Dhruv Dilipkumar Prajapati

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Mechanical Engineering Junior student with expertise in design, CAD modelling, and finite element analysis (FEA), passionate about semiconductors, automotive and aerospace industries. Skilled in data analysis, test & validation, Modelling and optimization, Six Sigma approaches and Lean principles, seeking a spring and/or summer 2026 co-op/internship block to apply and learn skills in innovation, testing, and sustainable solutions.

EDUCATION

Bachelor of Science in Mechanical Engineering, **Rochester Institute of Technology**, NY – 14623, USA , GPA: 3.30 **Dec 2027**
Coursework: Semiconductor Innovation & Manufacturing, EUV Photolithography Technology, Intro to Acoustics, Dynamics, Fluid Mechanics, Thermodynamics, Materials Science, Statics, Strength of Materials, Engineering Measurements lab, Computer-Aided Design/Manufacturing, Multivariable Calculus, Ordinary Differential Equations - Spring 2026: Systems Dynamics, Boundary-value Problems, Circuits, Heat Transfer, Aerodynamics

Bachelor of Science in Aerospace Engineering**, University of Arizona**, AZ – 85721, USA, GPA: 4.00 **Aug 2023– May 2024**
(Transferred out)

CORE COMPETENCES

· CAD Design & Analysis: SolidWorks, Flow Simulation, ACAD 2D/3D, Ansys Mechanical, CATIA v5, Prusa i3, GD&T
· Project Experience: Computer-aided design and modelling, 3D Printing, Finite Element Analysis (FEA), Computational Fluid Dynamics (CFD), Design of Experiments (DOE), Bill of Materials (BOM), Prototype design, Root Cause Analysis (RCA), Tensile, Compression, Fatigue and Structural Testing
· Programming: Python, MATLAB, MySQL (intermediate), LabVIEW, BMS Controls
· Tools & Fabrication: Lathe, CNC, Surface Finish, Shop Machine tools, Prusa i3 machine, Instron materials testing machine
· Office: Microsoft 365, Excel, PowerPoint, Outlook, Tableau, Power BI (basic), SAP, Performance Metrics Monitoring
· Strong ability to evaluate and conduct 6S principles, Lean manufacturing approaches, Cost-cutting, material waste reduction, safety & quality measures
· Skilled in handling multiple projects across cross-functional teams simultaneously, ensuring deadlines are met, and effectively managing safety operations for workplace efficiency.

ACADEMIC PROJECTS

Pulsed DC – Heat Sink Differential Pressure Project **Aug 2025 –Dec 2025**
• Performing SolidWorks Flow Simulation on pulsed DC heat sink design for semiconductor fabrication and validated results through lab testing (heat sink, chiller, flow meter, pressure gauges), comparing experimental and simulated pressure drop data to support new product development at MKS.

MATLAB Lunar Lander Project **Oct 2024 – Dec 2024**
• Developed MATLAB simulation of lunar lander descent, modelling gravity, thrust, and fuel consumption and optimized code to achieve an accurate landing trajectory within a 5% error margin.

Reverse Engineering Project **April 2024 – May 2024**
• Directed team in disassembling and redesigning silver armored connectors using SolidWorks, and fabricated a prototype via 3D printing, enhancing original design efficiency by 10%.

Team/Independent projects
• Solar Oven Tracker, Accelerometer and Strain Gauge, Epitrochoid, Thermocouple, Pressure Sensor, Mechanical Encoder LED

PROFESSIONAL EXPERIENCE

Mechanical Engineering Intern, **MKS Instruments Inc.** **Aug 2025 – Dec 2025**
Rochester, NY

• Collaborating with the team to enhance the maintenance, service, and operations of MKS's facilities.
• Updating CAD drawings for electrical, HVAC, gas, and water piping systems, documenting control and process procedures and verifying electrical schematics.
• Supporting the dept. projects dealing with HVAC controls, boilers and chillers, compressors, heat pumps, computer networks, bulk liquid nitrogen systems, and environmental ALT HASS/ESS chambers for reliability tests.
• Contributing to the team's daily tasks and continuously improving the systems, processes and procedures using Lean and Six Sigma approaches, including waste reduction, cost-cutting, operational efficiency and defects.
• Engaging in Continuous Improvement (CI) projects involving LOTO, sprinkler water system and engineering solutions.
• Undertaking projects based on MEP, VFDs, ultrasonic flow meters, and utilities (electric, steam, hydraulic water, compressed air, office reconfigurations/moves and critical environment (Data center) Support.

Information Technology (IT) Support Assistant, **Rochester Institute of Technology** **Aug 2024 – July 2025**
Rochester, NY

• Delivered technical support for 500+ students/faculty using D2L Brightspace, Zoom, Microsoft 365, Qualtrics & Honor lock.
• Analysed system logs to resolve 20+ hardware/software conflicts weekly, improving uptime by 15%.

Apple Certified Technician: Technology Service Assistant, **Apple** **Aug 2023 – May 2024**
Tucson, AZ

• Specialised in the repair of a wide range of Apple products, including MacBooks and iPads from 2017 models to 2023 Intel-based and silicon chips M1-M3 MacBooks and other Apple devices – Repair Process Engineering (RPE).

AWARDS & ACHIEVEMENTS

· RIT Founders International Scholarship | Rochester Institute of Technology July 2025
· Academic Year Academic Distinction | University of Arizona May 2024
· Dean's List with Distinction | University of Arizona May 2024
· Gobal Wildcat Award | University of Arizona Aug 2023