

Madeline Mae Sliwinski

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EDUCATION

Cornell University, College of Engineering, Ithaca, NY
Bachelor of Science, Mechanical Engineering

Expected May 2026

Relevant Coursework: Statics & Mechanics, Mechanical Design, Dynamics, System Dynamics, Mechanics of Engineering Materials, Dynamics, Fluid Mechanics, Heat Transfer, Mechatronics, Statistics

RELATED EXPERIENCE

Cornell Assistive Technologies Student Project Team

Ithaca, NY

Engineering Team Lead

Dec 2022 - Present

- Leading a team of 15+ tasked with adapting children's toys to be more user friendly by adding new circuitry and designing custom printed circuit boards in Fusion360
- Utilizing electromyography (EMG) sensors connected to an Arduino to collect muscle movement data
- Developing 3D printed assistive technology solutions designed with Fusion360 and OpenSCAD
- Facilitating community outreach by working with over 10 organizations and partners in New York State to develop 4+ high impact assistive technology solutions

Organic Robotics Lab

Ithaca, NY

Research Assistant

Nov 2023 - Present

- Designing and assembling combustion actuators for an underground digging robot in SolidWorks
- Creating a custom multi-channel fuel intake organizer with Fusion360 to prevent leakage with a luer lock mechanism and manufacturing with a Figure 4 resin printer
- Analyzing displacement data of the combustion actuators with different fuel ratios with high-speed camera capture to characterize the actuators
- Integrating a microcontroller and DC motor to actuate horizontal digging motion of the robot

Manufacturing Learning Studio

Ithaca, NY

Crew Member

Sept 2024 - Present

- Trained over 30 students to independently operate mill and lathe in a machine shop that serves 5000+ students from engineering project teams
- Advising students on engineering projects by preparing and using engineering drawings
- Upholding high standards of safety and proper use of machinery

WORK EXPERIENCE

Upward Bound

Ithaca, NY

College Preparatory Tutor and Math Instructor

Feb 2023 - Jul 2023

- Hosted weekly after school sessions for 15 high school students regarding coursework and college
- Developed and delivered lessons twice a week for a short month-long course in Algebra tailored to 3 students' unique learning needs

SKILLS

Autodesk (Inventor, Fusion 360, AutoCAD), SolidWorks, OpenSCAD, Ansys, Adobe (InDesign, Photoshop), Microsoft Suite (Excel, Word, PowerPoint), Rapid prototyping, 3D Printing (Prusa, Figure 4, Bambu), Machining (mill, lathe, band saw, power tools), MATLAB, Python, Labview, Arduino C++.