

DHRUV MAHESH SOMESHWAR

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OBJECTIVE

Co-op position utilizing Mechanical Engineering skills. Available January – August 2027.

EDUCATION

Rochester Institute of Technology <i>Bachelor of Science, Mechanical Engineering GPA: 4.0/4.0</i>	Rochester, NY
Vellore Institute of Technology <i>Mechanical Engineering</i>	<i>Expected May 2028</i> Vellore, India 2023 – 2025

EXPERIENCE

Dagger-Phassell Drone Project, Rochester Institute of Technology <i>Undergraduate Research Assistant</i>	Jun 2026 – Present 40 hrs/week (summer)
- Develop VTOL Group 2 unmanned aircraft systems (UAS) for maritime ISR missions on a DoD-funded, graduate-level project delivering separate variants for the U.S. Air Force and U.S. Navy. - Design drone components in CAD and fabricate parts via composites manufacturing and machining. - Model flight parameters and run flight tests, including autonomous ArduPilot flight; expanding into control systems. - Research components and engineering solutions to guide overall project direction. - Conducted the base research and contributed writing for a white-paper proposal for an additional U.S. Navy project.	
Indian Institute of Technology Bombay <i>Research Intern, Spherical Robot Project</i>	May – Aug 2026 Remote
- Quantified 3 m drop impacts (12 J, ~1 kN millisecond-scale pulses) to diagnose the printed chassis's fracture failure. - Recommended six design changes spanning materials (PETG), elastomer isolation, and print orientation. - Researched and proposed a foam-filled gyroid composite chassis using two-part expanding polyurethane foam.	
Maso Automotives Pvt. Ltd. (Sambhajinagar, India) <i>Engineering Intern</i>	Aug – Dec 2025 48 hrs/week
- Spearheaded 6-axis FANUC robot integration to automate upset forging, solely managing ROBOGUIDE cycle-time simulations and leading a training workshop for staff engineers. - Designed CAD models of robotic gripper fingers and billet stoppers to optimize automated conveyor part flow.	
Pravega Racing (FSAE Team) <i>Vehicle Dynamics & Business Plan</i>	Apr 2024 – Jul 2025
- Awarded 3rd Place Overall in India (Formula Bharat 2025) for designing and fabricating a formula-style race car. - Researched and built suspension systems, heavily utilizing MATLAB for vehicle dynamics simulation and tire modeling. - Co-developed the Business Plan Presentation, pitching the commercial viability of custom vehicle components to judges.	
Forges De Courcelles (Nogent, France) <i>Engineering Intern</i>	Jun – Jul 2025 45 hrs/week
- Simulated forging in Forge NXT 4.0, analyzing material flow and stress distribution to optimize billets and cut costs. - Produced part designs, calculations, and production drawings for reduce-rolled billets. - Analyzed shop-floor automation for forging presses and hammers with the Quality Department.	
Ace Micromatics Pvt. Ltd. (Bangalore, India) <i>Intern</i>	Jun – Jul 2024 50 hrs/week
Assisted end-to-end assembly of a VMC CNC machine, from base build and energization to final sub-assemblies.	
Mascor Precisions Pvt. Ltd. (Sambhajinagar, India) <i>Intern</i>	May 2023 48 hrs/week
- Integrated a FANUC robot with auto-gauging stations to double inspection output. - Drafted the 2D workcell layout using Fusion 360 and analyzed multiple input/output mechanisms to optimize part flow.	

ENGINEERING PROJECTS

Mini Hovercraft Designed and built a working amphibious mini hovercraft for the RoboOceana 2024 competition at IIT Madras.	Dec 2024
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TECHNICAL SKILLS

CAD & Simulation: SolidWorks, Autodesk Fusion 360, ANSYS (static structural), Simulink, ROBOGUIDE, Forge NXT, MATLAB (numerical simulation, data analysis)
Programming & Software: Python, C, C++, Microsoft Office
Technical Writing: White papers, research proposals, engineering reports
Machine Fabrication: Lathes, mills, power tools – cutting, grinding, welding, drilling

TEACHING, CERTIFICATIONS & AWARDS

Teaching Assistant <i>Mechanical Dynamics with Applications (MCET 320), RIT</i>	Aug – Dec 2026
Volunteer Coach <i>Aceing Autism – weekly tennis instruction for children with autism</i>	Mar 2026 – Present
FANUC Certification <i>Robot Operation, Programming, Maintenance Training</i>	Oct 2025
4-day training for jogging, programming, using I/O, mastering, and maintaining a 6-axis robot.	
Vortex 360 (3-day Designathon) – 1st Prize Designed an agricultural rover in Fusion 360 for the subtopic “Robotics in Agriculture.”	Feb 2025