Leveraging AI Models and Cyber Forensics for Solving Land Banking Issues

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ABSTRACT

The notion of land banking refers to the consideration of land as an investment commodity; the base of real estate; an asset for financial deals, businesses, and industrial establishment; and a factor of production. This study avers that by investing in land, one engages in land banking. This phase has become characterized by fraud and serious disputes over ownership. To find lasting solutions, this study proposes significant deployment of cyber forensics. Besides using secondary data from library and internet, telephone interviews and focus group discussions were employed for primary data. Most respondents confirmed that cyber forensics is an AI-driven technique capable of tackling land banking fraud and ownership disputes. Evidence shows that through optimization, prediction, detection, and tracking, cyber forensics can address these challenges. The study concludes that combining cyber forensics with AI makes the industry safe, lucrative, and investment-driven, and heightens real estate prospects. Stakeholders are urged to integrate cyber forensics and AI into land banking.

INTRODUCTION

The salient themes of land banking and ownership are yet to gain any serious attention and engagement. The matters arising from land banking frauds and ownership disputes include financial and land losses, interpersonal and intergroup conflicts, civil unrest and legal complications. In some cases, the violent ownership disputes or the hard-hit effects of financial losses cause either death or serious health challenges. Disputes over land are increasingly high these days (Salau et al., 2020). Among others, Akinola (2024), Okusi (2023 & 2024), Okoro and Ayaba (2023), Mishra et al. (2022) and Bouveret (2018) lament the increasing spate of cyber security attacks on assets, critical infrastructure, etc. and the attendant effects on various facets of society and organizations' wellbeing. In the same vein, Odonkor et al. (2021) express worries over the spate of fraud and its attendance menace in the finance sector. In the cashless era, money is easily stolen digitally and seamlessly. Land banking offers avenues for financial

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gains. Thus, fraudsters make concerted efforts to defraud different individuals. In the course of doing so, they claim ownership of lands that are not theirs.

By stealing, attempting to steal or impersonate the ownership of a land or some lands, ownership disputes arise in land banking industry. Olowu et al. (2024) observe that since financial frauds and cyber security threats are getting proliferated rapidly, AI and data science techniques for detecting, predicting, foiling and preventing them have to be devised proportionately. They emphasize that with these techniques, financial frauds and cyber security threats can be tackled sufficiently and reduced to the barest minimum. The present study subscribes to their standpoint. Land baking issues are worrisomely high in developing nations, such as Nigeria and Ghana. Although the issues also obtain in developed nations like the US and the UK, the ratios are insignificant compared to those obtained in Nigeria, Ghana and other developing nations. Low level of technology integration into land banking in the developing nations makes them susceptible to the challenges of land banking.

Consequently, cybersecurity threats to land banking thrive in the developing nations. Besides, the systemic weaknesses obtained in Nigeria, Ghana and other developing nations are absent in US, UK and other developed nations. Land laws and cybersecurity enforcement also vary among nations amidst some similarities. To significantly address the institutional weaknesses, such as political pressure, corruption, and data gaps that apply to all developing nations, AI models and cyber forensics ought to be leveraged for lasting solving land banking issues. The study argues that AI-driven cyber forensic is capable of proffering tangible solutions to the complex issues of land banking fraud and ownership disputes across all nations of the globe, particularly those ridden with land banking issues. This argument as well as the above noted standpoint will be substantiated with evidence from both primary and secondary data.

AIM AND OBJECTIVES

This study seeks to show that cyber forensics, an AI-driven technique, is a result-oriented and problem-solving technological mechanism for tackling land banking frauds and ownership disputes. Its specific objectives are to:

(i) Describe cyber forensics and the AI techniques that can be combined for tackling land banking frauds and ownership disputes.
(ii) Show how cyber forensics and ML, DL and NLP techniques of AI can help address land banking frauds and ownership disputes.
(iii) Determine the extent to which cyber forensics and the AI techniques can tackle land banking frauds and ownership disputes.

RESEARCH QUESTIONS

The following research questions are designed to guide the study:

(i) Which of the AI techniques can be combined with cyber forensics to tackle land banking frauds and ownership disputes?
(ii) How can cyber forensics and ML, DL and NLP tackle land banking frauds and ownership disputes?

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