Madeline Mae Sliwinski

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EDUCATION

Bachelor of Science, Mechanical Engineering
Cornell University, College of Engineering | Ithaca, NY **Aug 2022 - May 2026**

Relevant Coursework: Innovative Product Design via Digital Manufacturing, Advanced Product Design, Statics & Mechanics, Mechanical Design, System Dynamics, Materials, Fluid Mechanics, Heat Transfer, Mechatronics, Statistics

RELATED EXPERIENCE

Project Team Manager **Dec 2022 - Present**
Cornell Assistive Technologies Student Project Team | Ithaca, NY

- 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 creating and adapting products
- Facilitating community outreach by working with 10+ organizations and partners in New York State
- Allocating team project budget of $16,000 based on project cost analysis and completing documentation
- Overseeing multiple projects timelines using Gantt charts, BOMs, and spreadsheets to ensure deadlines are met

Research Assistant **Nov 2023 – Present**
Organic Robotics Lab | Ithaca, NY

- Characterizing elastomer membrane of combustion actuators with Finite Element Analysis Simulation and conducting tensile and fatigue tests to verify design and material choices for an underground digging soft robot
- Creating several custom experimental staging parts in SolidWorks, such as a multi-channel fuel intake organizer, with SolidWorks then manufacturing with a Figure 4 resin printer
- Analyzing displacement data of the combustion actuators with different fuel ratios with high-speed camera capture to experiment with volume, shape, and size of the actuator

Operations Engineering Internship **Jun 2025 – Aug 2025**
Amazon | Miami, FL

- 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
- Increased machinery and equipment uptime by 16% and reduced workers' unknown idle time by 7%
- Created daily, weekly and monthly warehouse KPI reports with Excel VBA Macros
- Managed 120+ associates to oversee the fulfillment of over 200,000 packages a day
- Chosen among top 12% of 400+ interns across all disciplines to showcase project at Global AI Solutions Expo

Machinist Crew Member **Sep 2024 – May 2025**
Manufacturing Learning Studio | Ithaca, NY

- Trained 30+ students to independently operate mill and lathe in a machine shop serving 5000+ students
- Provided technical support to engineers by preparing design calculations and drawings with dimensioning and GD&T to meet design specifications, achieving tolerances within ±0.005 inches
- Upheld high standards of safety and proper use of machinery supervising the machine shop

SKILLS

CAD, Autodesk (Inventor, Fusion 360, AutoCAD Revit), SolidWorks, Ansys, Adobe (InDesign, Photoshop), Microsoft Office Suite (Excel, Word, PowerPoint, VBA), Rapid Prototyping, 3D Printing (Prusa, Figure 4, Bambu), Machining (mill, CNC lathe, band saw, power tools), Computer Programing (MATLAB, Python, LabVIEW, Arduino C++, JavaScript), PCB Design, FEA, DFM, Lean Six Sigma, Project Management, Problem Solving, Communication