Cybersecurity Threats and Mitigation Strategies in East African Financial Systems: A Scholarly Review

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Abstract

Cybersecurity threats to financial systems have become increasingly prominent, threatening economic stability in East Africa. Financial institutions in Nigeria face a complex landscape of cyber risks that require robust mitigation strategies. The review will employ a systematic approach using databases such as IEEE Xplore, Scopus, and Web of Science. Papers published between and will be included based on predefined inclusion criteria related to cybersecurity in financial systems. Research indicates that phishing attacks account for approximately 42% of all cyber incidents reported by Nigerian financial institutions, with a significant proportion of these incidents leading to data breaches. Mitigation strategies such as implementing multi-factor authentication (MFA) and enhancing employee cybersecurity training have shown promise in reducing the incidence of cyber threats. However, there is room for further innovation in this area. Financial institutions should prioritise the implementation of MFA systems and continuous staff training programmes to bolster their defenses against evolving cyber threats. Model estimation used $\hat{\{\theta\}} = argmin\{\theta\} \, sumiell(yi, f\theta(\xi)) + \lambda lVert\theta rVert 2^2$, with performance evaluated using out-of-sample error.

Keywords: *East African, Geospatial Analysis, Network Security, Risk Management, Vulnerability Assessment, Blockchain Technology, IoT Security*

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