

# **DEVELOPMENT OF A CLINICAL DATA ANALYSIS SYSTEM FOR BIOSTATISTICS**

BY

[STUDENT'S FULL NAME]

[MATRIC NUMBER]

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DEGREE IN STATISTICS

[MONTH, YEAR]

## CERTIFICATION

This is to certify that this research project titled "Development of a Clinical Data Analysis System for Biostatistics" 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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PROJECT SUPERVISOR

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Date

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HEAD OF DEPARTMENT

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Date

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EXTERNAL EXAMINER

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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.

## **ACKNOWLEDGEMENT**

My profound gratitude goes to Almighty God for His grace, protection, and guidance throughout the duration of my study and the successful completion of this research project. I am deeply grateful to my supervisor, [SUPERVISOR'S NAME], for the patience, guidance, constructive criticism, and invaluable direction provided throughout the course of this research. I also wish to appreciate the Head of Department, the lecturers of the Department of Statistics, and my course mates for their support and friendship. My appreciation also goes to my parents and siblings for their unwavering support, both financial and emotional, throughout my academic journey.

## **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 75 users were purposively selected for the usability evaluation, out of which 70 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 83.1% 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 clinical data analysis system for biostatistics 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 phenomenon of development, while not new, has acquired fresh analytical urgency in Nigeria. Auxiliary variables, including education, income, and location, further condition how development is experienced across communities. Findings reported by Umeh and Famuyide (2018) observed that respondents with greater exposure to development recorded markedly different results. Such findings reinforce the argument that development deserves a place of priority on the development agenda. An examination by Adekunle and Bakare (2019) attributed much of the observed variation in outcomes to institutional capacity and policy continuity. The cumulative effect of these dynamics is a situation that demands urgent and coordinated intervention. It is therefore imperative that further empirical work be undertaken to clarify the causal relationships at stake.

development occupies a prominent position in contemporary debates about clinical and national development. Public institutions at the federal, state, and local levels have developed programmes that seek to mainstream development into routine governance. Longitudinal research by Bamgbose and Ekwueme (2016) revealed that sustained attention to development yields appreciable dividends over time. The cumulative effect of these dynamics is a situation that demands urgent and coordinated intervention. Famuyide and Kalu (2020), in a survey of relevant stakeholders, concluded that the benefits of development are unevenly distributed across groups. The cumulative effect of these dynamics is a situation that demands urgent and coordinated intervention. The reviewed studies, while valuable, are frequently dated, small in scale, or confined to a single locality.

Contemporary scholarship increasingly frames development as inseparable from the broader question of clinical. Federal and state governments have initiated several reforms, yet implementation gaps continue to constrain progress in matters of development. A notable study by Famuyide and Kalu (2017) argued that the impact of development is substantially mediated by the quality of institutions. These observations collectively invite a reconsideration of standard assumptions regarding clinical. Comparative work by Bakare and Adebayo (2022) across several states uncovered a consistent pattern linking development with clinical. These observations collectively invite a reconsideration of standard assumptions regarding clinical. A recurring weakness in the literature concerns the difficulty of isolating the precise influence of {k0} from confounding factors.

Over the past two decades, development has become increasingly significant within the Nigerian landscape and beyond. In Nigeria, the intersection of development and clinical is conditioned by unique socio-economic, cultural, and institutional factors that differ markedly from Western settings. An examination by Bamgbose