Karthik Manoranjan

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EXPERIENCE

Robotics Interest Group
Member *Oct 2022 - Present, NITC*

Led Battery Management System team
- Managed a team of 4 in the Battery Management System team involving maintenance of batteries, primarily LiPo batteries.

DD Robocon 2023
- Achieved **AIR 14** in the competition held in association with IIT Delhi at Tyagraj Stadium, New Delhi
- Collaborated to prototyping and fabrication of ring throwing bots.
- Executed locomotion of the bots using ROS and python.
- Developed image recognition algorithm capable of identifying poles using OpenCV and python.

e-Yantra Robotics Competition 23-24
- Qualified for stage 2 in competition held by IIT Bombay
- Developed control and image recognition algorithm for autonomous drone in a gazebo simulated environment using ROS, python and OpenCV and **secured 100%** in stage 1.
- Developed control and image recognition algorithm for autonomous drone capable of survey using ROS, ROS2, python and OpenCV.

Workshops
- Carried out Robotics Expo and Seminar for **50+ students** at UL Cyberpark Kozhikode for Moon day celebrations by UL Space Club.
- Carried out two-day Robotics workshop ORIGO for **200+ students** and developed a target following bot. Delivered training on python programming for the students.

Universal Adaptive Headlight (External Project)
- Collaborated on the fabrication of adaptive headlight and Parking Assistance System to be implemented in vehicles.
- Improved the product functionality by resolving noise in feedback signals in Arduino.

Mini Projects
- Used **API calls** to analyze a company's stock trends and send an SMS with the results and related news headlines. Github
- Developed a fully responsive static website compatible with both desktop and mobile screens using **HTML and CSS**. Hosted the project on GitHub. Link | Github

Tathva and Ragam
PRC and Runtime member *2021-2022, NITC*

Tathva, Ragam 2021
- Promoted events by engaging with 100+ students from other colleges to increase awareness and attendance.

Tathva 2022
- Promoted events by engaging with 200+ students from other colleges to boost awareness and attendance.
- Orchestrated Samasya Quiz for school students.
- Coordinated the management of game booths during the event.

SUMMARY

Passionate about programming and AI, with experience in control systems and algorithms. Proven leader and collaborator committed to continuous learning and innovation. Driven to solve industry challenges and seeking opportunities to grow within the field.

SKILLS

Back End	Python, C++
Front End	HTML, CSS
MS Office	Word, Excel, PPT
OS	Windows, Linux
DevOps	Docker, Github
Misc.	MATLAB, ROS, ROS2
Soft Skills	Teamwork, Leadership

EDUCATION

National Institute of Technology Calicut
- Current CGPA: 7.30

Kendriya Vidyalaya Payyanur
- Class XII: Passed with 93% in 2020
- Class X: Passed with 93.4% in 2018

CERTIFICATIONS

- DD Robocon 2023
- e-Yantra 23-24
- ORIGO Workshop 2022
- Learn Machine Learning in 21 Days
- Python for Data Science

LANGUAGES

- Malayalam (Native)
- English (Advanced)
- Hindi (Limited)
- French (Elementary)

INTERESTS

- Reading (Mainly Fiction)
- Playing Chess
- Travelling
- Sports