
FACULTY OF ENGINEERING AND TECHNOLOGY
DEPARTMENT OF ELECTRICAL AND ELECTRONICS
ENGINEERING

FINAL YEAR PROJECT REPORT
DESIGN AND IMPLEMENTATION OF AN AUTOMATED WASTE
SEGREGATOR BIN WITH A GSM MODULE FOR ALERTS

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**THIS REPORT IS SUBMITTED TO THE DEPARTMENT OF ELECTRICAL
ENGINEERING IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE AWARD OF A BACHELOR'S DEGREE IN ELECTRICAL
ENGINEERING AT BUSITEMA UNIVERSITY.**

MAY 2025

Declaration.

I NAMBALIRWA SHEILLA declare that this report is a record of my original work and has never been presented to any institution of higher learning. Any work similar to this has been referenced in the report.

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Approval.

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Dedication.

I dedicate this project to my beloved parents Mr. and Mrs. Kyewalabye Henry and Annet for all the support they have given me and my siblings throughout our lives. I appreciate you for always guiding us, encouraging, providing and protecting us endlessly. May God the Almighty bless you always.

Not forgetting my project partner Wakhweya Leonard Mulani for all the work and knowledge shared, you made it so easy to work with you.

And lastly, our project supervisors, Ms. Patience Tusiimire and Eng. Patrick Mugwanya, your guidance was really appreciated throughout the proposing and implementation stages.

Acknowledgement.

I dearly acknowledge the efforts of the following people in making this project a success. I am grateful to my project partner for Wakhweya Leonard Mulani for all the work and ideas we have shared throughout this period. I extend my appreciation to our supervisors Ms. Patience Tusiimire and Eng. Patrick Mugwanya for all their guidance and efforts towards the success of our project. I extend my gratitude towards both my parents and my partner's, for all their financial support and encouragement throughout the whole process. And lastly but not least, the Almighty for the wisdom, life and everything good in life.

Abstract.

This project presents the design and implementation of an automated waste segregator bin which utilizes sensor technology to categorize wastes and sort them effectively, and also has an alerting system using a GSM module to send notification messages to waste collection authorities when the bin reaches capacity. The system aims to address pressing issues in waste management by reducing human interaction with wastes, improving recycling efforts and reducing waste overflow in urban communities. This model is equipped with a number of systems that is; automatic lid opening, waste sorting system which is aided by a robot arm, sensors and a motor, then lastly is the notification system which uses GSM and GPS modules for reliable notifications. The project's outcome is scalable and adaptable in that the bins can be applied in different environments especially in public areas in cities, contributing to cleaner and more sustainable environment.

Table of Contents

Chapter 1 : Introduction.....	1
1.1 Background.....	1
1.2 Problem Statement.....	3
1.3 Objectives.....	4
1.3.1 Main Objective.....	4
1.3.2 Specific Objectives.....	4
1.4 Justification.....	5
1.5 Significance.....	5
1.6 Project Scope.....	6
1.6.1 Project Overview.....	6
1.6.2 Timeline.....	6
1.6.3 Contextual overview.....	6
Chapter 2 : Literature Review.....	8
2.1 Introduction.....	8
2.2 Automated Waste Segregation Systems.....	8
2.3 Review of Related Systems.....	8
2.3.1 IoT Based Smart garbage monitoring and collecting system using WeMos and Ultrasonic sensors.....	8
2.3.2 Machine Learning-Based Waste Sorting.....	9
2.4 Review of Existing Projects in Waste Management.....	9
2.5 Gaps in Existing Research.....	9
2.6 Conclusion.....	10
Chapter 3 : Methodology and System Design.....	11
3.1 Requirements Analysis.....	11
3.2 System Design.....	11
3.2.1 The Waste Segregation System.....	11
3.2.2 The Monitoring and Notification System.....	12
3.2.3 The Automatic Bin Lid Opening System.....	13
3.3 Full System Operation.....	13
3.4 Project Hardware and Software.....	16
3.4.1 Hardware Components Used.....	16
3.4.2 Software Tools.....	22

Chapter 4 : Implementation, Testing and System Analysis.....	24
4.1 Implementation.....	24
4.1.1 Hardware Assembly and Wiring.....	24
4.1.2 Software Development and Simulation.....	25
4.2 System Testing and Evaluation.....	27
4.2.1 System Testing.....	27
4.2.2 Verification of the System.....	28
4.2.3 Evaluation of the System.....	29
4.3 Results and Discussion.....	30
4.3.1 System Operational Results.....	30
4.4 System Efficiency and Limitations.....	32
4.5 Summary.....	32
Chapter 5 : Conclusion and Recommendations.....	33
5.1 Introduction.....	33
5.2 Project Summary.....	33
5.3 Project Achievements.....	33
5.4 Recommendations.....	34
5.5 Conclusion.....	34
References.....	35
Appendices.....	37

List of Figures.

Figure 1-1. Kiteezi Landfill before Collapsing [2]	2
Figure 1-3. Showing Illegal dumping in Kampala	3
Figure 1-4. Showing Manual Sorting of Recyclables	4
Figure 3-1. the block diagram of the segregation process	12
Figure 3-2. Block diagram of the Monitoring and Notification process	13
Figure 3-3. The system flow chart	15
Figure 3-4. Arduino Mega [15]	16
Figure 3-5. Ultrasonic sensor [17]	17
Figure 3-6. Parts of a Capacitive Proximity Sensor	17
Figure 3-7. Inductive Proximity Sensor	18
Figure 3-8. Infrared Sensor	18
Figure 3-9. Robot Arm	20
Figure 3-10. GSM Module	21
Figure 3-11. Stepper Motor [21]	22
Figure 4-1. Simulation of the system	27
Figure 4-2. Showing testing of the Robot arm and Sensors	28
Figure 4-3. Showing the GSM message sent	31
Figure 5-1. System Circuit Diagram	37
Figure 5-2. Showing the Fully Functioning Prototype.	38
Figure 5-3. The Project Timeline	40
Figure 5-4. Program code for Automatic Lid Opening	41
Figure 5-5. Program Code for Robot Arm Movements	42
Figure 5-6. Program Code for all System Processes Combined	43
Figure 5-7. Program Code for Monitoring and Communication Processes.	44
Figure 5-8. Program Code for the System Simulation	45
Figure 5-9. Prototype Framework	46

List of Tables.

Table 5-1. Showing the Budget of the Project implementation.

39

5.6 References

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