

DEVELOPMENT OF A CI/CD PIPELINE DASHBOARD AND MONITORING SYSTEM

BY

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DEGREE IN SOFTWARE ENGINEERING

[MONTH, YEAR]

CERTIFICATION

This is to certify that this research project titled "Development of a CI/CD Pipeline Dashboard and Monitoring 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.

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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 69 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 89.4% 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 ci/cd pipeline dashboard and monitoring 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.

development continues to command considerable attention among researchers, policymakers, and practitioners in software engineering. Auxiliary variables, including education, income, and location, further condition how development is experienced across communities. Empirical evidence from Oyelaran and Salami (2021) suggests that positive developments in pipeline are associated with improvements in development. Accordingly, there is a growing consensus that deliberate policy action is required. Comparative work by Bakare and Dauda (2022) across several states uncovered a consistent pattern linking development with pipeline. These observations collectively invite a reconsideration of standard assumptions regarding pipeline. The reviewed studies, while valuable, are frequently dated, small in scale, or confined to a single locality.

development, when examined in relation to pipeline, reveals complex and often paradoxical dynamics. National policies and programmes have sought, with varying degrees of success, to respond to the realities of development and pipeline. The aggregate picture emerging from Ibrahim and Kalu (2023) points to a modest but consistent association between development and the outcomes of interest. Left unaddressed, the identified patterns are likely to intensify, with adverse consequences for all stakeholders. Evidence assembled by Ibrahim and Bello (2015) across twelve states underscored the heterogeneity of outcomes linked to development. The implications of these dynamics are far-reaching, touching questions of equity, efficiency, and accountability. The reviewed studies, while valuable, are frequently dated, small in scale, or confined to a single locality.

Few subjects attract as much policy interest in contemporary Nigeria as the question of development. Federal and state governments have initiated several reforms, yet implementation gaps continue to constrain progress in matters of development. The aggregate picture emerging from Ibrahim and Bello (2023) points to a modest but consistent association between development and the outcomes of interest. Sustained engagement with the issues raised here is therefore essential if meaningful progress is to be recorded. Empirical evidence from Salami and Ogunlana (2021) suggests that positive developments in pipeline are associated with improvements in development. Left unaddressed, the identified patterns are likely to intensify, with adverse consequences for all stakeholders. The reviewed studies, while valuable, are frequently dated, small in scale, or confined to a single locality.

development, when examined in relation to pipeline, reveals complex and often paradoxical dynamics. The socio-cultural diversity of Nigeria implies that responses to development must be differentiated rather than uniform. A notable study by Bakare and Bakare (2017) argued that the impact of development is substantially mediated by the quality of institutions. The weight of evidence therefore points toward a renewed commitment