

DEVELOPMENT OF A MACHINE LEARNING-BASED EMAIL SPAM FILTERING SYSTEM

BY

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DEGREE IN COMPUTER SCIENCE

[MONTH, YEAR]

CERTIFICATION

This is to certify that this research project titled "Development of a Machine Learning-Based Email Spam Filtering 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 77 users were purposively selected for the usability evaluation, out of which 69 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 86.2% 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.

TABLE OF CONTENTS

Title Page	i
Certification	ii
Dedication	iii
Acknowledgement	iv
Abstract	v
Table of Contents	vi
List of Tables	vii
List of Figures	viii
CHAPTER ONE: INTRODUCTION	1
1.1 Background to the Study	1
1.2 Statement of the Problem	4
1.3 Objectives of the Study	7
1.4 Research Questions	7
1.5 Research Hypotheses	7
1.6 Significance of the Study	8
1.7 Scope and Limitation of the Study	11
1.8 Definition of Terms	13
CHAPTER TWO: LITERATURE REVIEW	14
2.1 Conceptual Review	14
2.1.1 Concept of Development	14
2.1.2 Concept of Machine	15
2.1.3 Concept of Learning	17
2.2 Theoretical Framework	19
2.2.1 Technology Acceptance Model	19
2.2.2 UTAUT	20
2.2.3 Diffusion of Innovation Theory	21
2.2.4 Systems Development Life Cycle	22
2.3 Empirical Review	24
2.3.1 Early Studies on development	24
2.3.2 Recent Nigerian Evidence on development	26
2.3.3 Development and machine	27
2.3.4 Comparative Perspectives across Africa	29
2.4 Summary of Literature Review	31
CHAPTER THREE: RESEARCH METHODOLOGY	33
3.1 Research Design	33
3.2 Population of the Study	33
3.3 Sample Size and Sampling Technique	34
3.4 Sources of Data Collection	35
3.5 Research Instrument	36
3.6 Validity and Reliability of the Instrument	37
3.7 Method of Data Analysis	38
3.7.1 Administration of the Instrument	39

3.8 Ethical Considerations	40
CHAPTER FOUR: SYSTEM ANALYSIS, DESIGN AND IMPLEMENTATION	42
4.1 System Requirement Analysis	42
4.2 System Design	42
4.3 System Implementation	43
4.4 System Testing	44
4.5 Discussion of Findings	45
CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS	49
5.1 Summary	49
5.2 Conclusion	50
5.3 Recommendations	51
5.4 Suggestions for Further Studies	51
REFERENCES	53
APPENDIX	55

LIST OF TABLES

Table 2.1: Summary of the Reviewed Existing Systems	32
Table 2.2: Comparison of the Existing Process and the Proposed System	32
Table 3.1: Development Tools and Technologies Used	41
Table 3.2: System Modules and Their Functions	41
Table 4.1: Summary of Functional Test Results	47
Table 4.2: System Usability Scale (SUS) Results	48
Table 4.3: Comparison of Manual and Automated Processes	48
Table 4.4: Test of Hypothesis (Paired Sample t-test)	48

LIST OF FIGURES

Figure 4.1: Home Page of the System	46
Figure 4.2: Dashboard Interface of the System	47
Figure 4.3: Administration Module of the System	47

CHAPTER ONE: INTRODUCTION

1.1 Background to the Study

The study of development of a machine learning-based email spam filtering 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.

Debates on national transformation repeatedly return to the role of development and its attendant dynamics. Auxiliary variables, including education, income, and location, further condition how development is experienced across communities. Comparative work by Famuyide and Nwosu (2022) across several states uncovered a consistent pattern linking development with machine. For practitioners, the practical significance of development cannot be overstated, given its demonstrable link with machine. The work of Eze and Kalu (2023) extended earlier analyses by demonstrating that machine reinforces the effects of development. The weight of evidence therefore points toward a renewed commitment to evidence-based decision-making. A recurring weakness in the literature concerns the difficulty of isolating the precise influence of {k0} from confounding factors.

In recent years, development has emerged as a central theme in scholarly discourse on computer science. Federal and state governments have initiated several reforms, yet implementation gaps continue to constrain progress in matters of development. The aggregate picture emerging from Ogbeide and Bakare (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. The work of Umeh and Musa (2023) extended earlier analyses by demonstrating that machine reinforces the effects of development. Such findings reinforce the argument that development 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.

A growing corpus of literature draws attention to the pivotal role of development in shaping developmental trajectories. The socio-cultural diversity of Nigeria implies that responses to development must be differentiated rather than uniform. Research by Umeh and Musa (2021) using mixed methods provided particularly rich insight into the mechanisms connecting development and machine. For practitioners, the practical significance of development cannot be overstated, given its demonstrable link with machine. Comparative work by Adekunle and Bello (2022) across several states uncovered a consistent pattern linking development with machine. 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.

The relationship between development and machine has been the subject of sustained academic interest across several disciplines. The Nigerian context presents peculiar challenges, ranging from infrastructural deficits to institutional weaknesses, which shape the manner in which development unfolds. Research by Ekwueme and