. Smart contract automation led to efficient fund distribution. However, challenges much as user onboarding to blockchain technology were encountered. This study comprehensively explores the integration of blockchain technology in distributed crowdfunding. It examines blockchain’s impact on transparency, security, and global accessibility. The methodology covers blockchain integration, smart contract automation, consensus mechanisms, and tokenization, unveiling a robust framework for efficient and trustworthy fundraising.

The results of the distributed crowdfunding project showcased a paradigm shift don’tn fundraising dynamics. Leveraging blockchain technology, the platform fostered unprecedented transparency and security throughout the fundraising process. Contributors enjoyed heightened confidence as they gained insight into fund allocation and project progression through the immutable ledger. Smart contract automation ensured seamless fund disbursement, bolstering trust and accountability among stakeholders. Furthermore, the elimination of intermediaries democratized fundraising, opening doors to a global audience of supporters. Despite encountering challenges such as user onboarding to blockchain technology, the implemented

system demonstrated remarkable efficiency with reduced fees and enhanced accessibility. Ultimately, this pioneering endeavor provided a blueprint for future projects seeking efficient, trustworthy, and inclusive fundraising solutions.

The discussion surrounding the distributed crowdfunding project underscores the transformative potential of blockchain technology in revolutionizing traditional fundraising mechanisms. By decentralizing the fundraising process and leveraging the immutable nature of blockchain ledgers, the project not only ensured transparency and security but also empowered both project creators and contributors. The adoption of smart contracts streamlined fund disbursement, mitigating the need for intermediaries and reducing associated fees. Despite encountering challenges related to user onboarding to blockchain technology, the project's success in enhancing accessibility and accountability sets a significant precedent for future endeavors in the crowdfunding space.

Moreover, the project's comprehensive examination of blockchain integration, smart contract automation, consensus mechanisms, and tokenization unveils a robust framework for efficient and trustworthy fundraising practices. This methodology not only enhances transparency and security but also addresses key concerns regarding global accessibility and user adoption. By presenting a viable solution to these challenges, the project serves as a beacon for startups, social initiatives, and entrepreneurs seeking financial support and community engagement. Overall, the discussion highlights the project's role as a catalyst for innovation in the crowdfunding landscape, paving the way for more inclusive and efficient fundraising platforms powered by blockchain technology.

Furthermore, the project's emphasis on community engagement and stakeholder participation fosters a sense of ownership and accountability among all involved parties. By providing contributors with visibility into fund allocation and project progress, the platform facilitates a collaborative environment where feedback and suggestions are welcomed and integrated. This participatory approach not only enhances trust and confidence but also strengthens the bond between project creators and their supporters.

## **CHAPTER 6**

### **CONCLUSION AND FUTURE WORK**

#### **6.1 CONCLUSION**

In conclusion, the implementation of a distributed crowdfunding system using blockchain technology has numerous benefits. The use of a decentralized ledger allows for increased transparency, as all transactions and contracts are recorded and verified by multiple participants. The immutability of the blockchain ensures that the system is secure and resistant to fraud or tampering. By removing the need for intermediaries, such as banks or crowdfunding platforms, blockchain-based crowdfunding can reduce costs and increase efficiency. Additionally, the global nature of blockchain allows for participation from individuals around the world, enabling greater access to funding opportunities. Overall, the adoption of a distributed crowdfunding system utilizing blockchain has the potential to revolutionize the way projects are funded and supported, creating a more democratic and inclusive crowdfunding ecosystem.

#### **6.2 FUTURE WORK**

The future work for a distributed crowdfunding system using blockchain involves several key areas of improvement. First, research and development should focus on enhancing the scalability of the system to accommodate a larger number of participants and transactions. This can be achieved through the implementation of layer-2 solutions such as payment channels or sharding techniques. Second, efforts should be made to enhance the security and privacy aspects of the system by exploring advanced cryptography techniques like zero-knowledge proofs or privacy-preserving algorithms. Additionally, interoperability between different blockchain networks should be explored to enable cross-chain crowdfunding campaigns and increase the flexibility for users. Furthermore, user experience and interface design should be optimized to attract more users and ensure a seamless and intuitive crowdfunding experience. This can involve the development of user-friendly mobile applications or integrating social networking features to enhance user engagement. Lastly, the system should adapt to regulatory frameworks and compliance

requirements to ensure legality and legitimacy. Overall, future work for a distributed crowdfunding system using blockchain will revolve around scalability, security, privacy, interoperability, user experience, and regulatory compliance.

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- [8] Xu, Y., Li, Q., Zhang, C., Tan, Y., Zhang, P., Wang, G., & Zhang, Y., A decentralized trust management mechanism for crowdfunding, *Information Sciences*, (2023).
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## APPENDIX

### A. SOURCE CODE

#### *//Crowdfunding Solution*

//SPDX-License-Identifier: Unlicense

pragma solidity ^0.8.0;

import "hardhat/console.sol";

import './Project.sol';

contract Crowdfunding{

// [X] Anyone can start a funding project .

// [X] Get All project list

// [X] contribute amount

event ProjectStarted(

    address projectContractAddress ,

    address creator,

    uint256 minContribution,

    uint256 projectDeadline,

    uint256 goalAmount,

    uint256 currentAmount,

    uint256 noOfContributors,

    string title,

```
    string desc,  
    uint256 currentState  
);
```

```
event ContributionReceived(  
    address projectAddress,  
    uint256 contributedAmount,  
    address indexed contributor  
);
```

```
Project[] private projects;
```

```
// @dev Anyone can start a fund rising
```

```
// @return null
```

```
function createProject(  
    uint256 minimumContribution,  
    uint256 deadline,  
    uint256 targetContribution,  
    string memory projectTitle,  
    string memory projectDesc  
) public {
```

```
    deadline = deadline;
```

```
Project newProject = new
Project(msg.sender,minimumContribution,deadline,targetContribution,projectTitle,pro
jectDesc);
```

```
projects.push(newProject);
```

```
emit ProjectStarted(
    address(newProject) ,
    msg.sender,
    minimumContribution,
    deadline,
    targetContribution,
    0,
    0,
    projectTitle,
    projectDesc,
    0
);
}
```

```
// @dev Get projects list
```

```
// @return array
```

```
function returnAllProjects() external view returns(Project[] memory){
    return projects;
```

```

}

// @dev User can contribute

// @return null

function contribute(address _projectAddress) public payable{

    uint256 minContributionAmount = Project(_projectAddress).minimumContribution();
    Project.State projectState = Project(_projectAddress).state();
    require(projectState == Project.State.Fundraising, 'Invalid state');
    require(msg.value >= minContributionAmount, 'Contribution amount is too low !');
    // Call function
    Project(_projectAddress).contribute{value:msg.value}(msg.sender);
    // Trigger event
    emit ContributionReceived(_projectAddress,msg.value,msg.sender);
}
}

```

### ***//Project Solution***

```

//SPDX-License-Identifier: Unlicense

pragma solidity ^0.8.0;

import "hardhat/console.sol";

```

```

// [X] Anyone can contribute

// [X] End project if targeted contribution amount reached

// [X] Expire project if raised amount not fullfill between deadline

//   & return donated amount to all contributor .

// [X] Owner need to request contributors for withdraw amount.

// [X] Owner can withdraw amount if 50% contributors agree

```

```

contract Project{

```

```

    // Project state

```

```

    enum State {

        Fundraising,

        Expired,

        Successful

    }

```

```

    // Structs

```

```

    struct WithdrawRequest{

        string description;

        uint256 amount;

        uint256 noOfVotes;

        mapping(address => bool) voters;
    }

```

```

    bool isCompleted;

    address payable recipient;
}

// Variables

address payable public creator;

uint256 public minimumContribution;

uint256 public deadline;

uint256 public targetContribution; // required to reach at least this much amount

uint public completeAt;

uint256 public raisedAmount; // Total raised amount till now

uint256 public noOfContributors;

string public projectTitle;

string public projectDes;

State public state = State.Fundraising;


mapping (address => uint) public contributions;

mapping (uint256 => WithdrawRequest) public withdrawRequests;


uint256 public numOfWorkRequests = 0;


// Modifiers

modifier isCreator(){

    require(msg.sender == creator,'You don't have access to perform this operation
!');

```

```
_;  
}
```

```
modifier validateExpiry(State _state){  
    require(state == _state,'Invalid state');  
    require(block.timestamp < deadline,'Deadline has passed !');  
    _;  
}
```

```
// Events
```

```
// Event that will be emitted whenever funding will be received
```

```
event FundingReceived(address contributor, uint amount, uint currentTotal);
```

```
// Event that will be emitted whenever withdraw request created
```

```
event WithdrawRequestCreated(  
    uint256 requestId,  
    string description,  
    uint256 amount,  
    uint256 noOfVotes,  
    bool isCompleted,  
    address recipient  
);
```

```
// Event that will be emitted whenever contributor vote for withdraw request
```

```
event WithdrawVote(address voter, uint totalVote);
```

```
// Event that will be emitted whenever contributor vote for withdraw request
```

```
event AmountWithdrawSuccessful(
```

```
    uint256 requestId,
```

```
    string description,
```

```
    uint256 amount,
```

```
    uint256 noOfVotes,
```

```
    bool isCompleted,
```

```
    address recipient
```

```
);
```

```
// @dev Create project
```

```
// @return null
```

```
constructor(
```

```
    address _creator,
```

```
    uint256 _minimumContribution,
```

```
    uint256 _deadline,
```

```
    uint256 _targetContribution,
```

```
    string memory _projectTitle,
```

```
    string memory _projectDes
```

```
) {
```

```
    creator = payable(_creator);
```

```
    minimumContribution = _minimumContribution;
```

```

    deadline = _deadline;

    targetContribution = _targetContribution;

    projectTitle = _projectTitle;

    projectDes = _projectDes;

    raisedAmount = 0;

}

// @dev Anyone can contribute

// @return null


function contribute(address _contributor) public validateExpiry(State.Fundraising)
payable {

    require(msg.value >= minimumContribution,'Contribution amount is too low !');

    if(contributions[_contributor] == 0){

        noOfContributers++;

    }

    contributions[_contributor] += msg.value;

    raisedAmount += msg.value;

    emit FundingReceived(_contributor,msg.value,raisedAmount);

    checkFundingCompleteOrExpire();

}


// @dev complete or expire funding

// @return null


function checkFundingCompleteOrExpire() internal {

```

```

    if(raisedAmount >= targetContribution){

        state = State.Successful;

    }else if(block.timestamp > deadline){

        state = State.Expired;

    }

    completeAt = block.timestamp;

}

```

```

// @dev Get contract current balance

```

```

// @return uint

```

```

function getContractBalance() public view returns(uint256){

    return address(this).balance;

}

```

```

// @dev Request refund if funding expired

```

```

// @return 38oolean

```

```

function requestRefund() public validateExpiry(State.Expired) returns(bool) {

    require(contributors[msg.sender] > 0,'You don't have any contributed amount !');

    address payable user = payable(msg.sender);

    user.transfer(contributors[msg.sender]);

    contributors[msg.sender] = 0;

    return true;

}

```

```

// @dev Request contributor for withdraw amount

// @return null


function createWithdrawRequest(string memory _description,uint256
_amount,address payable _recipient) public isCreator()
validateExpiry(State.Successful) {

    WithdrawRequest storage newRequest =
withdrawRequests[numOfWithdrawRequests];

    numOfWithdrawRequests++;

    newRequest.description = _description;

    newRequest.amount = _amount;

    newRequest.noOfVotes = 0;

    newRequest.isCompleted = false;

    newRequest.recipient = _recipient;

    emit WithdrawRequestCreated(numOfWithdrawRequests,_description,
_amount,0,false,_recipient );

}


// @dev contributors can vote for withdraw request

// @return null

function voteWithdrawRequest(uint256 _requestId) public {

    require(contributions[msg.sender] > 0,'Only contributor can vote !');

```

```

WithdrawRequest storage requestDetails = withdrawRequests[_requestId];

require(requestDetails.voters[msg.sender] == false, 'You already voted !');

requestDetails.voters[msg.sender] = true;

requestDetails.noOfVotes += 1;

emit WithdrawVote(msg.sender, requestDetails.noOfVotes);

}

// @dev Owner can withdraw requested amount

// @return null


function withdrawRequestedAmount(uint256 _requestId) isCreator()
validateExpiry(State.Successful) public{

    WithdrawRequest storage requestDetails = withdrawRequests[_requestId];

    require(requestDetails.isCompleted == false, 'Request already completed');

    require(requestDetails.noOfVotes >= noOfContributors/2, 'At least 50%
contributor need to vote for this request');

    requestDetails.recipient.transfer(requestDetails.amount);

    requestDetails.isCompleted = true;

    emit AmountWithdrawSuccessful(

        _requestId,

        requestDetails.description,

        requestDetails.amount,

        requestDetails.noOfVotes,

        true,

```

```

        requestDetails.recipient
    );

}

// @dev Get contract details
// @return all the project's details
function getProjectDetails() public view returns(
    address payable projectStarter,
    uint256 minContribution,
    uint256 projectDeadline,
    uint256 goalAmount,
    uint completedTime,
    uint256 currentAmount,
    string memory title,
    string memory desc,
    State currentState,
    uint256 balance
){
    projectStarter=creator;
    minContribution=minimumContribution;
    projectDeadline=deadline;
    goalAmount=targetContribution;
    completedTime=completeAt;

```

```
    currentAmount=raisedAmount;

    title=projectTitle;

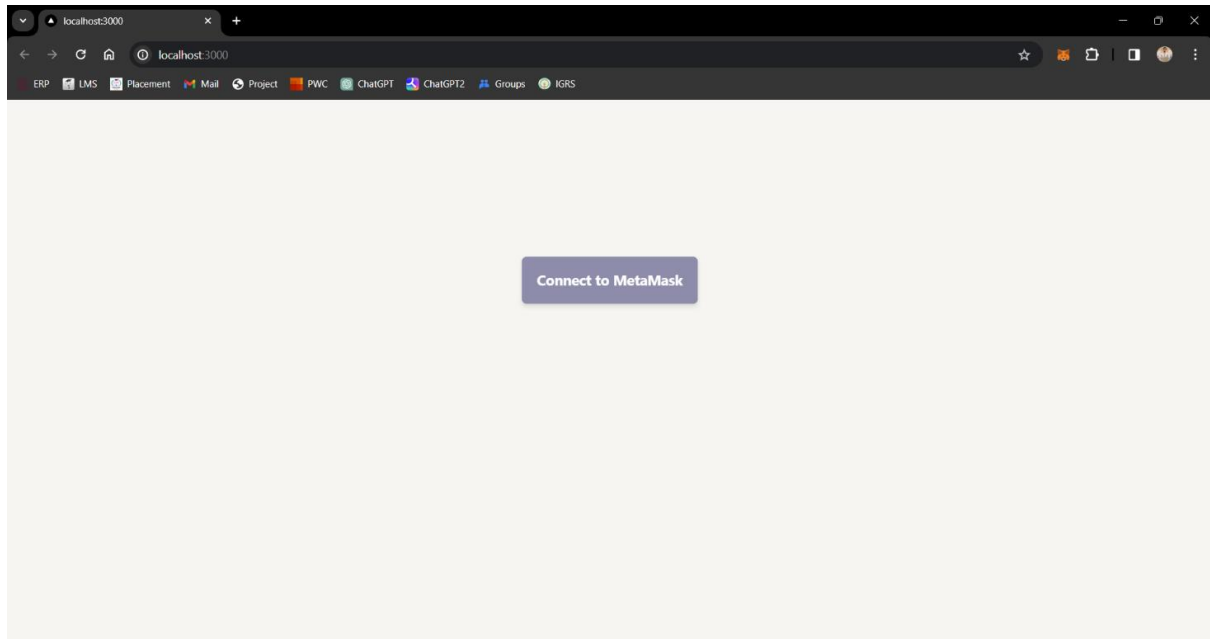
    desc=projectDes;

    currentState=state;

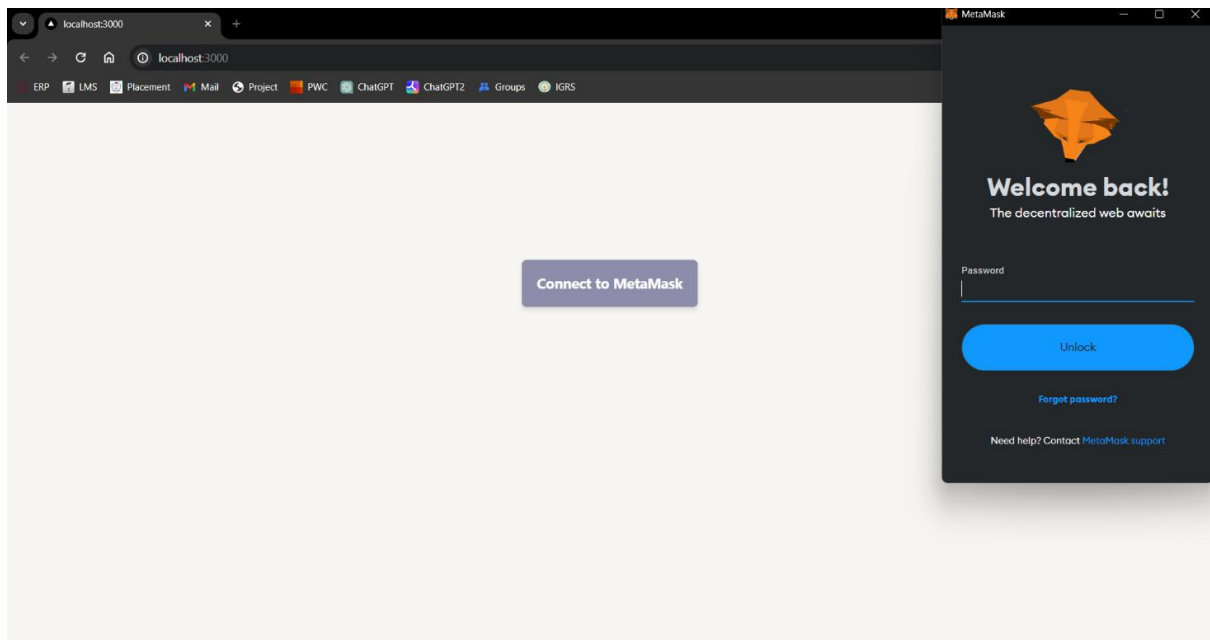
    balance=address(this).balance;
}
}
```

## B. SCREENSHOTS

### Blockchain Connection page



### Connecting to Digital wallet



## Advertisement creation page

The screenshot shows a web browser window with the address bar displaying 'localhost:3000/dashboard'. The page has a navigation bar with 'CROWD FUNDING', 'Dashboard', and 'My contribution'. A message 'No project found !' is centered on the page. On the right, there is a form titled 'Start a fund riser for free' with the following fields:

- Title :
- Description :
- Targeted contribution amount :
- Minimum contribution amount :
- Deadline :

Below the fields is a pink button labeled 'Rise fund'.

## Connecting advertisement to Crypto Wallet

The screenshot shows the same web browser window, but now with a 'Project' card on the left and a MetaMask wallet connection overlay on the right.

**Project Card:**

- Project: testing
- Targeted contribution: 2 ETH
- Deadline: 26/03/2024
- Contribution amount:  (Loading...)
- NOTE: Minimum contribution is 1 ETH

**MetaMask Overlay:**

- Account 2: hardhat
- Address: 0x5FbDB...80ad3
- Transaction: CONTRIBUTE
- Estimated fee: \$0.00
- Site suggested: 19 sec
- Max fees: 0.00063881 GO
- Total: \$0.01 2.00051531 GO
- Amount + gas fee: Max amount: 2.00063881 GO
- Buttons: Reject, Confirm

## Viewing the created Advertisement

The screenshot shows a web browser at localhost:3000/dashboard. The page has a header with 'CROWD FUNDING', 'Dashboard', and 'My contribution' tabs. A user profile '0xf39Fd6e51aad88...' is visible. The main content area is divided into two sections. The left section, titled 'Project testing', shows a 'Targeted contribution' of 2 ETH, a 'Deadline' of 26/03/2024, and a 'Contribution amount' input field with the value 0. A red note states 'NOTE: Minimum contribution is 1 ETH'. A green 'Contribute' button is present. The right section, titled 'Start a fund riser for free', contains input fields for 'Title', 'Description', 'Targeted contribution amount', 'Minimum contribution amount', and 'Deadline' (format dd-mm-yyyy), followed by a pink 'Rise fund' button.

## Monitoring Funds

This screenshot is identical to the one above, but the 'Project testing' section now features a pink progress bar at the bottom, labeled '100%', indicating that the targeted contribution has been fully reached.

The funds received are directly added to the respective crypto wallet automatically

# DISTRIBUTED CROWDFUNDING USING BLOCKCHAIN

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## ABSTRACT

This paper presents the design and implementation of a distributed crowdfunding system using blockchain technology. Crowdfunding has become a popular method for raising funds for various projects, but it suffers from limitations such as lack of transparency, high fees, and reliance on intermediaries. To address these issues, we propose a decentralized platform that leverages the transparency and security of blockchain technology. The system allows project creators to create fundraising campaigns and investors to contribute funds directly to the projects of their interest. Contributions are conducted using cryptocurrency on the blockchain, ensuring security and eliminating the need for intermediaries. Smart contracts are employed to automate the release of funds and ensure that they are used in accordance with the agreed terms. The proposed system also incorporates a reputation mechanism to enhance trust and encourage honest behaviour among participants. Experimental results demonstrate the efficiency and effectiveness of the system. Overall, this distributed crowdfunding system utilizing blockchain offers an innovative approach to fundraising that improves transparency, reduces fees, and increases inclusivity, with potential applications in various domain.

## I. INTRODUCTION

In the dynamic landscape of finance and crowdfunding, the introduction of a Distributed Crowdfunding System driven by blockchain technology marks a profound paradigm shift. This innovative system harnesses the transformative potential of blockchain's inherent attributes: decentralization,

security, and transparency. It enables a direct and seamless connection between project creators and backers, eliminating the need for intermediaries. Blockchain's smart contracts automate campaign processes, ensuring transparency, accountability, and efficient fund distribution. This introduction sets the stage for exploring

how this novel approach to crowdfunding, empowered by blockchain, not only democratizes funding but also ushers in an era of global, secure, and inclusive financial support for a myriad of projects and initiatives.

**Introduction to Distributed Crowdfunding:** In this introduction, we explore the concept of distributed crowdfunding and its revolutionary potential in reshaping the fundraising landscape. By leveraging blockchain technology, distributed crowdfunding offers a decentralized, transparent, and efficient platform for fundraising initiatives.

**Leveraging Blockchain for Transparent Fundraising:** Discover how blockchain enhances transparency and accountability in distributed crowdfunding. Every transaction is recorded on an immutable ledger, providing donors and project initiators with real-time visibility into the flow of funds and ensuring that contributions are used for their intended purpose.

**Advantages of Distributed Crowdfunding with Blockchain:** Explore the advantages of adopting a distributed crowdfunding model with

blockchain. These include reduced fees, global accessibility, and enhanced security, making it an attractive and inclusive alternative to traditional centralized crowdfunding platforms.

## II. LITERATURE SURVEY

1. Rashid, M. A., Deo, K., Prasad, D., Singh, K., Chand, S., & Assaf, M. (2020). TEduChain: A blockchain-based platform for crowdfunding tertiary education: The paper is likely to delve into the features and functionalities of TEduChain, a blockchain-powered platform aimed at facilitating crowdfunding for higher education. The focus may revolve around exploring the ways in which blockchain technology contributes to increased transparency and trust within the domain of education crowdfunding.

2. Xu, Y., Li, Q., Zhang, C., Tan, Y., Zhang, P., Wang, G., & Zhang, Y. (2023). A decentralized trust management mechanism for crowdfunding: This research may present a decentralized trust management mechanism for crowdfunding platforms, which could use blockchain technology to improve

trust and security in crowdfunding campaigns.

3. Pandey, S., Goel, S., Bansla, S., & Pandey, D. (2019, March). Crowdfunding fraud prevention using blockchain: This paper likely focuses on using blockchain technology to prevent fraud in crowdfunding campaigns, addressing one of the key concerns in the crowdfunding industry.

4. Chen, B., Luo, Y., Li, J., Li, Y., Liu, Y., Yang, F., & Qiao, Y. (2023). Blockchain-based Decentralized Co-governance: Innovations and Solutions for Sustainable Crowdfunding: This research may discuss how blockchain technology can enable decentralized co-governance in crowdfunding platforms, promoting sustainability and community involvement.

5. Zkik, K., Sebbar, A., Fadi, O., Kamble, S., & Belhadi, A. (2023). Securing blockchain-based crowdfunding platforms: an integrated graph neural networks and machine learning approach: The paper likely delves into the application of integrated graph neural networks and machine learning techniques for bolstering the security of crowdfunding platforms based on blockchain technology. The emphasis may be on exploring

innovative ways to enhance the protection and integrity of these platforms through the integration of advanced computational methods.

6. Varghese, A., Regi, N. A., Sandhu Babu, S. M., & Varghese, C. M. CROWDFUNDING PLATFORM USING BLOCKCHAIN: A REVIEW OF D APP IMPLEMENTATION: This review article may provide an overview of blockchain-based crowdfunding platforms, focusing on the implementation of decentralized applications (DApps) in this context.

7. Bogusz, C. I., Laurell, C., & Sandström, C. (2020). Tracking the digital evolution of entrepreneurial finance: the interplay between crowdfunding, blockchain technologies, cryptocurrencies, and initial coin offerings: The paper is likely to investigate the dynamics of entrepreneurial finance evolution, specifically examining the interconnected relationships among crowdfunding, blockchain technologies, cryptocurrencies, and initial coin offerings (ICOs). The focus may be on understanding how these elements interact and mutually impact the landscape of entrepreneurial finance in the digital realm.

8. Varghese, A., Regi, N. A., Babu, S., Mani, S., & Varghese, C. M. CROWDFUNDING PLATFORM USING BLOCKCHAIN: This appears to be another research paper or review article discussing the implementation of crowdfunding platforms using blockchain technology.

9. Govindarajan, S., Rajkumar, S. S., & Posonia, A. M. (2023, May). Blockchain Fundraising and Charity Platform: This paper may focus on blockchain-based fundraising and charity platforms, exploring how blockchain technology can enhance transparency and trust in charitable donations.

10. Zichichi, M., Contu, M., Ferretti, S., & D'Angelo, G. (2019, April). LikeStarter: a Smart-contract based Social DAO for Crowdfunding: This research likely introduces LikeStarter, a crowdfunding platform based on smart contracts and a Social Decentralized Autonomous Organization (DAO) model, which aims to enhance transparency and community participation in crowdfunding campaigns.

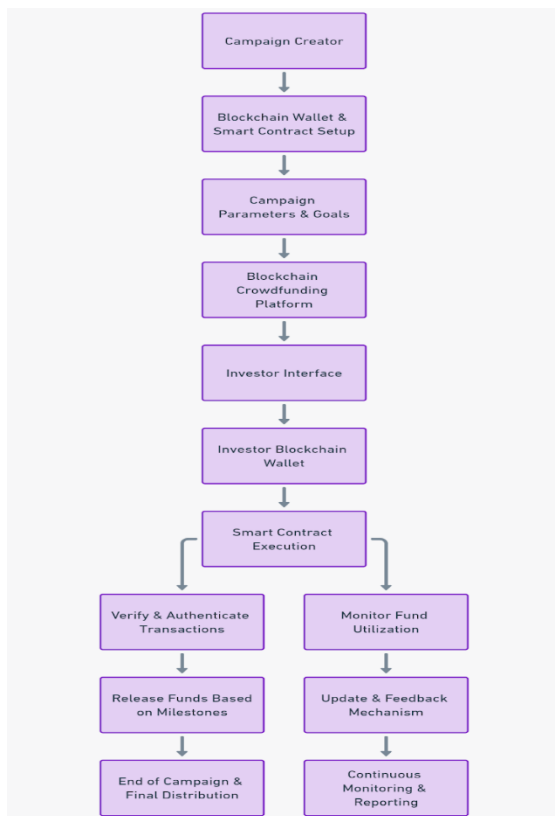
crowdfunding. Smart contracts ensure transparency, security, and automated fund distribution. Participants gain direct access to project information and decision-making, fostering trust and engagement.

The proposed work is to develop a distributed crowdfunding system using blockchain technology. The system aims to revolutionize the way projects are funded by leveraging the transparency, security, and efficiency of blockchain.

### **III. PROPOSED SYSTEM**

Our proposed system leverages blockchain technology for distributed

## ARCHITECTURE



**Fig - 1: System Architecture**

## IV. RESULT

The "Distributed Crowdfunding Using Blockchain," presents a pioneering crowdfunding platform that harnesses the power of blockchain technology. This decentralized network enables project creators to raise funds transparently and securely, while contributors gain visibility into fund allocation and project progress. Smart contracts automate fund disbursement based on predefined milestones, ensuring trust and accountability. Blockchain's immutable ledger safeguards against fraud and provides

an auditable transaction history. By eliminating intermediaries, this system democratizes fundraising, making it accessible to a global audience and offering an efficient and trustworthy solution for startups, social initiatives, and entrepreneurs seeking financial support and community engagement.

The implemented distributed crowdfunding systems demonstrated enhanced transparency, reduced fees, and increased contributor confidence. Smart contract automation led to efficient fund distribution. However, challenges much as user onboarding to blockchain technology were encountered. This study comprehensively explores the integration of blockchain technology in distributed crowdfunding. It examines blockchain's impact on transparency, security, and global accessibility. The methodology covers blockchain integration, smart contract automation, consensus mechanisms, and tokenization, unveiling a robust framework for efficient and trustworthy fundraising.

## V. CONCLUSION

In conclusion, the implementation of a distributed crowdfunding system using blockchain technology has numerous benefits. The use of a decentralized ledger allows for increased transparency, as all transactions and contracts are recorded and verified by multiple participants. The immutability of the blockchain ensures that the system is secure and resistant to fraud or tampering. By removing the need for intermediaries, such as banks or crowdfunding platforms, blockchain-based crowdfunding can reduce costs and increase efficiency. Additionally, the global nature of blockchain allows for participation from individuals around the world, enabling greater access to funding opportunities. Overall, the adoption of a distributed crowdfunding system utilizing blockchain has the potential to revolutionize the way projects are funded and supported, creating a more democratic and inclusive crowdfunding ecosystem.

Distributed crowdfunding through blockchain proved beneficial by mitigating centralization issues. Future improvements should focus on user-friendly blockchain interfaces to widen adoption and maximize its potential impact.

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