

KISHORE KUMAR A

+91 9600025176 | kishorekumar020413@gmail.com | LinkedIn | GitHub | Portfolio

PROFESSIONAL SUMMARY

Final-year EIE student at Anna University with hands-on experience in **Embedded Systems**, **Industrial Automation**, and **IoT-based sensor interfacing** through industrial training and multidisciplinary academic projects. Foundational knowledge in industrial process variables including **temperature**, **flow**, **pressure**, and familiar with **PID control** and process automation. Experienced with **STM32**, **ESP32**, **Siemens S7-1200 PLC**, **Factory I/O**, and industrial communication protocols.

EDUCATION

Madras Institute Of Technology, Chrompet,

Anna University – Chennai, Tamil Nadu

Bachelor of Engineering in Electronics and Instrumentation Engineering

2023- Present

CGPA: 7.36 / 10 (Upto 6th semester)

Relevant Coursework & Knowledge: Industrial Instrumentation, Sensors And Transducers, Industrial Automation, Embedded System, Process Control, Control valves, Cyber security for Industrial automation.

TECHNICAL SKILLS

- Programming:** C, Python, PLC Programming (Basics)
- Hardware Controllers:** Siemens S7-1200 PLC, 8051, STM32, ESP32, Yokogawa UT75A PID controller
- Communication Protocols:** HART, Modbus, PROFIBUS, FOUNDATIONAL Fieldbus, SPI, I²C, CAN, UART
- Software Utilities Explored:** MATLAB, TIA Portal, Factory I/O, LabVIEW, LTspice, Proteus, Fusion 360

INTERNSHIP EXPERIENCE

L&T Technology Services, Chennai | Embedded Hardware Design Intern | May 2026 – Jun 2026 | [Link](#)

- Completed 5 weeks of industrial training in **Embedded Hardware Design**, gaining exposure to the complete hardware development lifecycle, including **schematic design**, **PCB assembly (THT & SMT)**, **hardware validation**, and **testing methodologies**.
- Applied engineering concepts through **Design Analysis Report (DAR)**, **component selection**, **PCB defect analysis**, **I²C-based sensor interfacing**, **DC-DC converter design**, and **generation of BOM and Netlists**, while understanding industry-standard embedded hardware development practices.

PROJECTS

Digital Twin for Level Process | DEC 2025 – APR 2026 | [Link](#)

- Developed a **PLC-based digital twin** of an industrial level control process using **Siemens S7-1200**, **TIA Portal**, and **Factory I/O**, implementing **PID control**, **analog signal scaling**, and real-time synchronization between the PLC and virtual process.
- Designed an **HMI** for real-time process monitoring and control, integrating **response trend plotting** to visualize level variations and validate closed-loop process performance in an Industry 4.0-based automation environment.

IoT-Based Soil Moisture Monitoring & Pump Control | OCT 2025 – NOV 2025 | [Link](#)

- Designed an **ESP32-based smart irrigation system** by integrating a **soil moisture sensor**, **relay-controlled water pump**, and **Blynk IoT** to provide real-time soil moisture visualization through a mobile dashboard.
- Implemented **threshold-based automatic irrigation control** that activates the pump below the predefined soil moisture level and stops it upon reaching the target moisture, enabling remote monitoring and efficient water management.

ONGOING PROJECT

Smart Crop Prediction and Monitoring System using STM32 & ESP32 | Present |

CMRG Government Funded project:

- Developing a smart agriculture platform using **STM32**, **ESP32**, and an **8-in-1 soil sensor** to acquire real-time soil and environmental parameters, with long-range wireless data transmission and cloud-based remote monitoring.
- Integrating a **Machine Learning model** to predict suitable crops and generate **fertilizer recommendations** based on soil characteristics, while enhancing the existing prototype into a scalable precision agriculture solution through intelligent decision support.

MINI PROJECTS

Automated Assembly and Quality Check Station | MAR 2026 | [Link](#)

- Simulated an industrial assembly and inspection process using **Factory I/O and Control I/O**, implementing automated assembly, sensor-based quality verification, reject handling, safety interlocks, and production counters for efficient process automation.

Multi-Range DC Voltage Measurement Circuit Using LM741 | APR 2025 | [Link](#)

- Designed and implemented an **LM741-based DC voltage measurement circuit** with negative feedback and selectable gain for **1 V, 5 V, 10 V, and 13 V** measurement ranges, and validated its operation through **Proteus simulation and hardware testing**.

Maze Solver Robot using Digital Logic | APR 2025 | [Link](#)

- Designed and implemented a **maze-solving robot using IR sensors, digital logic gates, and motor driver circuitry** to detect obstacles and autonomously navigate through a predefined path without microcontroller-based control.

CERTIFICATIONS

- A Brief Introduction to Micro-Sensors | NPTEL | IISER Bhopal | Elite Silver Certificate (85%) and ranked among the Top 5% of course participants | [Link](#)**
- 3 Days Hands-On Skill Development Programme On Industrial Automation Using Siemens PLC And HMI | [Link](#)**
- 3 Days Hands-On Skill Development Programme On Application Of AI In Smart BMS For EV | [Link](#)**

ORGANISATION

- ISA- INTERNATIONAL SOCIETY OF AUTOMATION** 2025- Present
Student Member.
- YRC- YOUTH RED CROSS, MIT** 2023- Present
Volunteer
- IEA- INSTRUMENTATION ENGINEERS ASSOCIATION, MIT** 2023-Present
Student Member, Volunteer