Manthan Gourshete

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[GitHub](#) | [LinkedIn](#)

Profile

A motivated Electronics and Telecommunication Engineering student with a passion for robotics, automation, and AI/ML. Eager to apply hands-on experience in embedded systems, control systems, and machine learning to contribute to innovative projects in the automation industry. Proven ability to develop functional prototypes, from AI-powered gesture control to power-harvesting systems, and a strong desire to solve real-world engineering challenges.

Education

Deogiri Institute of Engineering and Management Studies **(2022-2026)**
Bachelor of Technology in Electronics and Telecommunication Engineering

Vivekanand College **(2020-2022)**
Higher Secondary Certificate • Percentage - 88.2%

Delhi Public School **(2019-2020)**
Secondary School Certificate • Percentage - 89.3%

Experience

Acmegrade | IoT Intern *4 months*
- Gained hands-on experience with IoT systems, integrating various sensors and actuators.
- Developed and deployed microcontroller-based solutions for data acquisition and control.

MSME Technology Center, Indo German Tool Room | Embedded Systems Intern *2 months*
- Programmed and debugged applications on the LPC2148 microcontroller (ARM7TDMI-S).
- Gained experience with industry-standard development tools and practices for embedded systems.

Technical Skills

Programming Languages:	C, Python, Java, MATLAB
Embedded Systems:	Arduino, Raspberry Pi, LPC2148, IoT (NodeMCU, ESP8266), RTOS Concepts
AI/ML:	Computer Vision (OpenCV), Scikit-learn, Python AI Libraries
Software Engineering:	Data Structures & Algorithms, Version Control (Git), OS Concepts
Web Development:	HTML, CSS, JavaScript, React

Projects

AI Video Analytics Dashboard *Python, OpenCV, React*
- Developed a web-based dashboard to analyze real-time video streams for object detection and tracking.
- Implemented a backend with Python and OpenCV for video processing and a responsive frontend with React.

Pinchit AI *Arduino, Python, OpenCV*
- Developed an AI-powered gesture control system to manage device intensity (lights, fans).
- Achieved over 90% accuracy in real-time gesture recognition using computer vision.

Footstep Power Generator *Arduino, Piezoelectric Sensors*
- Designed a prototype demonstrating **power electronics** principles for energy harvesting.
- Successfully converted kinetic energy from footsteps into electrical energy to power an LED.

AI Integrated Sign Language *Arduino, Flex Sensors*
- Engineered a proof-of-concept interpreter using flex sensors to translate sign language.
- The system successfully identifies and displays distinct hand gestures as text in real-time.

Accomplishments

- Avishkar Zonal Level (Bronze Medal)
- National Level Basketball Player
- Innohack 2.0 Top 10

Positions of Responsibility

- IETE DIEMS Chairperson
- Training & Placement Cell Member
- Robotics Club Co-ordinator

Certifications

- IoT Internship Certificate - Acmegrade (4 months)
- Embedded Systems Internship Certificate - Indo German Tool Room, Aurangabad (2 months)
- Schneider Electric India Foundation training