

UMAKANT MORE

umakantmore2005@gmail.com | +91 9922356528 | Viman Nagar, Pune - 411011 | [linkedin.com/in/umakant-more](https://www.linkedin.com/in/umakant-more)

SUMMARY

Instrumentation and Control Engineering (B.Tech) student with hands-on experience in embedded systems, IoT, PLC-based automation, and Python programming. Built and competed with multiple hardware projects spanning wearable IoT, assistive robotics, and emergency-response systems, including a hackathon podium finish. Strong foundation in sensors, control systems, and full-stack prototyping, with a keen interest in industrial automation and real-world engineering problem-solving.

SKILLS

Programming:	Java, Python, C++, C
Web Development:	HTML, CSS, JavaScript
Database:	SQL
Automation & Control:	PLC Programming (Ladder Logic), LabVIEW, PID / Cascade PID Control, Sensor & Transducer Interfacing
Tools & Platforms:	VS Code, MATLAB & Simulink, Arduino IDE, ESP32, Git

INTERNSHIP

Frontend Developer *Infeanet Digital Solution Pvt. Ltd.* Jun 2024 - Jul 2024

Front-end developer with expertise in HTML, CSS, and JavaScript, specializing in creating responsive, user-centric websites and applications. Skilled in translating design concepts into interactive, visually appealing digital experiences while ensuring cross-browser compatibility and performance optimization.

PROJECTS

MOVI-X — EMG-Controlled Smart Wheelchair

Designed an ESP32-based smart wheelchair with servo-driven obstacle avoidance and EMG-controlled motor speed regulation. Processed AD8232 EMG signals with EMA smoothing and threshold/hysteresis logic to translate muscle signals into motor commands, and built a non-blocking firmware architecture with dual-motor-driver control and a REST API speed endpoint.

Technologies: ESP32, EMG (AD8232), HC-SR04, Servo & DC Gear Motors, L298N Motor Drivers, Embedded C/C++

SERA — System for Emergency Rescue Aid

Built a GPS-enabled civilian safety tag paired with a rescue coordination hub, winning 3rd prize at a hackathon. Extended the design onto Arduino UNO Q dual-brain hardware (Qualcomm Dragonwing + STM32U5) for an AIoT design challenge, integrating GPS, IMU, and RTC modules with on-device TinyML inference for rescue-relevant event detection.

Technologies: u-blox NEO-6M GPS, MPU6050 IMU, DS3231 RTC, TinyML/ONNX, Python, Arduino C++

AI-Based Desktop Voice Assistant

Built a Python-based desktop voice assistant that listens to voice commands, converts speech to text using speech recognition, processes commands with basic AI/NLP techniques, and performs tasks such as opening applications, web searching, and fetching date/time via text-to-speech responses.

Technologies: Python, Speech Recognition, Text-to-Speech (TTS), AI/NLP, OS Automation

IR Sensor-Based Visitor Counter

Designed a visitor counting system using IR sensors and a microcontroller to detect entry events, interfacing sensors to increment count and display real-time data on a 7-segment display.

Technologies: IR Sensor, Microcontroller (Arduino), 7-Segment Display, Embedded Systems

EDUCATION

B.Tech, Instrumentation and Control Engineering *D. Y. Patil College of Engineering, Akurdi, Pune* 2025 - Present

Diploma in Computer Engineering *JSPM's Bhivrabai Sawant Polytechnic, Wagholi* Jun 2022 - Jul 2025