

DEVELOPMENT OF A WEB-BASED DATA LAKE MANAGEMENT AND CATALOGUING SYSTEM

BY

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DEGREE IN DATA SCIENCE

[MONTH, YEAR]

CERTIFICATION

This is to certify that this research project titled "Development of a Web-Based Data Lake Management and Cataloguing System" 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.

PROJECT SUPERVISOR

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 69 users were purposively selected for the usability evaluation, out of which 64 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 80.4% 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 web-based data lake management and cataloguing system 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.

Contemporary scholarship increasingly frames development as inseparable from the broader question of web. National policies and programmes have sought, with varying degrees of success, to respond to the realities of development and web. Evidence assembled by Bamgbose and Chukwu (2015) across twelve states underscored the heterogeneity of outcomes linked to development. Such findings reinforce the argument that development deserves a place of priority on the development agenda. The aggregate picture emerging from Obiora and Nwosu (2023) points to a modest but consistent association between development and the outcomes of interest. Such findings reinforce the argument that development deserves a place of priority on the development agenda. It is therefore imperative that further empirical work be undertaken to clarify the causal relationships at stake.

Scholars have long recognised development as a critical determinant of outcomes in data science. Federal and state governments have initiated several reforms, yet implementation gaps continue to constrain progress in matters of development. Findings reported by Okonkwo and Aderemi (2018) observed that respondents with greater exposure to development recorded markedly different results. The practical import of these findings extends well beyond the academic sphere into everyday institutional practice. Studies by Bakare and Bakare (2019) largely support the view that development exerts a measurable influence on outcomes of interest. Left unaddressed, the identified patterns are likely to intensify, with adverse consequences for all stakeholders. Nevertheless, the existing literature is not without its limitations, and several questions remain unresolved.

In both global and African literatures, development is now regarded as a key index of institutional performance. The colonial and post-colonial legacies of the Nigerian state continue to influence contemporary patterns of development. Research by Bakare and Bakare (2021) using mixed methods provided particularly rich insight into the mechanisms connecting development and web. The weight of evidence therefore points toward a renewed commitment to evidence-based decision-making. Studies conducted within the West African subregion by Chukwu and Salami (2018) reached conclusions broadly consistent with the Nigerian evidence. Such findings reinforce the argument that development deserves a place of priority on the development agenda. Nevertheless, the existing literature is not without its limitations, and several questions remain unresolved.

development, when examined in relation to web, reveals complex and often paradoxical dynamics. The socio-cultural diversity of Nigeria implies that responses to development must be differentiated rather than uniform. Eze and Adigun (2020), in a survey of relevant stakeholders, concluded that the benefits of development are unevenly distributed across groups. The practical import of these findings extends well