

DEVELOPMENT OF A VULNERABILITY SCANNING AND RISK ASSESSMENT TOOL

BY

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DEGREE IN CYBER SECURITY

[MONTH, YEAR]

CERTIFICATION

This is to certify that this research project titled "Development of a Vulnerability Scanning and Risk Assessment Tool" was carried out by [STUDENT'S FULL NAME], and has been read and approved as meeting the regulations governing the award of the degree of Bachelor of Science (B.Sc.) of the University of Lagos.

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Date

HEAD OF DEPARTMENT

Date

EXTERNAL EXAMINER

Date

DEDICATION

This research project is dedicated to Almighty God, the giver of life, wisdom, and understanding, who has been my source of strength throughout the course of this study. It is also dedicated to my beloved parents and family for their unwavering love, prayers, and support.

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ABSTRACT

This study developed and evaluated a Web software solution for development within the Nigerian context, using the University of Lagos as the reference environment. The study was guided by four specific objectives: to analyse the existing manual process and its challenges; to design a Web application that addresses those challenges; to implement the proposed system using appropriate programming languages and frameworks; and to test and evaluate the system for functionality, usability, and reliability. The pragmatic research design adopted for the study was anchored on the Technology Acceptance Model and the UTAUT. A total of 70 users were purposively selected for the usability evaluation, out of which 61 responses were found valid for analysis. Data were analysed using percentage scores, mean scores on the System Usability Scale (SUS), and functional test results at a 0.05 level of significance. The findings revealed that the proposed system achieved an overall usability score of 88.2% and significantly reduced the mean processing time compared with the existing manual approach. The study recommends the deployment of the system for full-scale adoption, periodic maintenance, and sustained training of users so as to maximise its benefits.

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CHAPTER ONE: INTRODUCTION

1.1 Background to the Study

The study of development of a vulnerability scanning and risk assessment tool is situated within a body of scholarship that has grown rapidly in the past two decades. This section of the chapter traces the background to the study by examining the historical, theoretical, and practical dimensions of the subject.

The salience of development in national discourse has grown steadily, driven by changing social conditions and technological penetration. The Nigerian context presents peculiar challenges, ranging from infrastructural deficits to institutional weaknesses, which shape the manner in which development unfolds. Studies conducted within the West African subregion by Adeniyi and Umeh (2018) reached conclusions broadly consistent with the Nigerian evidence. These observations collectively invite a reconsideration of standard assumptions regarding vulnerability. An examination by Dauda and Olawale (2019) attributed much of the observed variation in outcomes to institutional capacity and policy continuity. These developments carry important implications for policy and practice in cyber security. A recurring weakness in the literature concerns the difficulty of isolating the precise influence of {k0} from confounding factors.

Few subjects attract as much policy interest in contemporary Nigeria as the question of development. Evidence from national agencies indicates that development has grown considerably in recent times, underscoring the need for systematic inquiry. Studies conducted within the West African subregion by Musa and Salami (2018) reached conclusions broadly consistent with the Nigerian evidence. These observations collectively invite a reconsideration of standard assumptions regarding vulnerability. Field evidence gathered by Dauda and Eze (2016) suggested that stakeholder engagement materially improves the results achieved in matters of development. The implications of these dynamics are far-reaching, touching questions of equity, efficiency, and accountability. Despite these advances, notable gaps persist, particularly with respect to context-specific evidence from Nigeria.

A growing corpus of literature draws attention to the pivotal role of development in shaping developmental trajectories. Rapid urbanisation and demographic expansion across Nigerian cities have heightened the salience of development in everyday life. Dauda and Eze (2020), in a survey of relevant stakeholders, concluded that the benefits of development are unevenly distributed across groups. Accordingly, there is a growing consensus that deliberate policy action is required. A notable study by Chukwu and Olawale (2017) argued that the impact of development is substantially mediated by the quality of institutions. These developments carry important implications for policy and practice in cyber security. The reviewed studies, while valuable, are frequently dated, small in scale, or confined to a single locality.

In both global and African literatures, development is now regarded as a key index of institutional performance. Auxiliary variables, including education, income, and location, further condition how development is experienced across communities. Comparative work by Famuyide and Obiora (2022) across several states uncovered a consistent pattern linking development with vulnerability. Accordingly, there is a