



**BHARATI VIDYAPEETH'S
COLLEGE OF ENGINEERING KOLHAPUR**

**BACHELOR OF TECHNOLOGY
ELECTRONICS AND TELECOMMUNICATION
ENGINEERING**

**A
PROJECT PROGRESS REPORT
ON**

**“MACHINE LEARNING AND IOT-BASED
SUGAR CANE EYE DETECTION
AND CLASSIFICATION SYSTEM”**

SUBMITTED BY

Mr. Jadhav Gurudatta D.

Roll No.: 24

Mr. Jamdade Shubham V.

Roll No.: 27

Mr. Pise Param Ranjeet R.

Roll No.: 53

UNDER THE GUIDANCE OF

Mr. Mandlik V. S.

YEAR 2024 - 25



Bharati Vidyapeeth's College of Engineering Kolhapur

CERTIFICATE

This is to certify that, weekly project progress report entitled, “**MACHINE LEARNING AND IOT BASED SUGARCANE EYE DETECTION AND CLASSIFICATION SYSTEM**” submitted by “**Mr. Jadhav Gurudatta D., Mr. Jamdade Shubham V., Mr. Pise Param R.**” is bonafide work carried out by them under the guidance of **Mr. Mandlik V. S.** and it is approved for partial fulfilment of the requirement of the Shivaji University, Kolhapur.

Mr. V. S. Mandlik

(Guide)

Dr. K. R. Desai

(H.O.D.)

Dr. V. R. Ghorpade

(Principal)

Date: / /2024

Place: Kolhapur

Weekly Progress Project Report

Week 1:

(13/07/2024 – 20/07/2024)

Group 18

Work Done:

- We Collaborated with AI & ML students for a Multi-disciplinary Project.
- Shared achievements and Specializations with each other.

Resources Referred:

- Project Guide.
- Teaching Faculty.

Signature of Student:

Sr. No.	Name	Signature
1	Mr. Gurudatta D. Jadhav	
2	Mr. Shubham V. Jamdade	
3	Mr. Param R. Pise	

Signature of Guide:

Mr. Vinay S. Mandlik: _____

Weekly Progress Project Report

Week 2:

(20/07/2024 – 27/07/2024)

Group 18

Work Done:

- We referred several sites and research papers for Project Ideas.
- Also Approached several industries for projects and problem statements.

Resources Referred:

- Wipsa Electronics, Udyam Nagar.
- Adi Engineering, Unchgoan.
- <https://www.ieee.org/about/ieee-projects.html>

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Weekly Progress Project Report

Week 3:

(27/07/2024 – 03/08/2024)

Group 18

Work Done:

- Fixed a Topic with both the groups agreeing.
- Topic was fixed machine learning and IoT-Based Sugar Cane Eye Detection And Classification System

Resources Referred:

- Kagal Nursery Owner.

Signature of Student:

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Weekly Progress Project Report

Week 4:

(03/08/2024 – 10/08/2024)

Group 18

Work Done:

- Field Visted at Kagal Nursery.
- We observed the physical cutting process.
- Also Studied about the Sugarcane Varities.

Resources Referred:

- Kagal Nursery Owner.

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Weekly Progress Project Report

Week 5:

(10/08/2024 – 17/08/2024)

Group 18

Work Done:

- Referred Several Research Papers for a tentative ideas.
- We got several ideas for cutter and feeder designs.

Resources Referred:

- Research Paper: <https://www.mdpi.com/1424-8220/22/21/8430>
- Research Paper: <https://www.sciencedirect.com/science/article/pii/S0168169920313715>
- YouTube: <https://www.youtube.com/watch?v=GaXPZwiGmhk>

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Weekly Progress Project Report

Week 6:

(17/08/2024 – 24/08/2024)

Group 18

Work Done:

- We presented our project ideas to the project sponsor.
- We cleared out several doubts and fixed issues which may arise.

Resources Referred:

- Kagal Nursery Owner.

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Weekly Progress Project Report

Week 7:

(24/08/2024 – 31/08/2024)

Group 18

Work Done:

- We defined the placement architecture of the hardware part.
- Currently using Arduino Board may further utilize Raspberry Pi Models

Resources Referred:

- Arduino Docs: docs.arduino.cc/hardware/uno-rev3/
- Raspberry Pi: raspberrypi.com/products/raspberry-pi-4-model-b/specifications/

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Weekly Progress Project Report

Week 8:

(31/08/2024 – 07/09/2024)

Group 18

Work Done:

- We searched for the structural elements required for the project.
- We visited the Scrap Yards and Metal Fabricators.

Resources Referred:

- MS scraps, Kolhapur.
- Udyam Nagar Welding Works

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Weekly Progress Project Report

Week 9:

(07/09/2024 – 14/09/2024)

Group 18

Work Done:

- We Cutted the part and windows required for our feeder hardware.
- After Cutting we Thoroughly Polished the rough and rusted parts.

Resources Referred:

- A1 Fabricators, RK Nagar

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Weekly Progress Project Report

Week 10:

(14/09/2024 – 21/09/2024)

Group 18

Work Done:

- Fabricated the parts with the Structural Design.
- Looked up for the electronics components.

Resources Referred:

- A1, Fabricators, RK Nagar.
- Kiran Electronics, Shahu Maidan

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Weekly Progress Project Report

Week 11:

(21/09/2024 – 28/09/2024)

Group 18

Work Done:

- Worked on the edge Detection by Hardware.
- Also we used sensors detect if Sugarcane is present or not.

Resources Referred:

- Arduino.cc

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Weekly Progress Project Report

Week 12:

(28/09/2024 – 05/10/2024)

Group 18

Work Done:

- Suagracane feeder assembly.
- Tested with the available sugaracnes.

Resources Referred:

- Arduino.cc

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