

Rishabh Dholakia

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Education

Cornell University, College of Engineering Ithaca NY
Bachelor of Science in Mechanical Engineering Anticipated May 2028

GPA: 4.137

Relevant Coursework: Mechanical Design, Engineering Simulations, Dynamics, Thermodynamics, Statics

Experience

Cornell Assistive Technologies Ithaca NY
Engineering Subteam Lead March 2026 - Present

- Leading 5 person team to design and implement a mechanical lift to aid those with disabilities to get into their car

Mechanical Engineering Subteam Member November 2024 - Present

- Engineered a tactile coding system by adapting Microsoft MakeCode syntax into a library of 3D-printed blocks with embedded Braille, enabling visually impaired students to learn programming
- Received 2nd place at RESNA student design challenge, an assistive technologies competition at the Abilities International Professional Conference for the tactile coding blocks project
- CAD modeled a compact enclosure for a sensory overload watch in Fusion 360, optimizing for electronics protection, user comfort, and wearability

Engineered Living Materials Institute Ithaca NY
Undergraduate Research Member August 2025 - Present

- Design and manufacture micro-robot for novel chemical-based control system for multirobot coordination for future search-and-rescue capabilities
- Co-Developed complete CAD assembly using Fusion 360 for V0 chassis and internal components, optimized for 3D printing and rapid assembly
- Developed an initial run & tumble algorithm to validate component integration and pathfinding logic, ensuring reliable robot navigation before hardware finalization
- Simulated chemical diffusion along with biological sensor response time lag using finite difference method (FDM) in python

Liquid Propulsion at Cornell (LPC) Ithaca NY
Mechanical Engineering Member - Turbopump Subteam Lead August 2025 - Present

- Organize and delegate tasks over a 3-person subteam to develop a liquid-propellant turbopump for engine system integration
- Design turbine to withstand operating conditions of 25000 RPM and blades for required power output

Projects

MAE 3150 - Bike Frame Analysis & Optimization April 2026 - May 2026

- Created a 2D geometry of a basic bike frame using Fusion 360 surface modification tools
- Analyzed deformation & Von-Mises stress with boundary conditions & loads in Ansys
- Reduced material from lower tube by 42% while maintaining a Factor of Safety of 3.5 using response surface optimization in Ansys

3D Printed Payload Drone May 2025 - August 2025

- Designed & manufactured a 3D-printed drone frame with a custom 1lb payload bay using DFM/DFA
- Performed static FEA on frame to validate structural integrity against mission load requirements
- Integrated entire electronic wiring (Brushless Motors, AIO FC, RX, VTX, Battery) through PCB soldering and verified continuity & isolation of components

Skills

Fusion 360, Ansys, FEA, DFM/DFA, MATLAB, Python, VBA/Excel, 3D Printing, Mill/Lathe, Soldering