COMED KARES
INNOVATION HUB

ROBOTICS INTERNSHIP OUTCOMES

JP NAGAR

MAY 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	4.6/5
Attendance	96.9%
Student Enrolled	10

Highlights of Batch 1 @ JP Innovation Hub

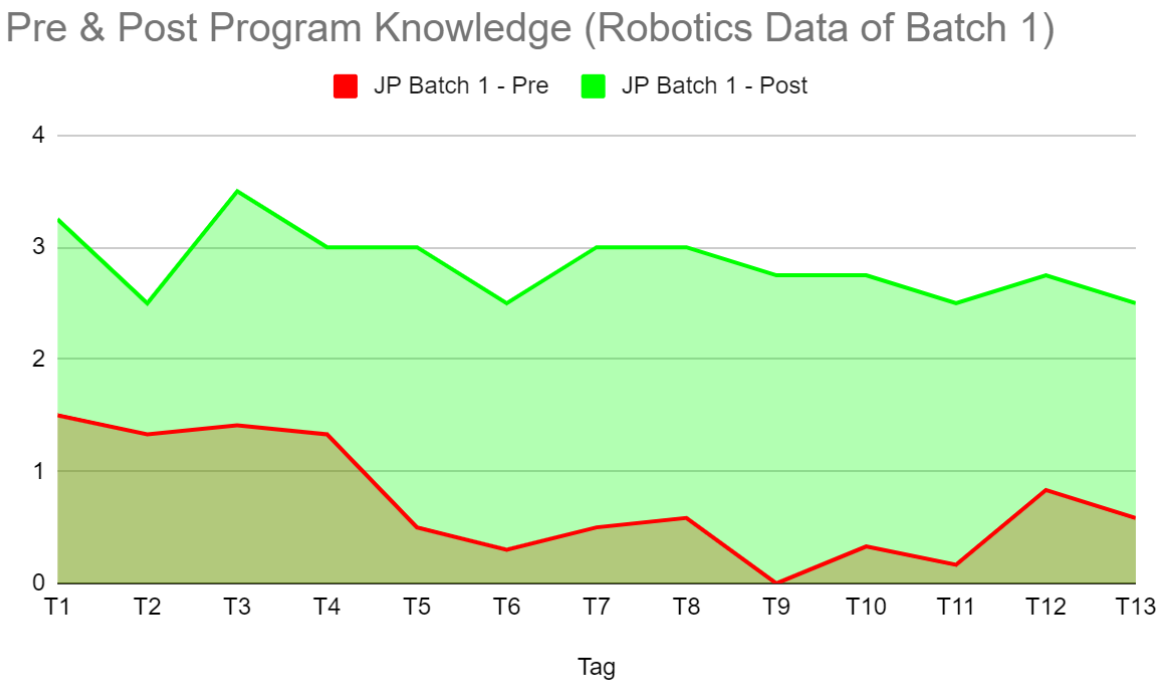
This program saw the participation of 10 students from T John institute. The students partook in the program for a duration of 3 months/12 weeks and came up with prototypes addressing various design challenges.

10 Bots built for the final line following design challenges

75.3% increase in knowledge levels and performance of students

Post Program Findings of our Courses

Robotics Course Assessment Report of Batch 1



The batch 1 of JP Innovation Centre in Bangalore, have resulted in a **significant increase in knowledge levels (2.12 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. *We enjoyed a lot during the sessions and with your help and support we were able to build the bot and we were always encouraged and motivated by your words and able to complete the course. Thank you Vinu ma'am and Aftab sir.*

2. *Made me confident in building a bot and I learned about new concepts.*

3. *Being a computer engineering student I didn't expect that I could build a robot. This program helps me to build a robot,to know about arduino, raspberry pi, opencv ext.*

4. *I learned about Arduino raspberry Pi openCV and I can build Bot on these concepts.*

5. *I can build bot now on Arduino, raspberry Pi,opencv*

Final Line Follower Design Challenge

Robotics Internship Design Challenge

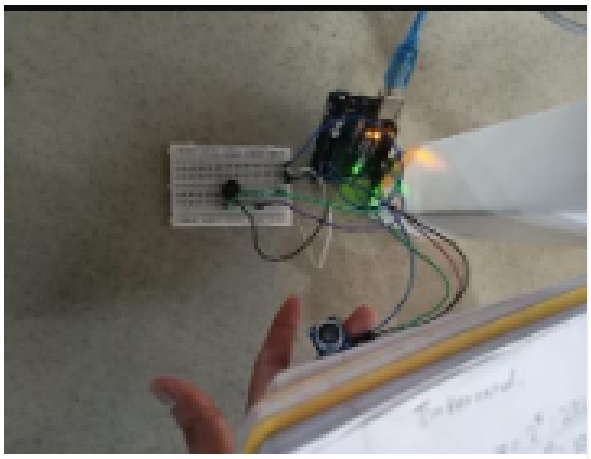
T JOHN INSTITUTE OF TECHNOLOGY / SECOND SEM

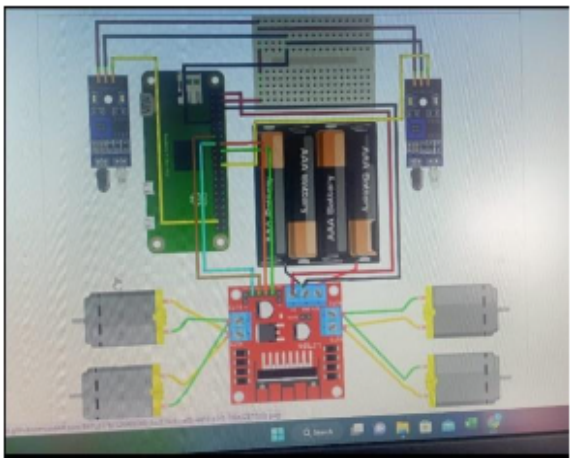
PROBLEM STATEMENT

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.

STUDENT NAME: Shaiyad Khan

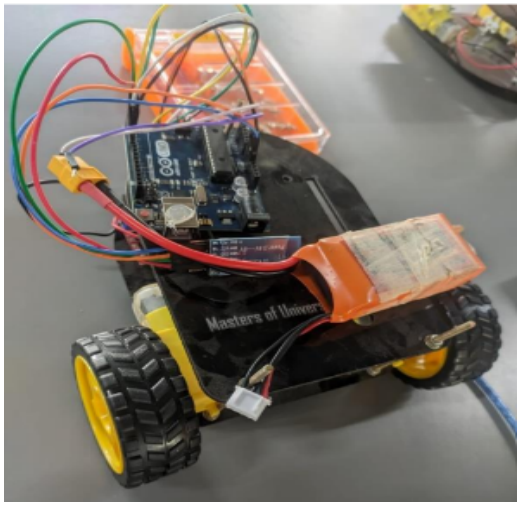
PROTOTYPE IMAGE

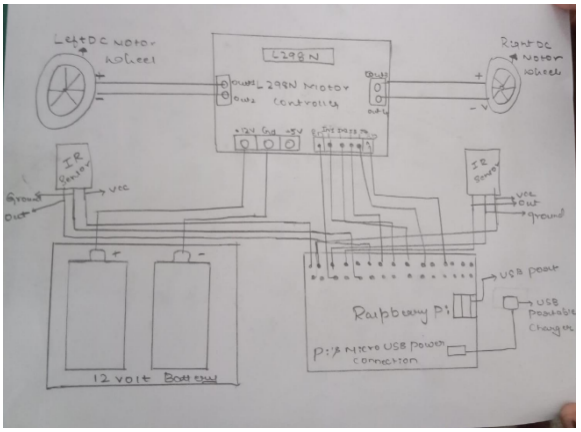




STUDENT NAME: P Gayathri

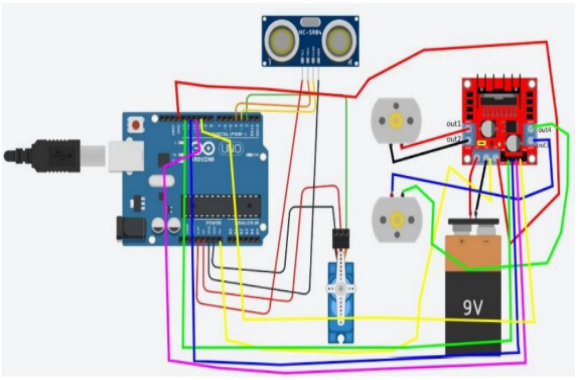
PROTOTYPE IMAGE

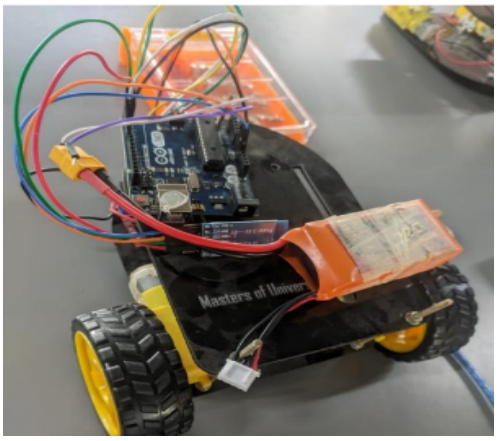




STUDENT NAME : Gunashekhar S

PROTOTYPE IMAGE





STUDENT NAME : HARINI R

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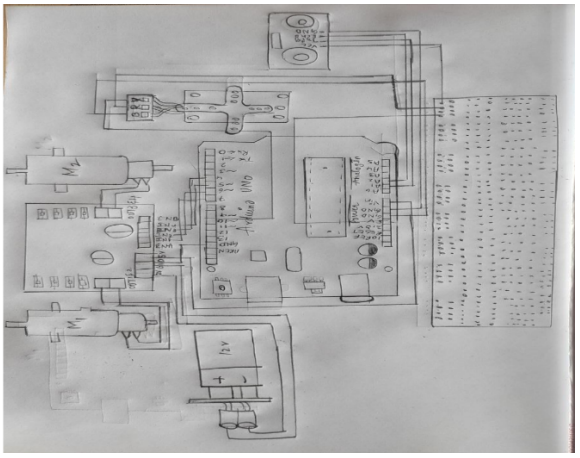

STUDENT NAME : MAMATHA J

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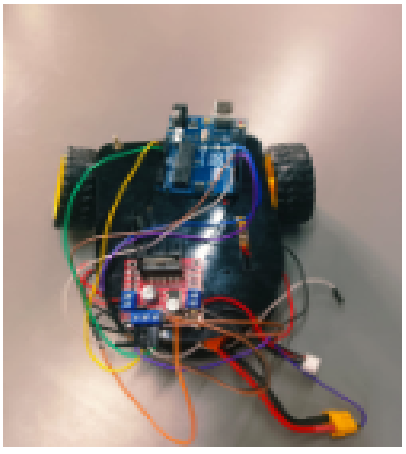

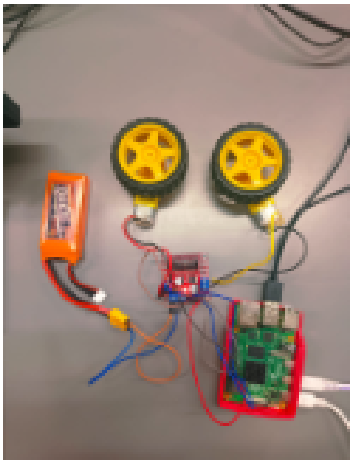

STUDENT NAME : SHANKARAREDDY L

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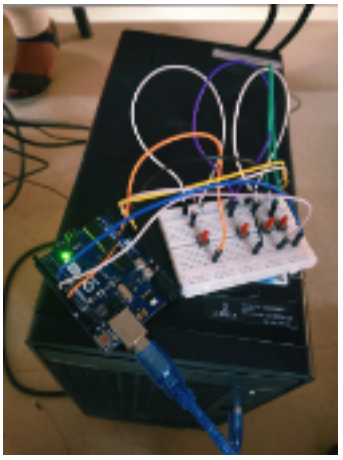

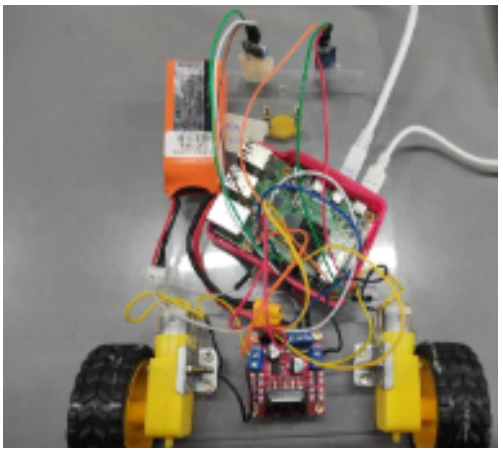

STUDENT NAME : JYOTHI D

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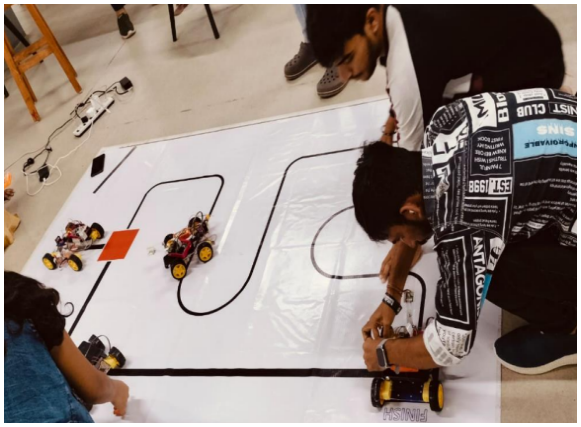
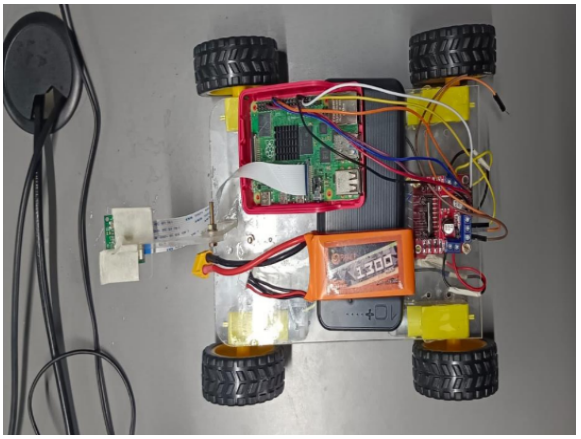
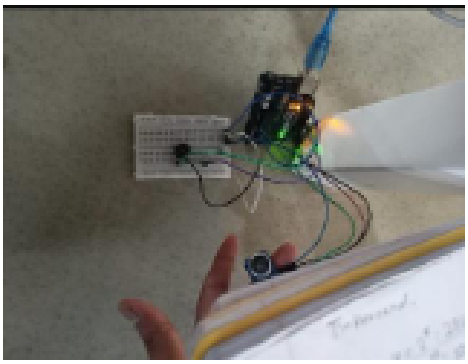
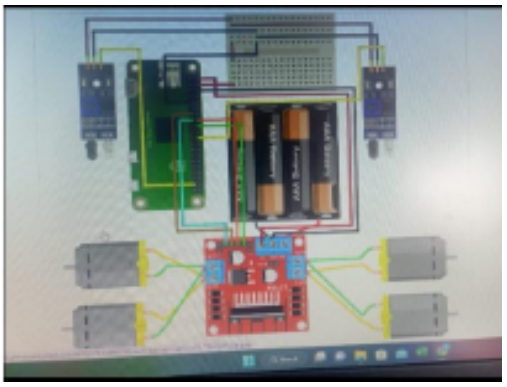




STUDENT NAME : Darshil Parmar

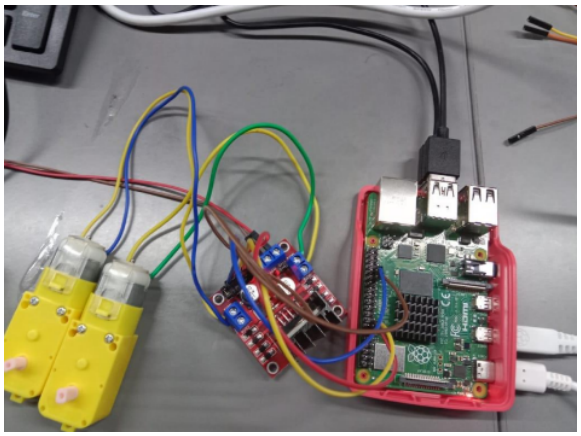
PROTOTYPE IMAGE

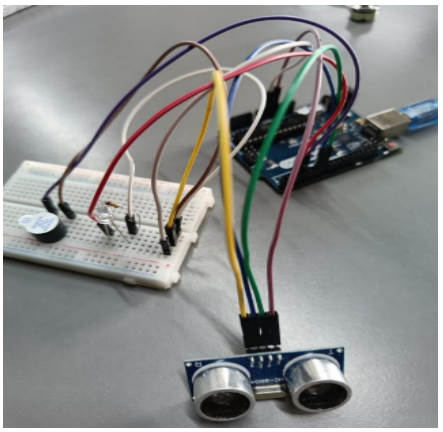




STUDENT NAME : Ramya S

PROTOTYPE IMAGE





STUDENT NAME : Darshil Parmar

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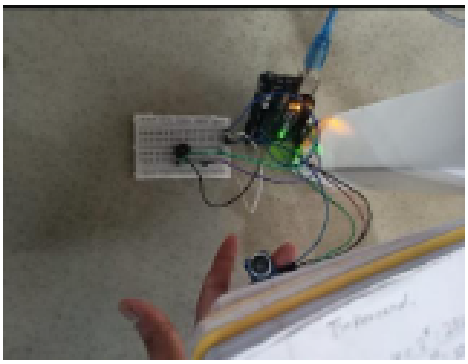

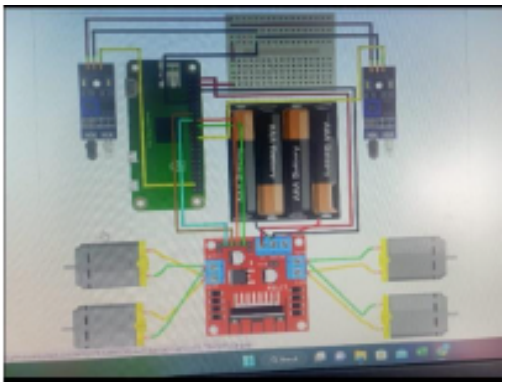

STUDENT NAME : Tanuja B

PROTOTYPE IMAGE