Madeline Mae Sliwinski

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EDUCATION

Cornell University, College of Engineering, Ithaca, NY **Expected May 2026**
Bachelor of Science, Mechanical Engineering

Relevant Coursework: Innovative Product Design via Digital Manufacturing, Statics & Mechanics, Mechanical Design, System Dynamics, Materials, Fluid Mechanics, Heat Transfer, Mechatronics, Statistics, Fundamentals of Engineering Exam (EIT) Preparation Course

RELATED EXPERIENCE

Cornell Assistive Technologies Student Project Team **Ithaca, NY**
Full Team Lead **Dec 2022 - Present**
- Designing physical products in Autodesk CAD software to develop 5+ high impact assistive technology solutions
- Leading a cross-functional team of 40+ engineers tasked with adapting products to be more user-friendly and cost-effective, collaboratively adding new circuitry and designing custom printed circuit boards in Fusion360
- Facilitating community outreach by working with 10+ organizations, corporations, and partners in New York State
- Allocating and documenting team project budget of $16,000 based on project cost analysis

Organic Robotics Lab **Ithaca, NY**
Research Assistant **Nov 2023 - Present**
- 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
- Characterizing materials with Finite Element Analysis Simulation and conducting tensile and fatigue tests to verify design choices
- Integrating a microcontroller and DC motor to actuate horizontal digging motion of the robot

Amazon **Miami, FL**
Operations Engineering Internship **Jun 2025 – Aug 2025**
- Developed and implemented a process engineering project with JavaScript and AI-based browser tool to improve efficiency metrics and visibility of packing stations that need repair
- Assisted in managing 120+ associates to oversee the fulfillment of over 200,000 packages a day
- Created daily, weekly and monthly warehouse KPI reports with Excel VBA Macros
- Chosen among top 12% of 400+ interns across all disciplines to showcase project at Global AI Solutions Expo

Manufacturing Learning Studio **Ithaca, NY**
Crew Member **Sept 2024 - Present**
- Training 30+ students to independently operate mill and lathe in a machine shop serving 5000+ students
- Providing technical support to engineers by preparing design calculations and drawings to meet specifications
- Upholding high standards of safety and proper use of machinery

SKILLS

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