

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

Rakesh P G (ENG22CS1037)

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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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 **Rakesh PG (ENG22CS1037)**, 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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1.

2.

Signature of Examiner

DECLARATION

I, **Rakesh PG (ENG22CS1037)**, 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 me 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

Rakesh PG - ENG22CS1037

Place : Bangalore

Date :

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NOMENCLATURE USED

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

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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.