AKHILJITH GIGI

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OBJECTIVE

Robotics Engineer with 3 years of experience building, testing, and optimizing autonomous systems from prototype to deployment. Skilled in mechanical assembly, electrical debugging, and control systems integration using ROS 2, Python, and Embedded C. Proven ability to develop diagnostic procedures and predictive maintenance protocols to ensure continuous operation.

EXPERIENCE

TechnicalCareer Education Pvt Ltd **Apr 2024 - Present**
Robotics & IoT Program Mentor *Mangalore, India*

Sinrorobotics Pvt Ltd **Sep 2023 - Mar 2024**
Robotics Engineer & Facilitator *Cochin, India*

PROJECT

Autonomous Lane Following Robot with ROS2

- Built a lane following robot based on Raspberry Pi and OpenCV.
- Achieved real-time lane detection and accurate motor control for autonomous navigation on predefined tracks.
- Integrated with Aruco based junction detection and routing

Autonomous Road Sign Detecting Robot

- Designed and built a Raspberry Pi-based robot using YOLO for accurate real-time road sign detection.
- Enabled automated decision making based on detected signs for autonomous navigation.

Office Mood Tracking System

- Built an interactive mood tracking system using Raspberry Pi and Python with a graphical interface.
- Collected user mood data, stored in SQLite database, and generated mood reports for analysis.

IoT Gas Leakage Detection System

- Created an IoT-based gas leakage detector using ESP32 and gas sensors.
- Enabled real-time detection of gas leaks and automated SMS alert system for enhanced safety monitoring.

Line Following Robot

- Built an ESP32-PID based line following robot capable of detecting and following predefined tracks using IR sensors.
- Implemented real-time sensor reading and motor control algorithms for smooth navigation.

EDUCATION

Viswajyothi College of Engineering and Technology **2022**
B.Tech, Electronics and Communication Engineering *Muvattupuzha, Kerala,India*

SKILLS

- **Programming Languages**: Python, Embedded C
- **Hardware & EmbeddedPlatforms** : Jetson, Raspberry Pi, ESP32, Arduino
- **Computer Vision & MachineLearning**: OpenCV, YOLO
- **Robotics & Control Systems**: ROS2, Gazebo, Control Systems, Sensor Integration, Perception
- **Fabrication & Assembly**: Soldering, 3D Printing, Laser Cutting

LANGUAGE

- English
- Malayalam
- Tamil
- Hindi