



**BUSITEMA
UNIVERSITY**
Pursuing Excellence

FACULTY OF ENGINEERING

**DEPARTMENT OF ELECTRICAL AND COMPUTER
ENGINEERING**

FINAL YEAR PROJECT REPORT

TITLE:

**A SENSOR-BASED RESPIRATORY DISEASE DETECTION SYSTEM IN CHICKEN
IN A POULTRY HOUSE**

BY

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*A project report Submitted in partial fulfilment of the requirements for the award of a Bachelor's degree in
Computer Engineering from Busitema university*

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DECLARATION

I, **MUGIDE CATHERINE** with registration number BU/UP/2017/1818 declare that this project report is my original work with exceptions of where citations have been made and this paper has not been presented to any institution of higher learning for the award of academic paper.

SIGN:

DATE:

DEDICATION

I dedicate this report to my beloved parents Mr. Obbo John and Mrs. Obbo Goretti, my supervisor Dr. OCEN GILBERT, to my classmates and all my beloved lecturers for Computer Engineering Department by whom I have had a successful academic journey since 2017. You are part of my success story. May the Almighty God reward you abundantly.

Above all, I Dedicate to my personal Lord and Savior Jesus Christ.

ACKNOWLEDGEMENT

I thank the almighty God for the gift of life, wisdom, understanding and knowledge that has helped me through my research.

I render my heart-felt thanks to my supervisor, Dr. OCEN GILBERT for the guidance given to me to bring out the best out of my project.

My appreciation goes to the Department of Computer Engineering at large for the guidance and insight into concepts of research and project management as well as technical knowledge applicable in the design of the system.

I thank my classmates for their support and encouragement throughout this journey of accomplishing my degree.

Finally, I thank my beloved parents for having been there for me, especially in terms of the financial provision that has propelled me to accomplish it with ease.

APPROVAL

The project proposal titled “**A SENSOR-BASED RESPIRATORY DISEASE DITECTION SYSTEM IN CHICKEN IN A POULTRY HOUSE**” has been under my guidance and is now ready for examination.

Signature:

Date:

Dr. OCEN GILBERT

Department of computer engineering

ABSTRACT

There are many common diseases which can affect the respiratory system (air passages, lungs, air sacs) of poultry. These diseases include Newcastle Disease, Infectious Bronchitis, Avian Influenza (AI) influenza, Infectious Laryngotracheitis, Mycoplasma gallisepticum (MG), chronic respiratory disease (CRD), infectious sinusitis, mycoplasmas[1]. The designed project detects respiratory diseases among chicken basing on their abnormal sounds like cough and snore. The system model has been designed using different hardware components audio sensor, microcontroller, temperature sensor, LCD. The system works in such a way that the audio sensor acquires sound from the chicken environment, it sends to the microcontroller which then interprets the input and in case of an abnormal sound such as cough and snore, the farmer will be notified. This systems architecture is based on context of operations and processes in real-time scenarios.

Keywords: poultry, Arduino, respiratory diseases, sound sensor, WIFI module, LCD, temperature sensor

Table of Contents

DECLARATION 2

DEDICATION 3

ACKNOWLEDGEMENT 4

APPROVAL 5

Chapter 1: INTRODUCTION iii

 1.1 Back ground iii

 1.2 Problem statement 3

 1.3 Objectives of the study 3

 1.4 Significance 3

 1.5 Scope of the study 4

Chapter 2: LITERATURE REVIEW 5

 2.1 Introduction 5

 2.2 Key terms 5

 2.3 Related works 6

 Database 7

 2.3.4 Deep Convolutional Neural Network for Chicken Diseases Detection 7

 2.4 Table 1: Existing Systems Comparison 8

 2.5 Proposed system 8

3.1 REQUIREMENTS GATHERING 10

3.2 PURPOSE AND RELEVANCE OF METHOD/PROCEDURES 10

 3.2.1 Literature review 10

 3.2.2 Interviews 10

 3.2.3 Consultations 10

3.3 TECHNIQUES USED IN REALIZING THE PROJECT 10

 3.3.1 Hardware tools; 10

 3.3.2 Software tools; 11

3.4 System Implementation 11

3.5 Testing and validation 11

3.6 Testing 11

 3.6.1 Unit testing 11

 3.6.2 Integration testing 11

 3.6.3 System testing 11

3.7 Validation 12

4.1 FUNCTIONAL ANALYSIS 13

| | |
|--|----|
| 4.2 REQUIREMENTS ANALYSIS | 13 |
| 4.2.1 FUNCTIONAL REQUIREMENT | 13 |
| 4.2.2 NON-FUNCTIONAL REQUIREMENT | 13 |
| 4.3 Data flow model | 13 |
| Chapter 5: SYSTEM IMPLEMENTATION | 16 |
| INTRODUCTION | 16 |
| 5.1 IMPLEMENTATION AND ANALYSIS | 16 |
| 5.2 DEVELOPMENT PLAT FORMS | 16 |
| 5.2.1 Arduino | 16 |
| 5.2.2 Xampp..... | 16 |
| 5.2.3 HTML | 16 |
| 5.2.4 CSS | 16 |
| 5.2.5 JavaScript..... | 17 |
| 5.2.7 Bootstrap..... | 17 |
| 5.2.8 MySQL | 17 |
| 5.2.9 PHP | 17 |
| 5.2.10 SQL..... | 17 |
| 5.2.11 ChartJS..... | 17 |
| 5.3 CODE DESIGN..... | 17 |
| 5.4 SYSTEM DEVELOPMENT | 22 |
| 5.5 VERIFICATIONS | 22 |
| 5.6 EVALUATIONS | 22 |
| 5.7 VALIDATION | 22 |
| 6.1 SUMMARY OF MY WORK..... | 23 |
| 6.2 CRITICAL ANALYSIS /APPRAISAL OF THE WORK | 23 |
| 6.3 RECOMMENDATIONS..... | 23 |
| 6.4 CONCLUSION..... | 23 |
| REFERENCES | 24 |
| APPENDIX..... | 29 |