

# **DESIGN AND IMPLEMENTATION OF A FACE RECOGNITION-BASED ATTENDANCE MANAGEMENT SYSTEM**

BY

[STUDENT'S FULL NAME]

[MATRIC NUMBER]

BEING A RESEARCH PROJECT SUBMITTED TO THE DEPARTMENT OF COMPUTER SCIENCE, FACULTY  
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DEGREE IN COMPUTER SCIENCE

[MONTH, YEAR]

## CERTIFICATION

This is to certify that this research project titled "Design and Implementation of a Face Recognition-Based Attendance Management 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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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 Computer Science, 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 design 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 66 users were purposively selected for the usability evaluation, out of which 59 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 81.1% 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 design and implementation of a face recognition-based attendance management 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.

The relationship between design and implementation has been the subject of sustained academic interest across several disciplines. Nigeria's federal structure and its diverse cultural geography ensure that the experience of design varies considerably from one region to another. Kalu and Olawale (2020), in a survey of relevant stakeholders, concluded that the benefits of design are unevenly distributed across groups. These observations collectively invite a reconsideration of standard assumptions regarding implementation. Longitudinal research by Osinachi and Ibrahim (2016) revealed that sustained attention to design yields appreciable dividends over time. Sustained engagement with the issues raised here is therefore essential if meaningful progress is to be recorded. The reviewed studies, while valuable, are frequently dated, small in scale, or confined to a single locality.

A growing corpus of literature draws attention to the pivotal role of design in shaping developmental trajectories. Auxiliary variables, including education, income, and location, further condition how design is experienced across communities. Comparative work by Okonkwo and Musa (2022) across several states uncovered a consistent pattern linking design with implementation. Left unaddressed, the identified patterns are likely to intensify, with adverse consequences for all stakeholders. Ekwueme and Adigun (2020), in a survey of relevant stakeholders, concluded that the benefits of design are unevenly distributed across groups. Left unaddressed, the identified patterns are likely to intensify, with adverse consequences for all stakeholders. Despite these advances, notable gaps persist, particularly with respect to context-specific evidence from Nigeria.

The phenomenon of design, while not new, has acquired fresh analytical urgency in Nigeria. Rapid urbanisation and demographic expansion across Nigerian cities have heightened the salience of design in everyday life. An examination by Ekwueme and Adigun (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. Comparative work by Umeh and Nwosu (2022) across several states uncovered a consistent pattern linking design with implementation. Such findings reinforce the argument that design deserves a place of priority on the development agenda. The reviewed studies, while valuable, are frequently dated, small in scale, or confined to a single locality.

design, when examined in relation to implementation, reveals complex and often paradoxical dynamics. Nigeria's federal structure and its diverse cultural geography ensure that the experience of design varies considerably from one region to another. Evidence assembled by Bello and Alade (2015) across twelve states