



# REKHA RUTHIKA

## STUDENT

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Fervent Electronics and Communication Engineering (ECE) student in the pre-final year at KL University, Hyderabad, specializing in **Embedded Systems**. Possesses a strong interest in electronics, communication systems, programming, and **artificial intelligence**, with a focus on integrating AI into embedded solutions to enhance functionality and efficiency. Dedicated to continuous learning, innovation, and contributing to impactful projects that bridge academic knowledge with real-world applications.

## EDUCATIONAL HISTORY

- B.Tech in **Electronics and Communication Engineering** | KL University Hyderabad — Expected Passout: 2027 | **CGPA: 9.83**
- Intermediate (MPC) | Gayathri Junior College — Passout: May 2023 | **CGPA: 9.8**
- High School | Sri Narayana High School, Hyderabad — Passout: May 2021 | **CGPA: 10**

## SKILLS

- **Programming Languages:** C, Java, Python
- **Embedded Systems & Firmware:** STM32 (CubeIDE), MSP430, ESP32, Arduino; C/Embedded C, communication protocols (I2C, SPI, UART), interrupts, timers, PWM.
- **Core Concepts:** Data Structures and Algorithms (DSA), Operating Systems
- **AI-Assisted Productivity:** Using Copilot & ChatGPT for code generation, debugging, model-based testing
- **Artificial Intelligence:** Machine Learning with Python, NumPy

## PROJECTS

- **ESP32-Based Robotic Arm and Car for Remote Assistance:**

Developed a web-controlled robotic arm and vehicle system for remote operations in agriculture, delivery, and 3D printing. Currently extending the project to an AI-enabled rover for automated crop detection and harvesting.

- **Human Activity Recognition using Deep Learning Architectures :**

Designing and comparing deep learning models for video-based activity recognition, analyzing accuracy and performance metrics to identify the most efficient architecture for real-time prediction.

- **Smart Traffic Management using Edge AI (Ongoing) :**

Developing an intelligent traffic monitoring system using Edge AI for real-time vehicle detection and adaptive signal control. Aims to deploy optimized CNN models on edge devices to minimize latency and improve traffic flow efficiency.

## ACHIEVEMENTS

- Secured project funding from **TiHAN, IIT Hyderabad**, for project on Edge AI in Traffic Management.
- Certified **AWS Cloud Practitioner (CLF-C02)** – Amazon Web Services
- Certified in **Automation Anywhere RPA** – Automation Anywhere University
- Winner of **INNOV-A-TECH Hackathon** – Secured 1st place in the **Sensors track**.
- **Peer mentor** for 2<sup>nd</sup> year students