

Lingam Roopesh

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PROFESSIONAL SUMMARY

IoT and Embedded Systems graduate with strong hands-on experience in ESP32-based automation, Embedded C and Python development, and real-world hardware-software integration, supported by an industry internship in drone operations involving live mission execution, training, and field deployments. Experienced in designing fault-tolerant and energy-efficient embedded systems, including dual-controller architectures for uninterrupted operation, along with secure data processing and automation tools. Holds Microsoft Azure and AWS Cloud certifications and actively maintains a live technical portfolio (roopesh431.github.io) showcasing embedded, IoT, and software projects.

EDUCATION

KL University, GPA: 8.47/10.0

Bachelor of Technology in Internet of Things

Vijayawada, Andhra Pradesh

Sep. 2021 – May 2025

Sri Gayatri Junior College

MPC

Hyderabad, Telangana

Jun. 2019 – 2021

EXPERIENCE

Intern

Fopple Drone Technologies Pvt.Ltd

July 2024 – Oct 2024

Kankipadu, Vijayawada, AP

- Participated in real-time drone operations including mission planning, flight execution, and data collection workflows.
- Conducted training sessions for 5 trainees on drone flying techniques, safety protocols, and operational procedures.
- Supported certified drone pilots during field deployments, ensuring smooth execution and accurate data capture.
- Contributed to improving training and deployment processes, enhancing operational efficiency and customer satisfaction.

PROJECTS

Text-To-Speech-Convertor | *Python, Speech Synthesis, Automation*

Nov 2025 – Jan 2026

- Developed a Python-based Text-To-Speech system that converts written text into natural-sounding speech.
- Implemented adjustable speech rate and multiple voice options for accessibility and usability.
- Designed the system for real-time applications in learning, accessibility, and productivity tools.
- Structured, documented, and version-controlled the project using GitHub.

Secret Message Encoder and Decoder | *Python, ASCII, Bitwise Logic, GitHub*

Aug 2025 – Nov 2025

- Built a secure text-to-binary and binary-to-text encoding system using ASCII mapping and bitwise operations.
- Implemented validation and debugging logs to detect and prevent corrupted data outputs.
- Delivered a reliable encryption-style tool for secure message transformation and recovery.

Customizable Home Automation with Fault Identification | *ESP32, Embedded C* Dec 2024 – May 2025

- Designed a fault-tolerant home automation system using dual ESP32 controllers with Cold Standby Sparing Redundancy (CSSR).
- Implemented automatic controller failover to ensure uninterrupted operation during hardware failure.
- Built energy-efficient appliance control logic to reduce power consumption.
- Led a 3-member team, coordinating system design, testing, and final deployment.

Functional Electric Vehicle (EV) Cycle | *BLDC Motor, Power Electronics, Embedded Systems* Nov 2023 – Mar 2024

- Developed a working EV cycle using a 48V BLDC motor, electronic speed controller, and custom power distribution.
- Designed control wiring and safety systems for stable and efficient motor operation.
- Successfully demonstrated the prototype at a university technical expo.

Personal Portfolio Website | *HTML, CSS, JavaScript, GitHub*

Oct 2023 – Present

- Designed and deployed a responsive personal portfolio website to showcase embedded systems, IoT projects, and software applications.
- Built structured project pages with GitHub integration, live demos, and recruiter-friendly navigation.
- Implemented contact and profile sections to enable direct communication with hiring managers.
- Optimized layout and performance for desktop and mobile devices.
- Deployed and maintained the site using GitHub Pages with continuous updates.

TECHNICAL SKILLS

Programming & Scripting: Python, C, Embedded C, HTML, CSS

Embedded & Hardware: ESP32, Arduino, STM Microcontrollers, Sensors, Actuators

IoT & Communication: IoT Systems, Serial Communication, Basic Networking

Developer Tools: Git, GitHub, VS Code, Arduino IDE, Google Colab

Intrapersonal Skills: Problem Solving, Self-Learning, Analytical Thinking, Time Management

Interpersonal Skills: Team Collaboration, Technical Communication, Leadership, Coordination

CERTIFICATIONS

- Microsoft Certified: Azure Fundamentals
- Microsoft Certified: Azure AI Fundamentals
- AWS Certified Cloud Practitioner
- NPTEL – Introduction to Industry 4.0 and Industrial Internet of Things
- Artificial Intelligence & Machine Learning using Python (Industrial Automation – Level 2), KL University

ACHIEVEMENTS

- Organized and supported a Drone Technology Workshop conducted by Fopple Drone Technologies at Godavari Institute of Engineering and Technology.
- Assisted in industrial visits and live demonstrations for KITS College, explaining real-world drone applications.

LANGUAGES KNOWN

English | Telugu | Hindi