



Pavan Tichkule

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A Student of Instrumentation Engineering. Passionate about solving real-world industrial challenges by combining core Engineering knowledge with automation and innovation. I bring hands-on experience, leadership energy and a growth-driven mindset to every opportunity.

EDUCATION

Government College of Engineering, Amravati

Amravati, Maharashtra

July 2023- June 2027

- B.tech in Instrumentation Engineering, Minor in Software Engineering
- CGPA: 7.32 (Cumulative till 6th Semester)

Z.P. Jakatdar Junior College, Bhandara

Bhandara, Maharashtra

2021-2022

- 12TH Higher Secondary Certificate (HSC)
- Result: 75% Stream: Science (PCMB)

SKILLS

Technical Skills :-

- Industrial Sensors & Transmitters
- Process Measurement (Temp, Pressure, Flow, Level)
- Basics of DCS & SCADA
- Control Valves & Actuators
- Calibration & Troubleshooting
- Industrial Communication
- PID Controls
- Preventive & Breakdown Maintenance
- Industrial Safety Practices
- MS Office

EXPERINCES

ASHOK LEYLAND LIMITED

Bhandara, Maharashtra

15 Days

Intern – Electrical Department

- Monitored and assisted in calibrating thermocouples, pyrometers, and gas atmosphere analyzers (CO_2 , O_2) across continuous and batch heat treatment furnaces to maintain metallurgical tolerances during gear processing.
- Evaluated PID loop performance for furnace temperature control and fuel-air ratio regulation.
- learned about the standard 4–20 mA current loops, RTDs, and pneumatic positioners.

SUNFLAG IRON AND STEEL CO. LTD

Bhandara, Maharashtra

Dec 2025 – Jan 2026

Vocational Intern – I&C Section, SMS Department

- Gained hands-on exposure to Steel Melt Shop (SMS) operations, including EAF, Ladle Furnace, and CCM instrumentation.
- Monitored and assisted maintenance of temperature (thermocouples, pyrometers), pressure transmitters, and flow instruments used in SMS operations (EAF, LF, CCM).
- Supported calibration, troubleshooting, and industrial safety compliance activities.

Annual College Magazine Committee

GCOE, Amravati

Aug 2025 - Present

Secretary, Overall, Magazine and Newsletter

- Led the editorial and content coordination for the college magazine, collaborating with students and faculty to collect, review, and organize articles and creative submissions.
- Coordinated with the English and Marketing sections to ensure timely development and publication of magazine content.
- Managed multiple contributors and streamlined content selection and editing to maintain the quality and consistency of the magazine.

PROJECTS

1. 19”2U Server Chassis Vibration Analysis | ZOHO, Nagpur

Instrumentation & FEA Project | ANSYS, Vibration Measurement, Signal Processing

- Analysed dynamic response of a 2U chassis across 20Hz–2,000Hz to protect storage drives from fan Blade Pass Frequency (200Hz–433Hz) excitation.
- Evaluated Frequency Response Functions (FRF) and identified a critical 263Hz resonance generating a 7.4g peak acceleration.
- Formulated elastomer isolation and Constrained Layer Damping (CLD) schemes, suppressing peak acceleration by >94% to a safe 0.4g RMS(<0.5g threshold).

2. PLC Based Control of Single and Double-Acting Pneumatic Cylinders

PLC, Electro-pneumatics, Siemens Tia Portal, PLC Ladder Logic

- Implemented PLC-based control of single and double-acting pneumatic cylinders using an off-delay timer (5s) and negative edge detection. Designed the sequence so the second piston activates after the first completes its cycle.

3. Automated Solar Panel Cleaning System | Major project

ESP 32 Automation, DC Motors, Sensors Integration (IR Sensors, Ultra Sonic Sensor, Dust Sensor)

- Developed a self-operating cleaning mechanism that detects dust accumulation using IR sensors and triggers a motorized brush to clean the panel surface automatically.
- Automated the schedule cleaning cycle, which can reduce manual maintenances and improvising energy output efficiency.

4. EMG-based Video Game Controller

Self-initiated project- Arduino, LM324N, EMG Sensor, Python

- Built an analog EMG signal conditioning circuit using the LM324N op-amp, incorporating amplification, filtering, and rectification stages to extract clean muscle activity signals.
- Turn the Muscle activity into the game characters movements using different threshold of the muscle.

CERTIFICATION AND ACHIEVMENTS

- **MATLAB Simulink**
Certification from National Institute of Electronics and Information technology, Calicut
- **Ideathon**
 - Secured 1st rank at Ideathon by Saviskar India
 - Secured 1st rank at BIOFUSION, Tulsiram Gaikwad College of Engineering
- **Shortlisted for the Incubation program at Sant Gadge Baba Amravati University**

INTERESTS

Interests: Cricket, Cooking, E-sports.

Language: Conversational English, fluent in Marathi and Hindi.