Tanmay Dhandge

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Career Objective

Aspiring Engineering student specializing in **Embedded Systems and IoT**. Skilled in **microcontrollers, embedded C/C++, and hardware-software integration**. Seeking the position of **Embedded Systems Engineer** to design and implement innovative solutions that bridge electronics and intelligent automation.

Education

Shri Guru Gobind Singhji Institute of Engineering and Technology — Maharashtra, India
B.Tech. in Instrumentation Engineering; ***CGPA: 8.22/10*** — *2022 – Present*

Technical Skills

Automation & Control: PLC Programming (Ladder Logic), Process Control, SCADA Systems
IoT Integration: ESP32/ESP8266, Arduino, Wireless Sensor Networks, IoT Dashboards
Industrial Protocols: Modbus, Profibus, BACnet, LonWorks
Programming Languages: C, Python (basic), MATLAB
Software Tools: AutoCAD Fusion 360, SolidWorks, MATLAB, VS Code

Internship Experience

Nice Consultancy [Certificate] — Online
Instrumentation Engineering Intern — *May 2025 – Jul 2025*

- Prepared and reviewed **P&IDs, Instrument Lists, IO Lists, Hook-up diagrams, and Datasheets**.
- Worked on **cable routing, JB layouts, and documentation** for automation projects in process industries.
- Enhanced knowledge of **industrial instrumentation, automation planning, and process control design**.

Academic Projects

Smart Building Automation using PLC and IoT

- Developed a **smart control system** integrating temperature, humidity, air quality, and lighting sensors.
- Implemented **PLC-ESP32 communication** for automated energy management and ventilation.
- Built a **web-based IoT dashboard** for real-time monitoring and control.

Automatic Liquid Mixing Process using PLC

- Designed an industrial-scale **automated mixing system** using pumps, valves, and flow sensors.
- Implemented ladder logic ensuring **precision, safety, and reliability**.

Health Monitoring System (IoT-based)

- Developed an IoT-based wearable system for **real-time health data acquisition**.
- Integrated **cloud dashboard and alert system** for continuous monitoring.

Smart Farmland Monitoring System

- Built an IoT-enabled solution for **automated irrigation and soil monitoring**.
- Integrated **solar power backup** ensuring 24/7 operation.

Competitions & Events

IRC 2025 – International Rover Challenge, BITS Pilani [Certificate]

- Led team ranked among **top 32 global teams**; developed rover with **6-DOF manipulator and IoT-enabled systems**.
- Directed **automation and biosensing integration** for planetary exploration.

IRoC-U 2024 – Organized by ISRO [Certificate]

- Designed an autonomous rover with **ROS-based automation and IoT navigation**.
- Used Fusion 360, Gazebo, and RViz for simulation of smart control systems.