



KJ'S EDUCATIONAL INSTITUTE

TRINITY COLLEGE OF ENGINEERING AND RESEARCH PUNE

(Accredited by NAAC Approved by AICTE & Affiliated to SPPU, Pune)

St. No. 28 & 27, Near, Khadi Machine Chowk, Kondhwa Annexo, Pune-48 Maharashtra

DEPARTMENT OF E&TC

BE A.Y.2024-25 SEM-I Sub: Project St

FINAL PROJECT TITLE LIST PROJECT STAGE I

Group Number	Name of Student	Roll No	Guide Name	Title	Sponsorship Status
1	GHORPADI PRADNYA TANAI	EN4008	Pranali Deshmukh	Multitasking agriculture robot	No
	SHINDE DIPALI MACHINDRA	EN4032			
	TAAD MANISHA VITHAI	EN4034			
2	GANDHI DIVYA DULIP	EN4007	Anil Sawant	Cloud-Enhanced IoT-Based Smart Speed Breaker Control System	Yes
	HAOTAP VAIBHAV AMBIRAV	EN4012			
	RAKUMARI GUPTA	EN4041			
3	DESHMUNDE PRAVIAL AMRINDHA	EN4006	Radhika Bodhe	Implementation of solar-based smart Irrigation system for optimising agricultural efficiency	Yes
	LOKHANDE ALAY BHARAT	EN4018			
	PADIR AYESHAKH DINKAR	EN4025			
4	GULANAGUDAR ABHISHEK CHANVARGUDA	EN4009	Amol Bhosale	SafeStart:Breathalyzer Based Ignition Control Vehicle	Yes
	HAWALE MAKARAND RANESHWAR	EN4010			
	JADHAV PRACHI GOVINDRAO	EN4011			
5	LONDHE SAURABHAR RAJASABHAI	EN4019	Ashwini Deshmukh	Kid rescue system from borewell using ai and cloud technologies	No
	TATAR RONAK ANIL	EN4036			
	TATHE ROMAN RANISH	EN4037			
6	BHARTI DEVKUNAR GOVIND	EN4003	Pratibha Chavan	Digital Twin of RV vehicles and Appliances Automated Defect Detection and Sorting System for Pharmaceutical Tablets Using Image Processing	No
	CHAUDHARI TEJAS RANISH	EN4004			
	KOSHI ADITYA RAJUNAR	EN4013			
7	KALE ROHIT BHARAT	EN4014	Shubhangi Handore		No
	PATIL SUMIT ANANDA	EN4026			
	POKATE RITESH SANDIP	EN4029			
8	NADAF AMANULLA AYYUB	EN4022	Ritu Rani	Intelligent Blockage Detection And Alert System	No
	NADAF SAMIULLA HUSEN	EN4023			
	MALE SHUBHAM SANTOSH	EN4024			
9	MUJLA MOHAMMAD ZAKIRIA RAFIK	EN4021	Anil Sawant	Healthcare prediction system	No
	SHAKIM JUNAID PARVEZ	EN4031			
	TAMBEJI OMWAZ ABID	EN4035			
10	KHAN SANIA INAYAT	EN4017	Deepthi Pande	Metal garbage segregation and monitoring system	No
	PATTALE NEHA KAILAS	EN4027			
	TEKAWADE SAHIL GOPAL	EN4038			
11	KARPURE KOMAL SUMHDEV	EN4016			
	SAWANT KUSHKESH POPAT	EN4030			

	SHIPAISADAF RIVAI	EN4033	Amol Bhosale	A Cloud based Traffic Management System	No
	AUDORA ARHAY TANAJI	EN4001			
12	BADADE ADESH RAJENDRA	EN4002	Pranjal Deshmukh	Voice based home automation system	Yes
	MAHE PRATHAMESH DHANANJAY	EN4020			
	DESHMUKH FAHAD SHAKIR	EN4005			
	PHADTARE SIDDHANT ANNASAHEB	EN4028			
13	YADAV SOHAM SUDHIR	EN4039	Ashwini Deshmukh	Smart parking system	No

Prof. A. N. Deshmukh
Project Coordinator



Dr. S. N. Hurdore
HOD, E&TC TCOER

TRINITY COLLEGE OF ENGINEERING AND RESEARCH

Department of Electronics and Telecommunications



CERTIFICATE

This is certify that the Project entitled
"Safe-Start Breathalyzer- Based Ignition Control Vechicle"

submitted by

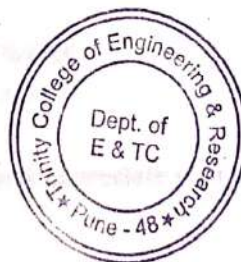
Abhishek Gulanagoudar	B400650095
Makarand Hawale	B400650097
Prachi Jadhav	B400650098

is a bonafide work carried out under the supervision of "Prof. Amol Bhosale " and
it is submitted towards the partial fulfilment of the requirements of Savitribai Phule
Pune University (SPPU), for the award of the degree of Bachelor of Engineering
(Electronics and Telecommunications).

Date:

Place: Pune

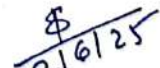

Prof. A. R. Deshmukh
Project Co-ordinator




Prof. Amol Bhosale
Project Guide


Dr. S. M. Handore
HOD


Dr. Abhijeet Auti
Principal
Trinity Educational Institute
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12/6/25
External Examiner





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TO,

The HOD

Branch: Electronics and Telecommunications

Trinity College of Engineering and research Pune.

Maharashtra 411048

Subject: Offering Sponsorship to the students for academic project 2024-2025

Dear Sir/Madam,

I am writing behalf of Reyansh Technologies to express our interest in collaborating with the following students on the final year project development sponsorship for project titled "**Safe start breathalyser-based ignition control vehicle**", software ML domain. We are excited to sponsor this project. And invite the talented students to work upon the same for academic year 2024-25 with a duration of 8 months starting from 1st September 2024 to 30th April 2025.

Students:

1. Makarand Hawale
2. Abhishek Gulanagoudar
3. Prachi Jadhav

Our sponsorship involves technical support, mentorship and resources. It offers students:

- Actual work Experience
- Software coding in Python Language
- Interaction with skilled professionals

We look forward a great collaboration & appreciate your participation

Thank you,

Sincerely

Vishal Labde

Director, Reyansh Technologies

ABSTRACT

The Safe Start: Breathalyzer-Based Ignition Control Vehicle is an innovative safety system designed to prevent drunk driving by integrating real-time alcohol detection and facial recognition technologies. The system comprises a dual-layer verification mechanism: an MQ-3 alcohol sensor that evaluates the driver's breath for Blood Alcohol Concentration (BAC), and a machine learning-based face recognition system to authenticate the driver. The ignition system of the vehicle is electronically controlled by a Node(Microcontroller Unit (MCU)) (Wi-Fi Enabled Microcontroller (ESP8266)) microcontroller that permits engine startup only if the driver is verified as sober and authorized. Data is exchanged using the (Message Queuing Telemetry Transport (MQTT)) protocol, allowing for remote monitoring through an IoT dashboard. The system also features an (Organic Light Emitting Diode (OLED)) display and (Global System for Mobile Communication (GSM)) module for real-time alerts and status indication. With its robust and cost-effective implementation, this solution is particularly suitable for applications in public transportation, ride-sharing fleets, and personal vehicles, offering a proactive approach to enhancing road safety and reducing alcohol-related accidents.

Keywords: *Breathalyzer, Alcohol Detection, Ignition Control, Face Recognition, IoT Safety System, MQ-3 Sensor, ESP8266, MQTT Protocol, GSM Alerts, Drunk Driving Prevention, Embedded System, Vehicle Safety, Smart Vehicle Authentication.*

TRINITY COLLEGE OF ENGINEERING AND RESEARCH
Department of Electronics and Telecommunications



CERTIFICATE

This is to certify that the Project entitled
**"Automatic Defect Detection and Sorting System for
Pharmaceutical Tablets Using Image Processing"**

submitted by

Rohit Kale	B400650102
Sumit Patil	B400650112
Ritesh Pokale	B400650115

is a bonafide work carried out under the supervision of **"Dr. S. M. Handore"** and it is submitted towards the partial fulfilment of the requirements of **Savitribai Phule Pune University (SPPU)**, for the award of the degree of Bachelor of Engineering (Electronics and Telecommunications).

Date:

Place: Pune


Prof. A. R. Deshmukh
Project Co-ordinator


Dr. S. M. Handore
HOD


Dr. Abhinav Anand
Principal


Dr. S. M. Handore
Project Guide


External Examiner



ABSTRACT

This project presents a real-time system for the automatic detection and sorting of pharmaceutical tablets based on visual defects using image processing and deep learning. The system classifies tablets into three categories: broken, not broken, and no medicine — using a ResNet50 convolutional neural network trained on a custom image dataset. [1]

The classified result is communicated to an ATmega328P microcontroller, which controls a servo-based mechanical flap to sort the tablets accordingly. The proposed solution replaces manual inspection with a reliable, efficient, and scalable method for quality assurance in pharmaceutical production lines. The hardware integration enables accurate sorting with minimal latency.

Future enhancements include expanding the defect categories and implementing real-time embedded inference.

Keywords: Defect Detection, Pharmaceutical Tablets, Image Processing, Sorting Mechanism.

TRINITY COLLEGE OF ENGINEERING AND RESEARCH

Department of Electronics and Telecommunication



TRINITY

CERTIFICATE

This is certify that the Project entitled

Cloud Enhanced IoT Based Smart Speed Breaker Control System

submitted by

Vaibhav Jagtap B400650099

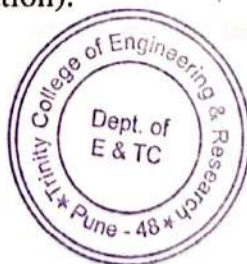
Divya Gandhi B400650093

Rajkumari Gupta B400650096

is a bonafide work carried out under the supervision of **Prof. Anil Sawant** and it is submitted towards the partial fulfilment of the requirements of **Savitribai Phule Pune University (SPPU)**, for the award of the degree of Bachelor of Engineering (Electronics and Telecommunication).

Date: 11/06/2025

Place: Pune



Prof. A. R. Deshmukh

Project Co-ordinator

Dr. S. M. Handore

Head of Department

Prof. Anil Sawant

Project Guide

External Examiner

Dr. Abhijeet Kulkarni
Principal
Trinity College of Engineering & Research
S No. 25 & 27, Narayan Peth, Pune - 411 004



Chaphekar Engineering Pvt. Ltd.

An IATP 16949:2016 Company

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www.chaphekarengg.com

CIN No: U29253MH1975PTC018216

Date: August 13, 2024

To
Prof. Sawant Anil
Faculty,
Dept. of Electronics & Telecommunication
Trinity College of Engineering & Research
Pune, Maharashtra

Subject: Confirmation of Sponsorship and Collaboration for Final Year Project

Respected Sir/Madam,

I am writing to formally confirm that Chaphekar Engineering Pvt. Ltd. is pleased to sponsor and collaborate on the final year project cloud Enhanced IoT Based smart speed Breaker Control System.

proposed by

1. Vaibhav Madhav Jagtap.
2. Divya Gandhi
3. Rajkumari Gupta.

We are committed to providing the necessary resources, including technical support, and access to relevant data and facilities, to ensure the successful completion of this project. I look forward to contributing to the students' success through this collaboration. Please feel free to reach out to me if there are any additional requirements or if you would like to discuss the project further.

Thank you for this opportunity to collaborate, and I look forward to working closely with you and the students.

HR-Tushar Walunj
Chaphekar Engineering Pvt. Ltd
Pune, Maharashtra

