# Vignesh M

**IoT & Embedded Systems Engineer (Fresher)**

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## Summary

Hands-on Electronics & Communication graduate passionate about embedded systems, IoT, and robotics. Proven ability to build real-time smart systems with 3+ successful project implementations. Recognized as a finalist in two national-level hackathons. Looking to contribute to innovation-driven embedded team.

## Education

Sri Venkateswaraa College Of Technology,
Sriperumbudur - 602105.
Bachelor's Degree in Electronics and Communication 2021 – 2025.
CGPA - 7.77

Rajah's Higher Secondary School,
Ettayapuram - 628902.
HSC percentage - 87%
SSLC percentage - 81%

## Technical Skills

- Languages: C, Python, Embedded C.
- Hardware: ESP32, Arduino, Raspberry Pi.
- Software/Tools: Arduino IDE, MPLAB X, Firebase, OpenCV, Linux.

## Awarded

- Smart India Hackathon Finalist (Hardware, 2022)
- Kings College Hackathon Finalist (Software, 2023)

## Certifications

- Embedded Systems Developer Internship – Neubaitics, Chennai (Oct 2024 – July 2025)
- Embedded Systems Internship – Emertxe, Virtual (Aug 2023 – Oct 2023)
- Azure IOT hub - Coursera.
- Super way to Learn Arduino - Udemy.
- CCNA Certification - Suren Networks.

## Internship

**Embedded System Developer Intern (Full time)**
Neubaitics (Oct 2024- July 2025 ) (Chennai).

- Contributed to development of 5+ intelligent robotic systems integrating AI and IoT, improving automation precision by 20%.
- Assembled and programmed 3 robotic platforms, reducing prototyping time by 25%.

**Embedded Systems Intern (Virtual)**
Emertxe (Aug 2023 – Oct 2023)

- Worked on firmware simulation using PICSimLab and MPLABX on PIC16F877A.
- Collaborated on real-time embedded systems projects with multidisciplinary teams.

## Projects

**Gesture-Controlled Home Automation System**

Designed a gesture-based smart home system using Raspberry Pi, ESP32, and OpenCV to control appliances. Enabled 90%+ accurate real-time wireless control of multiple devices.
Tools: Raspberry Pi 4, ESP32-CAM, Python, OpenCV, Flask

**RFID-Based Attendance System**

Built an ESP32 + RFID-based cloud attendance system using Firebase and Arduino IDE. Logged data with <2s delay and achieved 100% success in a 30-user pilot test.
Tools: ESP32, MFRC522, Arduino IDE, Google sheet.

**Human-Following Robot**

Developed an Arduino-based robot using ultrasonic and IR sensors to follow human movement. Achieved 85%+ accuracy in maintaining 1-meter distance during testing