



**Bahria University**  
Discovering Knowledge

## **FINAL YEAR PROJECT REPORT**

### **SMART UNMANNED AERIAL VEHICLE**

In fulfillment of the requirement for degree of  
**Bachelors in Computer Engineering (BCE)**

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## Abstract

The aim of this project is to introduce the technologies which are AI- based help to improve ability in waste collection and disposal, also manage the challenges which is faced by various industries including the various fields in the municipal organizations like the detecting solid waste and informing the authorized persons with the help of android application for notification.

With the global population, the municipality Organization is facing Problems, but AI has the potential and energy to deliver best needed solution. Our AI- based technological solutions has enabled the scavenger to produce more good results output with less input and even improved the quality of result.

We are providing automatic waste managing systems based on image detecting which detects metal materials or other special types of waste materials. With an associate approach consisting of the hard- ware devices such as a drone, Arduino, GPS/GSM module, deep learning, machine learning and image processing algorithms, we introduce a better solution to the problem of effective solid waste detection and management.

This system will capture real time images/video using SUAV and further process the data to detect solid waste litter at unusual places. To notify the respective person-in-charge for taking the necessary action to clean the solid waste.

## Table of Contents

<b>1 Introduction.....</b>	<b>1</b>
1.1 Overview .....	1
1.2 Problem Statement .....	2
1.3 Objectives .....	3
1.4 System Features.....	4
1.5 Project Scope .....	4
1.6 Chapter Summary .....	5
<b>2 Literature Review</b>	<b>6</b>
2.1 Autonomous Detection system .....	6
2.2 This framework intends to accomplish.....	7
2.3 Artificial Intelligence .....	7
2.4 Smart vehicle Functionality .....	7
2.5 Following are the benefits .....	8
2.6 Object detection with Tensor Flow model and OpenCV.....	8
2.7 Android App .....	9
2.8 Google Collabs .....	9
2.9 Pycharm .....	9
2.10 Tensor Flow Lite .....	10
2.11 Raspberry pi .....	11
2.12 PIXHAWK .....	11
2.13 4 MOTORS AND PROPELLERS .....	11
2.14 BATTERY .....	11
2.15 SPEED CONTROLLER.....	12
2.16 WIFI AND BLUETOOTH.....	12
2.17 GPS .....	12

<b>3 DESIGN</b>	<b>13</b>
3.1 DESIGN METHODOLOGY AND SOFTWARE PROCESS MODEL .....	13
3.2 WHAT ARE THE HARDWARE AND SOFTWARE COMPONENTS, AND how do they relate to each other? .....	14
3.2.1 Hardware Components Of Drone .....	14
3.3 RASPBERRY PI .....	14
3.4 PIXHAWK .....	14
3.5 4 MOTORS AND PROPELLERS .....	15
3.6 BATTERY .....	15
3.7 SPEED CONTROLLER.....	15
3.8 WIFI AND BLUETOOTH.....	15
3.9 GPS .....	15
3.9.1 Software Components .....	16
3.10 ARCHITECTURAL DESIGN / DESIGN PATTERNS .....	17
3.11 PROCESS FLOW / REPRESENTATION .....	18
3.12 SEQUENCE DIAGRAM .....	19
3.13 CHAPTER SUMMARY .....	20
<b>4 SYSTEM DEVELOPMENT.....</b>	<b>21</b>
<b>5 TESTING.....</b>	<b>24</b>
<b>6 FUTURE DIRECTIONS AND CONCLUSION</b>	<b>34</b>
6.0.1 Future Direction .....	34
6.0.2 Conclusion .....	35
<b>APPENDICIES</b>	<b>36</b>
<b>Appendix A: REFERENCES</b> . . . . .	<b>36</b>
<b>Appendix B: APPLICATION AND GARBAGE DETECTION CODES</b> . . . . .	<b>37</b>

## Appendix C: SOFTWARE REQUIREMENT SPECIFICATION

1	Introduction.....	67
	1.1 Purpose.....	68
	1.2 Scope.....	68
	1.3 Definitions, Acronyms and Abbreviations.....	69
	1.4 References.....	69
2	Overall Description.....	70
	2.1 Product Perspective .....	71
	2.2 Product Functions .....	71
	2.3 User Classes and Characteristics .....	72
	2.4 Operating Environment .....	72
	2.5 Design and Implementation Constraints .....	72
	2.6 Testing Phase.....	73
3	Specific Requirements .....	73
	3.1 Functionality .....	73
	3.2 Graphical User Interface .....	73
	3.3 Accessibility.....	74
	3.4 Internet Service Provider.....	74
	3.5 Performance .....	74
4	Design Constraints.....	75
	4.1 Standard Development Tools .....	75
	4.2 Web / Android Based Product.....	75
	4.3 Purchased Components.....	75
5	Interfaces .....	76
	5.1 Software and Hardware Interfaces .....	76
	5.2 Licensing Requirements .....	76
	5.3 Legal, Copyright, and Other Notices.....	76
	5.4 Applicable Standards .....	77
6	Project Architecture.....	77
	6.1 Diagrammatic representation of the overall system	
7	System Analysis      Design Overview .....	79
	7.1 Behavioral Models.....	79
	7.2 System Sequence Diagrams .....	80



7.3	Other Non-functional Requirements . . . . .	80
7.4	Performance Requirements . . . . .	80
7.5	Glossary . . . . .	81