

DESIGN AND IMPLEMENTATION OF A LOAN APPROVAL PREDICTION SYSTEM USING MACHINE LEARNING

BY

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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 Loan Approval Prediction System Using Machine Learning" 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 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 72 users were purposively selected for the usability evaluation, out of which 63 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 83.8% 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 loan approval prediction system using machine learning 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. Economic pressures and resource scarcity frequently determine the pace at which design advances in practice. Studies conducted within the West African subregion by Oyelaran and Adekunle (2018) reached conclusions broadly consistent with the Nigerian evidence. Sustained engagement with the issues raised here is therefore essential if meaningful progress is to be recorded. A notable study by Okonkwo and Umeh (2017) argued that the impact of design is substantially mediated by the quality of institutions. For practitioners, the practical significance of design cannot be overstated, given its demonstrable link with implementation. Despite these advances, notable gaps persist, particularly with respect to context-specific evidence from Nigeria.

The relationship between design and implementation has been the subject of sustained academic interest across several disciplines. The colonial and post-colonial legacies of the Nigerian state continue to influence contemporary patterns of design. Kalu and Olawale (2020), in a survey of relevant stakeholders, concluded that the benefits of design are unevenly distributed across groups. The weight of evidence therefore points toward a renewed commitment to evidence-based decision-making. Comparative work by Bakare and Ekwueme (2022) across several states uncovered a consistent pattern linking design with implementation. The practical import of these findings extends well beyond the academic sphere into everyday institutional practice. Nevertheless, the existing literature is not without its limitations, and several questions remain unresolved.

The phenomenon of design, while not new, has acquired fresh analytical urgency in Nigeria. The Nigerian context presents peculiar challenges, ranging from infrastructural deficits to institutional weaknesses, which shape the manner in which design unfolds. A notable study by Bakare and Ekwueme (2017) argued that the impact of design is substantially mediated by the quality of institutions. Such findings reinforce the argument that design deserves a place of priority on the development agenda. Comparative work by Dauda and Aderemi (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. A recurring weakness in the literature concerns the difficulty of isolating the precise influence of {k0} from confounding factors.

Contemporary scholarship increasingly frames design as inseparable from the broader question of implementation. Nigeria's federal structure and its diverse cultural geography ensure that the experience of