

GAURAV DUSANE

Mechanical Engineer —Design & Robotics

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Jalgaon, Maharashtra, India

EDUCATION

SSBT's College of Engineering & Technology

Bachelor of Engineering in Mechanical Engineering

Jalgaon, Maharashtra

Aug 2023 – Aug 2027

- Relevant Coursework: Machine Design, Thermodynamics, Manufacturing Processes, CAD/CAM, Robotics
- Active Member, Mechanical Engineering Students Association (MESA)

TECHNICAL SKILLS

- **CAD & Design:** Proficient in SolidWorks and AutoCAD for 3D modeling, assembly design, and structural analysis.
- **Robotics & Automation:** Hands-on experience with ROS 2, Gazebo simulation, URDF modeling, MoveIt motion planning, and RViz visualization.
- **Programming:** Skilled in Python and C++ for robotics applications and automation scripting.
- **Operating Systems:** Working knowledge of Linux (Ubuntu) and Windows environments.
- **Other Tools:** Microsoft Office (Word, Excel, PowerPoint) for technical documentation and reporting.

PROFESSIONAL EXPERIENCE

Training & Placement Coordinator

Mechanical Engineering Students Association (MESA)

Sep 2025 – Present

Jalgaon, Maharashtra

- Coordinated placement activities and technical workshops for 10+ mechanical engineering students, improving industry readiness.
- Mentored 20+ students in career preparation, resulting in increased engagement with engineering recruitment drives.

Mechanical Engineering Intern

Hitachi Astemo Powertrain Systems Pvt. Ltd.

Jun 2025 – Jul 2025

Jalgaon, Maharashtra

- Assisted in automotive powertrain component design, manufacturing processes, and brake system quality control workflows at an Tier-1 automotive supplier.

Production & Quality Control Intern

Kiran Machine Tools Pvt. Ltd.

Jun 2025 – Jul 2025

Jalgaon, Maharashtra

- Performed dimensional verification and quality inspections using precision measurement instruments; prepared inspection reports and SOPs for 5+ production compliance.

Event Organizer

Mechanical Engineering Students Association (MESA)

Jun 2024 – Sep 2025

Jalgaon, Maharashtra

- Led a team of 10 members to organize 4+ technical events including workshops, guest lectures, and engineering competitions, managing logistics and sponsorships end-to-end.

TECHNICAL PROJECTS

Robotic Arm with Thermal Sensing Integration | Personal Project

2024 – 2025

- Designed a 3D robotic arm in SolidWorks with load, stress, and strain analysis to validate mechanical integrity for industrial pick-and-place operations.

- Built a URDF model and simulated full arm kinematics in Gazebo (ROS 2), implementing joint trajectory control and inverse kinematics (IK) using MoveIt.
- Integrated a 1-thermal camera sensor on the gripper to detect surface temperatures, enabling safe operation in high-heat industrial environments.

SolidWorks Design & Assembly Projects | *Personal Projects*

- Designed and assembled 8+ mechanical systems including Disk Brake, Engine Crank-Slider Mechanism, Roller Bearing, Two-Wheeler Shock Absorber, Scissor Car Jack, Jet Engine, Intermeshing Rotor Helicopter Transmission(2 blades), and a Foldable Table —motion analysis, and component integration.

ACHIEVEMENTS & ACTIVITIES

- **Competitions:** Participated in national-level engineering competitions and hackathons including IIT Techfest, Smart India Hackathon (SIH-2024), E-Yantra, and Milestone-2023, Science Exhibition...
 - **Certifications:** Completed 6+ certified online courses in CAD, and Robotics.
 - **Research Interest:** Industry 4.0 technologies — robotics, automation, and smart manufacturing systems.
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