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Blockchain-Based Crowdfunding For Education

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Abstract:

This project focuses on building a crowdfunding platform powered by blockchain technology, tailored specifically to support educational financing. The proposed system ensures secure, transparent, and decentralized deals, barring the need for interposers. Blockchain ensures donor confidence by recording all transactions in a tamper-resistant ledger. Educational institutions or students can initiate fundraising campaigns, and donors may contribute using cryptocurrency. Through the use of smart contracts, funds are disbursed only when specified conditions are met, thereby safeguarding against misuse. The platform promotes financial accessibility and offers a trustworthy, fraud-resistant solution for educational funding.

Keywords: Blockchain Technology, Crowdfunding, Educational Financing, Cryptocurrency, Secure Transactions.

I. INTRODUCTION

The rising cost of education is a hedge for numerous scholars worldwide. Traditional fundraising styles are frequently hamstrung, prone to fraud, and warrant translucency. Blockchain technology, with its decentralized and inflexible tally system, offers a revolutionary approach to crowdfunding. By using smart contracts and cryptocurrency-grounded deals, we propose a platform where scholars can raise educational finances transparently and securely. Unlike traditional fiscal systems, blockchain ensures traceability, invariability, and security, fostering patron confidence and encouraging further benefactions toward education.

II. RELATED WORKS

In developing countries, funding remains a significant barrier to accessing higher education, often preventing brilliant but economically disadvantaged students from completing their studies. To address this issue, Asamoah et al. [1] proposed a blockchain-based decentralized loan platform that leverages the distributed architecture of blockchain technology. The platform employs smart contracts to automate agreements between students and investors, ensuring transparent and conditional fund disbursement. However, the system has some limitations. Simulation results show that transaction costs and delays increase under high network load. The paper also acknowledges that users could attempt Sybil attacks. Furthermore, the platform is designed as a loan-based model, requiring students to repay the amount after graduation. In contrast, our proposed approach seeks to offer scholarships, where donors contribute funds without expecting repayment.

Li and Li [2] proposed a reputation-based mechanism in their blockchain-powered crowdfunding system, focusing on mitigating information asymmetry by assigning reputation scores to project initiators. Their aim was to enable backers to make more informed decisions and reduce the risk of fraud. However, the system

does not address core concerns such as transparency and accountability. Supporters have no control over how their funds are utilized, and there is no enforcement mechanism to hold project initiators accountable. Additionally, the reputation system is susceptible to manipulation if developers find ways to artificially inflate their scores. Therefore, their approach does not fully meet the challenges of ensuring transparency and accountability in crowdsourcing.

Rashid et al. Laporte et al. [3] propose the utilisation of blockchain technology in crowdfunding to ensure transparency and reduce intermediation costs. They argue that third parties such as banks, payment processors, and traditional crowdfunding platforms often increase the overall cost of raising funds and restrict the autonomy of project initiators. By integrating blockchain, these intermediaries can be eliminated, allowing for a more efficient and decentralized crowdfunding process [3]. In this the platform don't focus on user authenticity.

III. CONCLUSION

This project successfully demonstrates a secure, transparent, and efficient crowdfunding platform tailored to support educational funding. By integrating blockchain technologies such as smart contracts and IPFS, the platform ensures trustless interactions, protects donor interests, and enforces conditional fund release. The immutability and transparency of blockchain records not only enhance donor confidence but also minimize the risk of fraud and misuse. Through this system, we aim to bridge the educational funding gap by providing an inclusive platform that empowers students and institutions while encouraging responsible and impactful contributions from donors.

REFERENCES

- [1] K. O. Asamoah et al., "A Blockchain-Based Crowdsourcing Loan Platform for Funding Higher Education in Developing Countries," *IEEE Access*, vol. 11, pp. 24162–24174, Mar. 2023, doi: 10.1109/ACCESS.2023.3252917.
- [2] S. Li and Z. Li, "Development of a Reputation-Based Crowdfunding System Utilising Blockchain Technology," *Proc. 2021 IEEE Int. Conf. Information Technology, IoT, and Smart City (ICITISC)*, pp. 161–166, 2021. doi: 10.1109/ICITISC53764.2021.00040.
- [3] M. A. Rashid, K. Deo, D. Prasad, K. Singh, S. Chand, and M. Assaf, "TEduChain: A blockchain-based platform for crowdfunding tertiary education," *Knowl. Eng. Rev.*, vol. 35, p. e27, Jun. 2020.