Noah Saxenian

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Education

Tufts University, Medford, MA *October 2022 – December 2025*

Bachelor of Science, Mechanical Engineering | Minors: Music Engineering, Mathematics | 4.0 GPA

Samuels Mechanical Engineering Award (Spring 2025), Dean's List each semester

Extracurriculars: Competition Climbing Team Captain

Relevant coursework: Acoustics, Electronics and Controls, Robotics And Mechatronics

Technical Skills

Control Systems:	PID control, frequency response analysis, FRFs, modal analysis, FFT, digital filtering
Programming:	Python, MATLAB, LabVIEW, JavaScript, HTML, Git
CAD/Simulation:	SOLIDWORKS (CSWA), Onshape, COMSOL CFD, KiCad PCB/schematic design
Embedded Systems:	Arduino, Raspberry Pi, ESP32, sensors/actuators
Fabrication:	Manual Mill, Lathe, CNC, Laser Cutter, Waterjet, 3D Printer, Sheet Metal

Experience

SharkNinja – Needham, MA

R&D Mechanical Engineering Co-op *January 2026 – June 2026*

- Develop and iterate heated plate assemblies for a next-generation multi-styling device, focusing on temperature sensing, control feedback, and thermal response
- Conduct controlled hair styling experiments to quantify the impact of temperature, contact time, pressure, and material properties
- Process and visualize test data and communicate concise findings to support design decisions

Tufts University Center for Engineering Education and Outreach – Medford, MA

Undergraduate Research – Acoustics Engineering *July 2025 – December 2025*

- Developed Python-based tools for acoustic and electro-mechanical measurement, enabling real-time acquisition and analysis of frequency response and modal data
- Built interactive web applications to visualize transfer functions, resonance behavior, and damping characteristics of tested structures

Mechanical Engineering Intern *June 2024 – August 2024*

- Designed and fabricated an automated impact excitation system using a robotic arm to improve repeatability and data quality for modal testing
- Developed Python algorithms to compute and curve-fit frequency response functions (FRFs), derive modal parameters, and animate mode shapes for experimental modal analysis

Educational Robotics Research Assistant *September 2023 – May 2024*

- Redesigned 3D printed housings for “Smart Motors,” improving durability and cutting assembly time by 50%
- Integrated electromechanical systems in educational robotics kits and programmed user interfaces

Nolop Makerspace, Tufts University – Medford, MA

Workshop Staff *September 2024 – December 2025*

- Assisted makerspace users in their electronics, 3D printing, laser cutting, and woodworking projects
- Advised on mechanical design, electronics integration, and fabrication techniques for students and researchers
- Monitored and promoted a safe environment in the woodworking shop as part of the makerspace

Appalachian Mountain Club – Gorham, NH

Assistant Manager of Backcountry Lodge Crew *Fall 2021 - Summer 2023*

- Co-led a seasonal team in a high-pressure environment, coordinated logistics to support service for up to 52 guests per day
- Developed strong communication and team leadership skills through training new crew members while fostering positive dynamics and efficient work practices