

# DAYANANDA SAGAR UNIVERSITY

Devarakagalahalli, Harohalli  
Kanakapura Road, Ramanagara - 562112, Karnataka, India



**SCHOOL OF  
ENGINEERING**

**BACHELOR OF TECHNOLOGY**  
*In*  
**COMPUTER SCIENCE AND ENGINEERING**

**Major Project Phase-2 Report**  
*On*

**Smart Management of Crop Monitoring using  
Drone Technology**

*Team No : 44*

*By*  
**Yashwanth GM (ENG22CS1043)**

Under the supervision of  
**Dr.George Fernandez I**  
Associate Professor, Computer Science and Engineering

**DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING,  
SCHOOL OF ENGINEERING  
DAYANANDA SAGAR UNIVERSITY,**

**(2024-2025)**

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**SCHOOL OF  
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Department of Computer Science & Engineering  
Devarakaggalahalli, Harohalli, Kanakapura Road, Ramanagara - 562112  
Karnataka, India

## CERTIFICATE

This is to certify that the Major Project Stage-2 work titled **Smart Management Of Crop Monitoring Using Drone Technology** is carried out by **Yashwanth GM (ENG22CS1043)**, bonafide student eight semester of Bachelor of Technology in Computer Science and Engineering at the School of Engineering, Dayananda Sagar University, Bangalore in partial fulfillment for the award of degree in Bachelor of Technology in Computer Science and Engineering, during the year **2024- 2025**.

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Date:

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Date:

**Dr. Udaya Kumar Reddy  
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Dean  
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Dayananda Sagar University

Date:

**Name of the Examiner**

1.

2.

**Signature of Examiner**

# DECLARATION

I, **Yashwanth GM (ENG22CS1043)**, are student of eight semester B. Tech in **Computer Science and Engineering**, at School of Engineering, **Dayananda Sagar University**, hereby declare that the Major Project Stage-2 titled “**Smart Management Of Crop Monitoring Using Drone Technology**” has been carried out by us and submitted in partial fulfilment for the award of degree in **Bachelor of Technology in Computer Science and Engineering** during the academic year **2024-2025**.

**STUDENT**

**SIGNATURE**

**Sangamesha - ENG22CS1040**

**Place : Bangalore**

**Date :**

## ACKNOWLEDGEMENT

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I would like to thank our guide **Dr. George Fernandez I Associate Professor, Dept. of Computer Science and Engineering, Dayananda Sagar University**, for sparing his valuable time to extend help in every step of our project work, which paved the way for smooth progress and fruitful culmination of the project.

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# TABLE OF CONTENTS

	Page
LIST OF FIGURES .....	VIII
LIST OF TABLES .....	IX
ABSTRACT .....	X
CHAPTER 1 INTRODUCTION.....	1
1.1. OBJECTIVES.....	1
1.2.SCOPE.....	2
CHAPTER 2 PROBLEM DEFINITION .....	3
2.1. THE LIMITATIONS OF REACTIVE CROP MANAGEMENT.....	3
2.2. IMPLEMENTATION CHALLENGES IN PRECISION AGRICULTURE.....	3
2.3. TECHNOLOGICAL CONSTRAINTS IN CURRENT DRONE SOLUTIONS	4
CHAPTER 3 LITERATURE SURVEY.....	5
CHAPTER 4 PROJECT DESCRIPTION.....	8
4.1 SYSTEM ARCHITECTURE.....	8
CHAPTER 5 REQUIREMENTS .....	9
5.1 SOFTWARE REQUIREMENTS.....	9
5.1.1 SOFTWARE SPECIFICATIONS.....	9
5.2 HARDWARE REQUIREMENTS.....	10
5.2.1 HARDWARE SPECIFICATIONS.....	10
CHAPTER 6 METHODOLOGY .....	11
6.1 SYSTEM WORK FLOW.....	13
CHAPTER 7 EXPERIMENTATION.....	14
CHAPTER 8 RESULT.....	16
REFERENCES... ..	24
IEEE PUBLISHED PAPER.....	
PROJECT EXPO 2025 CERTIFICATES .....	

## NOMENCLATURE USED

AI	Artificial Intelligence
DL	Deep Learning
GUI	Graphical User Interface
PHP	Pre-Processor Hyper text
MySQL	My Structured Query Language

## **LIST OF FIGURES**

Fig. No.	Description of the figure	Page No.
4.1	SYSTEM ARCHITECTURE	6
6.1	SYETEM FLOW CHART	10
8.1	SAMPLE OUTPUT	14

## LIST OF TABLES

Table No.	Description of the Table	Page No.
5.1.1	SOFTWARE SPECIFICATIONS	8
5.2.1	HARDWARE SPECIFICATIONS	9
8.1.1	SAMPLE OUTPUT	15



## ABSTRACT

*This project aims to revolutionize agriculture by introducing a technology-driven solution for early detection and management of plant diseases. Using drones equipped with Raspberry pi camera modules and a Wi-Fi module, real-time images of crops are captured and transmitted to an app. These images are processed using a Convolutional Neural Network (CNN) model implemented with TensorFlow Lite, achieving an accuracy of over 95% in disease detection and classification.*

*The app provides farmers with detailed, step-by-step recommendations for disease management, offering both organic and chemical solutions. It also promotes the transition from chemical to organic farming, fostering sustainable practices. A user-friendly interface in regional languages ensures accessibility for farmers, including newcomers, while real-time updates enable informed decision-making.*

*By integrating traditional farming methods with cutting-edge technology, the system encourages more people to adopt farming as a profession. Scalable for farms of all sizes, this end-to-end solution is designed to enhance crop yields, minimize losses, and empower farmers with modern agricultural tools.*