COMED KARES
INNOVATION HUB

ROBOTICS INTERNSHIP OUTCOMES

Gopalan Innovation Hub

2023

Robotics Course

This course provides a comprehensive hands-on experience in building robotic applications, equipping students with the skills to integrate hardware and software components. Students will explore various physical and digital tools to construct projects involving computer vision and motor control. Development boards like Raspberry Pi and Arduino UNO are utilised to teach essential concepts, including OpenCV, GPIO interface, and Serial communication. By the end of the 12-week course, participants from diverse domains will possess the expertise needed to create innovative products as product developers.

Overall program Rating	4.8/5
Attendance	79.28%
Student Enrolled	19

Highlights of batch 1 @ Gopalan Mall

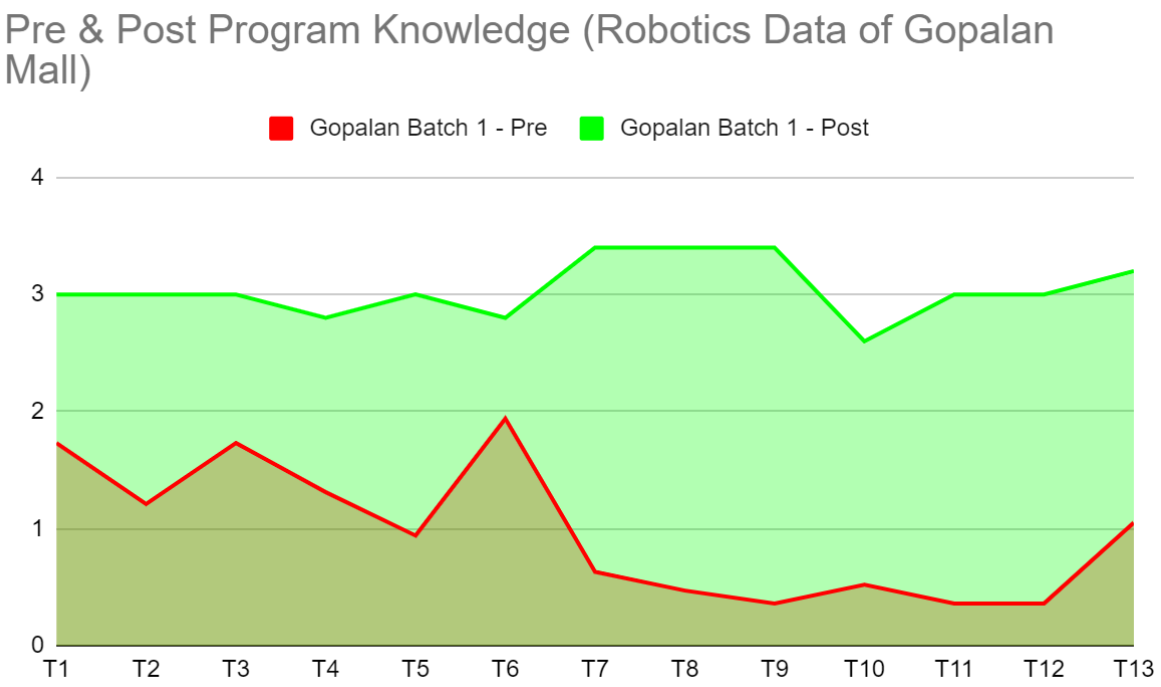
This program saw the participation of 19 students from RAJARAJESWARI COLLEGE OF ENGINEERING. The students partook in the program to come up with bots that are capable of following the line, detect colours and perform certain tasks .

19 Bots built for the final line following design challenges

67.18% increase in knowledge levels and performance of students

Post Program Findings of our Courses

Robotics Course Assessment Report of batch 1



The batch 4 of JP Innovation Centre in Bangalore, have resulted in a **significant increase in knowledge levels (2.07 points avg across all topics) self-reported by students.** Based on the course outcomes a total of 13 topic related questions were posed to the students before and after the program to see the change in their self efficacy levels. The highest score of 4 indicates complete practical expertise in the topic, and **a score of 3 means achievement of program relevant objectives**, which has been true for all the centres.

**Refer the table for the tags and their relevant topics*

Topics	Tag	Topics	Tag
Microcontroller	T1	Interfacing Sensors and Actuators with Raspberry Pi	T8
Arduino	T2	Raspberry Pi for Motion Control	T9
Sensor	T3	Computer Vision and OpenCV	T10

Motor Control	T4	Object Detection Using openCV and HSV	T11
Robot Motion Control	T5	Detecting Edges or Lanes Using OpenCV	T12
Python Programming	T6	Object detection and Move Around Arena	T13
Raspberry Pi	T7		

What our students had to say

1. *I would like to thank all the faculty and facilities given to us. It was one of my best and unforgettable memories in my life and I will make time in future and join new courses when offered from comedkares happily and be a part of it .. I thank stapley sir for teaching us the concepts and acknowledging us, Nivedha ma'am for helping during the times we needed the most and Nisar sir also for helping us and cooperative and prajna maam and prajna Shetty maam for getting back to us and taking feedback from us and making the internship sessions even more engaging, interactive and interesting. Thanks to all.*

2. *I would like to thank all the facilitators for the wonderful experience they have provided us and I look forward to attending more internship programs and participating in competitions./Helped me open up a lot about my ideas since day one and also helped in communication and sharing thoughts and working together for a successful idea or goal.*

3. *I'm very grateful to be an internship activity and had an opportunity to be in comedkares, I've learnt a lot of things and accept some challenges*

4. *It was so good well experience to learn and also well equipment system, hands on training*

5. *It was mainly for the interactive sessions and material provided by the facility which taught us about many different components and how to use them.*

6. *Topics taught, mentoring, helping nature, it was very friendly with the staff members, faculty was very nice and responding to problems and helping during the milestone and challenge . Everything was good in comedkares and it was the best experience in my life. Thanks for all*

Final Line Follower Design Challenge

Robotics Internship Design Challenge

T JOHN INSTITUTE OF TECHNOLOGY / SECOND SEM

PROBLEM STATEMENT

Build a robot capable of line following & detecting colours for performing certain tasks using Raspberry Pi with integration of basic motion and computer vision applications.

TEAM MEMBERS:

Suhas S Vasishta

VIHA TRUPTHI S PANDIT

HAFSA FATHIMA

DEEPTI.R

ANUSHA MAHESH

NISANKA MANSI CHANDRAN

HEMANTH K

Balasaravana S

Venugopal P

Lohith M R

MOHAMMED HAROON KHAN

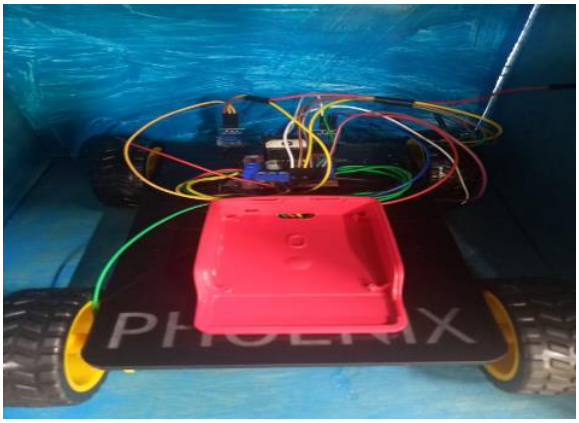
Naveen Kumar S N

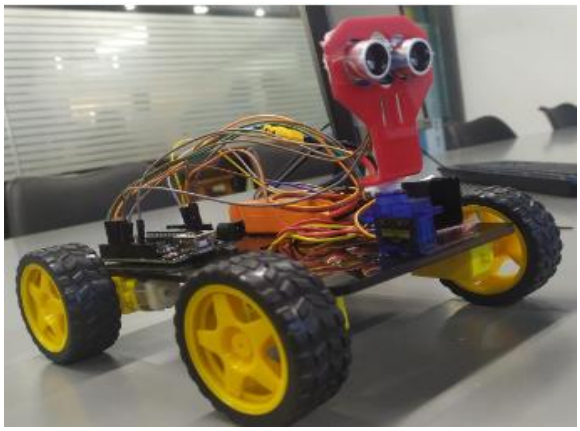
Nithashree L

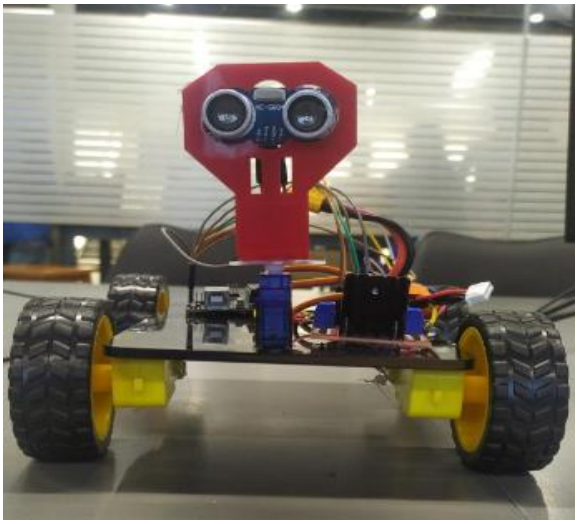
DEVARAJU

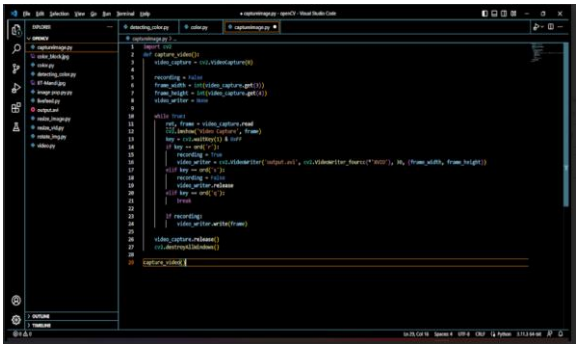
BHUMIKA.H.S

PROTOTYPE IMAGE



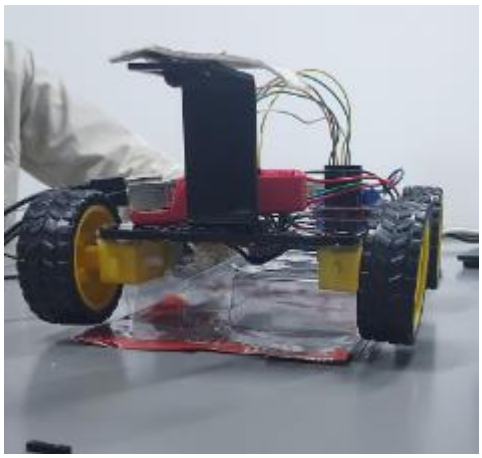


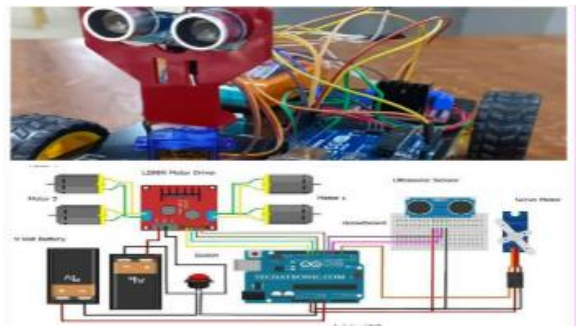


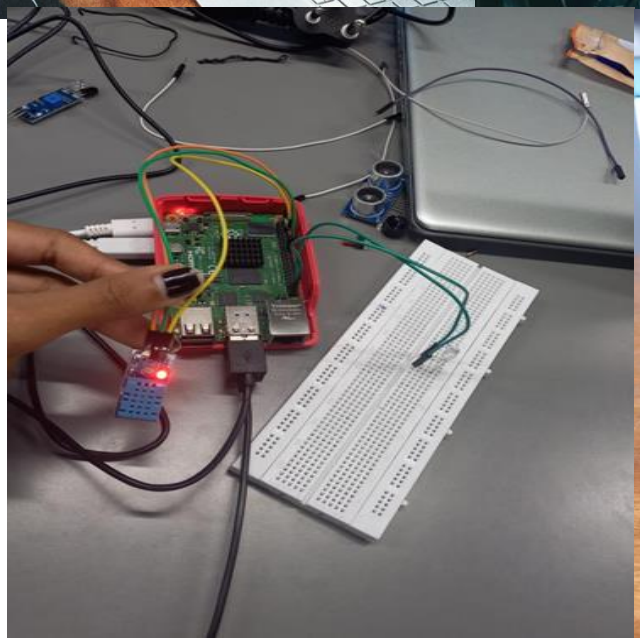


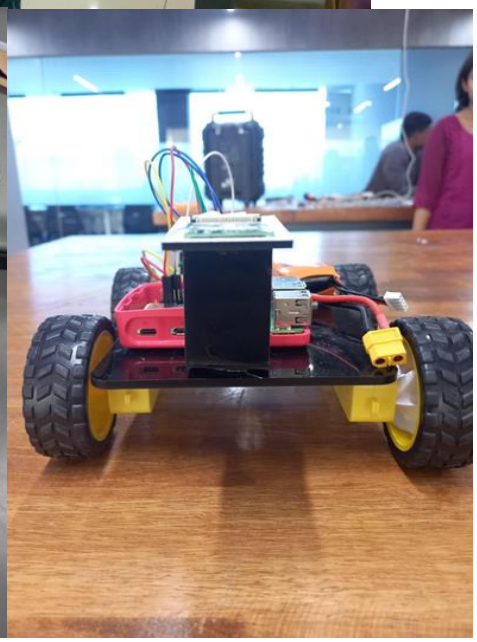
STUDENT NAME : NITHYA.B

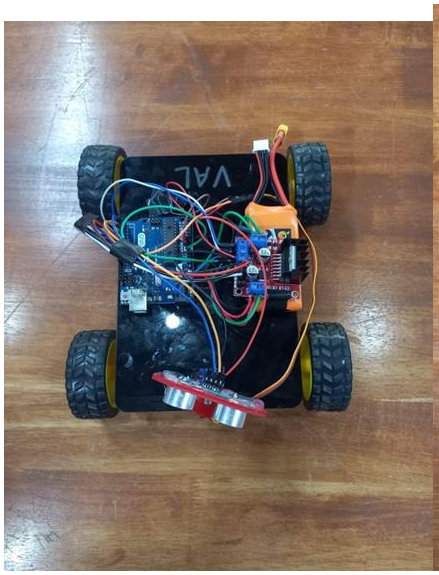
PROTOTYPE IMAGE

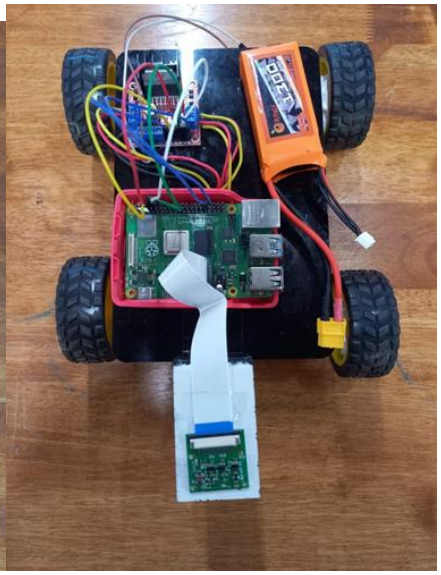


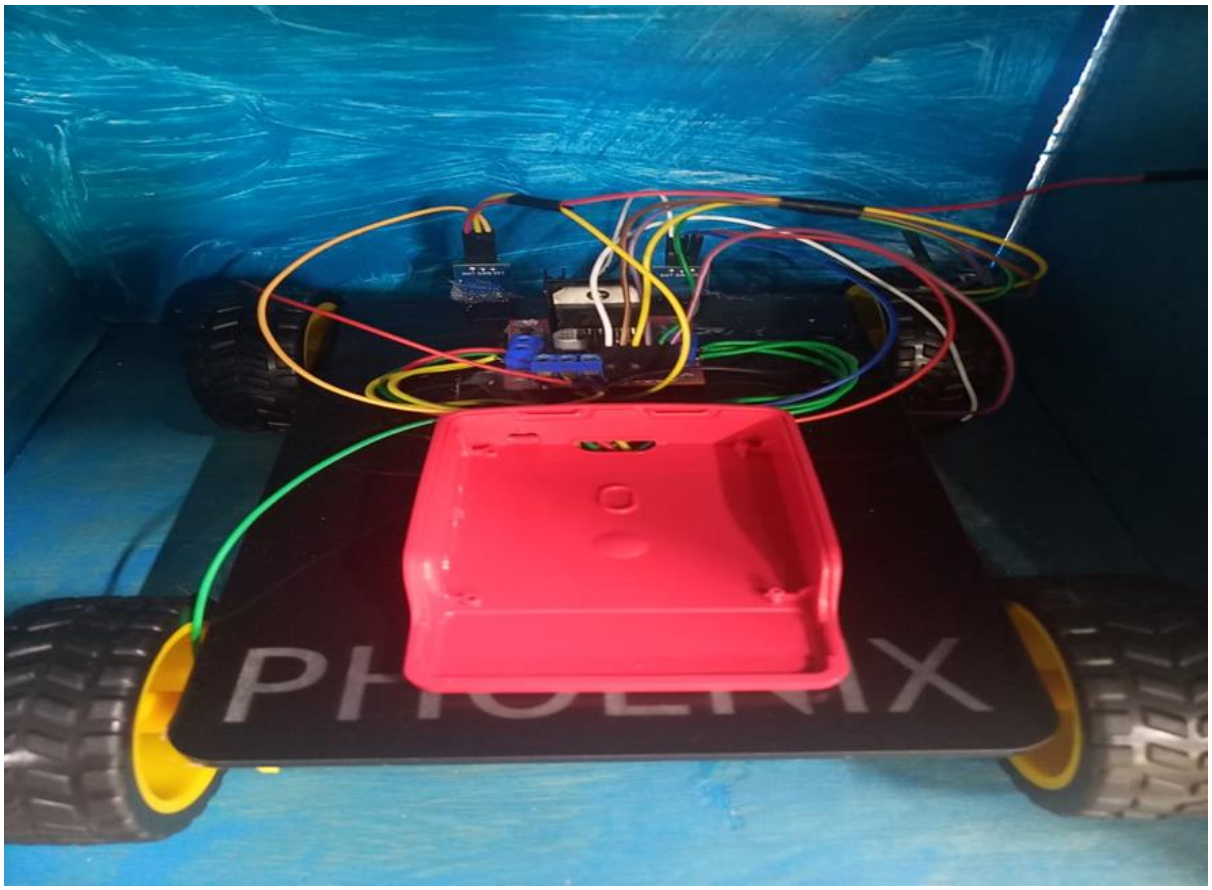











PHOENIX