

KARTHIK PAGADALA

Hyderabad, India

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PROFESSIONAL SUMMARY

A final-year B.Tech Computer Science (IoT) student with strong hands-on experience in developing IoT-based embedded systems and full-stack web applications. Passionate about building real-time automation solutions and actively contributing to impactful tech-driven projects. Quick learner with demonstrated leadership in project execution and event organization.

EDUCATION

B.Tech in Computer Science and Engineering (IoT)

Malla Reddy University, Hyderabad

2021 – 2025 | CGPA: 8.85 / 10

TECHNICAL SKILLS

Programming Languages: Java, Python, Arduino C

Web Development: React.js, Node.js, MongoDB

IoT Platforms & Tools: Arduino, Raspberry Pi, Easy EDA, Blynk

Databases: SQL, MongoDB

Other Tools: Git, Firebase, Visual Studio Code

EXPERIENCE

Firmware Developer Intern

Arc Labs (Virtual) | Aug 2023 – Dec 2023

- Developed a custom WiFi Manager firmware for IoT devices to enable seamless wireless network onboarding.
- Created and configured Access Points on ESP-based microcontrollers to simplify IoT connectivity.
- Collaborated in a remote team and participated in code reviews and development discussions.

PROJECTS

Third Eye for Blind People (IoT Project)

- Built a wearable device using Arduino and ultrasonic sensors to detect obstacles and provide real-time alerts via a buzzer.
- Designed to enhance mobility for visually impaired individuals as a hands-free alternative to traditional walking sticks.

ESP32-Driven Indoor Plant Monitoring System *(IoT Project)*

- Designed a smart plant care system with temperature, humidity, and soil moisture monitoring. - Integrated water delivery automation and remote control via the Blynk IoT platform.

Swarm-Enhanced Line Following Robots *(IoT + Robotics Project)*

- Built a fleet of line-following robots using ESP32 microcontrollers with UDP-based communication for real-time swarm behavior. - Enabled synchronized movement, obstacle avoidance, and cooperative pathfinding.

E-WASH: Smart Vehicle Maintenance Platform *(Full-Stack Web Project)*

- Developed a web platform using React.js, Node.js, and MongoDB for eco-friendly car and bike service bookings. - Features include secure login, address entry, location-based service center filtering, and appointment scheduling.

CERTIFICATIONS

- Programming in Java – NPTEL
 - Internet of Things Firmware Developer – Arc Labs
 - Introduction and IoT Programming with Boards – Coursera
 - Architecting Smart IoT Devices – Coursera
 - IoT Cloud Applications – Coursera
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LEADERSHIP & ACHIEVEMENTS

- **Team Lead** – Successfully led a 4-member team in an IoT application development project.
 - **Best Performer** – Awarded Excellence Certificate in IoT Workshop by VisionXLabs.
 - **Workshop Coordinator** – Coordinated VisionXLabs IoT workshop at university level.
 - **Event Organizer** – Managed logistics and promotions for university-level Code Hackathon.
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References available upon request.