

KARUPPASAMY T

Electronics Engineer

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CAREER SUMMARY

Electronics and Communication Engineering student with proven expertise in IT networking, hardware management, microcontroller programming (AVR C), and Industry 4.0 applications. Experienced in leading IoT-based projects using various microcontroller platforms and actively pursuing entrepreneurship programs to strengthen business acumen and leadership capabilities.

EDUCATION

KALASALINGAM UNIVERSITY

B Tech in Electronics and Communication Engineering

2022 – 2026

SKILLS

- IoT System Development
- Mobile Application Development
- Web Development
- Full-Stack development
- Embedded Systems
- MATLAB
- AVR C Programming
- Communication
- Leadership
- Entrepreneurship
- Coordination
- Mentoring

PROJECTS

Glucose Level Monitoring System

FEB 2025 – APR 2025

This project "Glucose level monitoring system" has been developed using STM32, ESP32 (Wi-Fi Module) and potentiometer (Manually Generate Values). We have designed a Flutter based app to obtain the Real-Time data. The App loaded with key features including Chatbot AI powered by Gemini AI which gives suggestions based on history of the user health data.

IoT based Water Clarity Monitoring System (Vermifiltration)

MAR 2025 – APR 2025

This Project has been Developed using ESP32 (Wi-Fi Module), Turbidity Sensor, DHT11 (Temperature Sensor) to monitor the ideal condition for Earthworms), Raindrop Sensor and Soil Moisture Sensor. This Project is an IoT based system to monitor the clarity of water using specified parameters in Vermifiltration process. This Data can be sent to the database (Firebase) and then to the App using Flutter language for Remote monitoring purposes.

ACHIEVEMENTS

Runner-Up in Sustainosphere

Awarded second prize for presenting the Smart Ambulance System at Sustainosphere 2024, an innovation-driven event focusing on sustainable and smart solutions for societal challenges. The project aimed to optimize emergency medical response by integrating IoT-based real-time traffic management, automated route clearance, and live patient monitoring, ensuring faster and safer transit of ambulances in critical situations. The system emphasized sustainable urban mobility and efficient healthcare logistics through intelligent technologies.

WORKSHOPS

Mathworks Workshop

Successfully participated in a hands-on workshop conducted by IIT Madras in Chennai, focusing on practical applications of MATLAB and Simulink for engineering problem-solving. The workshop covered key topics including data analysis, simulation modeling, and control system design, providing valuable insights into real-time industrial applications and enhancing technical skills in computational software environments.

BUSINESS AND INNOVATION INITIATIVES

Gas Leakage Detection System

As part of my Entrepreneurship Development course, I conceptualized and developed a Gas Leakage Detection System aimed at enhancing household and industrial safety. The system is designed to detect hazardous gas leaks in real time using IoT-enabled sensors and immediately alert users via SMS and mobile notifications.

LANGUAGES

English - Fluent

Tamil - Native

Malayalam - Limited

INTERESTS

- **IoT-based smart systems development**
 - **Entrepreneurship & Sustainable Innovation**
 - **IT Infrastructure & Project Management**
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