

Blockchain Framework For Enhancing Employment Integrity Process to Curb Ghost Worker Fraud

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Introduction

Ghost worker fraud is a significant issue in public sector recruitment systems, leading to financial losses, inefficiencies, and corruption. Blockchain technology offers promising solutions to address ghost worker fraud and enhance public sector recruitment processes. It can improve transparency, auditability, and efficiency in payroll systems, potentially saving governments significant amounts of money lost to fraud (Bello & Thomas, 2023). This research explores how these technologies can be integrated to prevent ghost worker fraud while ensuring privacy, security, and transparency.

Objective

The objective of the study is to propose a Decentralized Employment Integrity and Fraud Prevention (DEIFP) framework that will improve the integrity and transparency of employment processes by allowing for the secure sharing of employee data among relevant government agencies, including the Central Bank of Nigeria (CBN), the Integrated Personnel and Payroll Information System (IPPIS), and various ministries. Implementing a networked system helps to greatly lower the possibility of ghost worker fraud by allowing real-time validation of employee

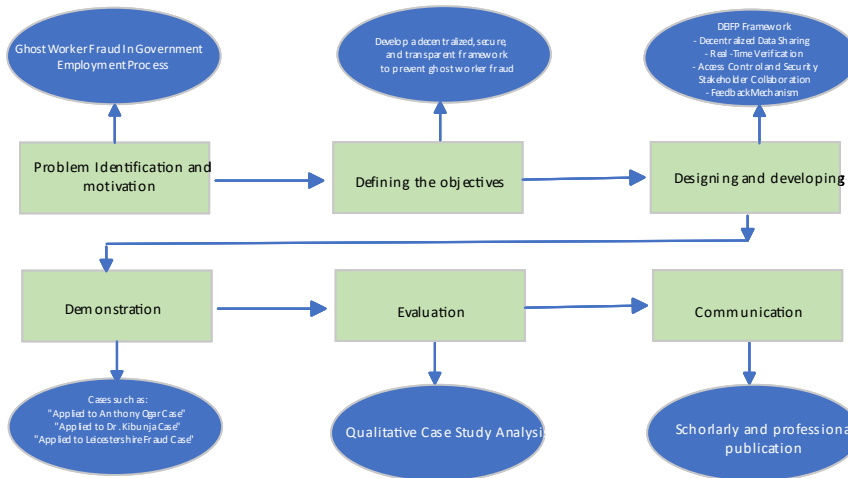
Methodology

Literature Review:

Review existing research on ghost worker fraud in public sector payroll systems and the use of Blockchain.

Design Framework Development:

Using the Design Science Approach to develop DEIFP framework



Evaluation

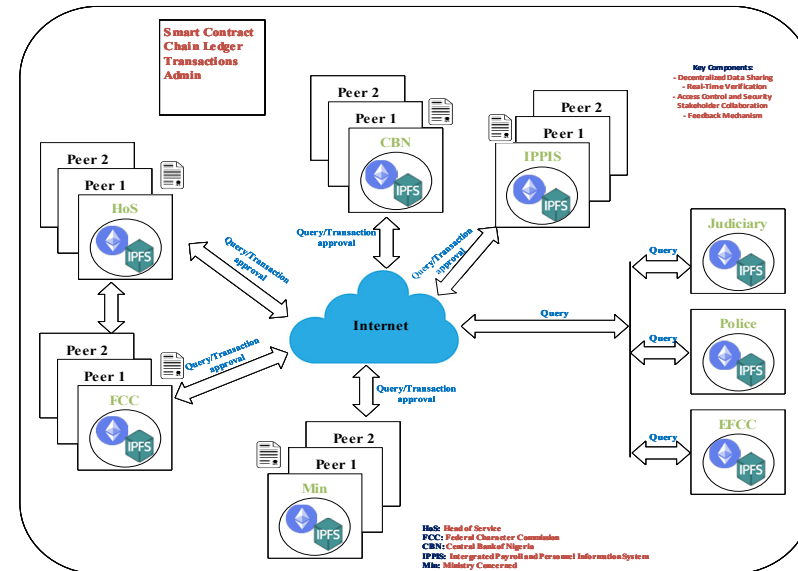
The effectiveness of the framework was evaluated through a methodical comparison of the key components of the proposed DEIFP framework with the vulnerabilities and weaknesses that were discovered in every case of ghost worker fraud. Eight (8) cases were analysed based on "Vulnerabilities Identified" and "How the DEIFP Framework Could Have Prevented This Fraud".

Reference

Bello, M. I., & Thomas, D. R. (2023). Curbing Ghost Worker Fraud In Developing Countries Using Consortium Blockchain. *Proceedings of the 9th ACM International Workshop on Security and Privacy Analytics*, 77–83. <https://doi.org/10.1145/3579987.3586569>

Result

Decentralized Employment Integrity and Fraud Prevention (DEIFP) Framework



Objectives of the Framework

- ❖ Enhancing Data Integrity
- ❖ Facilitating Real-Time Verification
- ❖ Increasing Stakeholder
- ❖ Collaboration Strengthening Access Control
- ❖ Encouraging Reporting of Irregularities

Conclusion

This research demonstrates the potential of Blockchain to combat ghost worker fraud by developing DEIFP framework which will decentralize the system and give other agencies of government the authority to validate new employees. This can enhance transparency in recruitment process and reduce fraud. Future work should focus on implementing the framework through developing practical implementation strategies.

Ongoing

Quantitative survey to further evaluate the proposed DEIFP framework from the employees of the Federal Government of Nigeria and some blockchain experts.