

# Daniel McKirby

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## EDUCATION

### Northeastern University

Boston, MA

*B.S. in Mechanical Engineering, Minor in Aerospace*

*Candidate, Dec 2026*

- **GPA:** 3.8 | **Awards:** Dean's List
- **Relevant Coursework:** Computational Fluid Dynamics, Aeronautical Propulsion, Heat Transfer, Mechanical Engineering Design, Introduction to Flight, Fluid Mechanics, Thermodynamics, Electrical Engineering, System Analysis and Control

## SKILLS

**Technical:** SolidWorks Modeling, Drawing, and Simulation (CSWA Certified/Instructor), MATLAB (Simulink), ANSYS, GD&T, Keyence 3D Scanning, Instron Testing, DFM, 3D Printing, Manufacturing Tooling Design, RCA, Rapid Prototyping, Material Selection

**Languages:** Spanish (Conversational), Turkish (Intermediate), Japanese (Beginner)

## PROFESSIONAL EXPERIENCE

### Insulet Corporation

Acton, MA

*Mechanical Engineer - Equipment Design Co-op*

*July 2025 – December 2025*

- Designed and implemented high-precision automated manufacturing equipment using SolidWorks to improve product assembly accuracy and reliability for insulin pump production lines, incorporating GD&T and tolerance stackup to ensure sub-millimeter alignment across assembly fixture
- Performed root cause analysis and troubleshooting for critical equipment issues, diagnosing mechanical, pneumatic, and sensor-related failures on automated assembly stations to reduce unplanned downtime and improve OEE
- Developed CAD models and production-ready engineering drawings with supporting thermal FEA simulations to validate equipment designs under operating conditions
- Collaborated with manufacturing engineers, technicians, and external suppliers to execute design improvements in a cGMP ISO8 cleanroom
- Managed multiple equipment design projects from concept through fabrication and installation in a regulated medical device environment

### Thermacell Repellents Inc.

Bedford, MA

*Mechanical Engineer Co-op*

*July 2024 – December 2024*

- Owned design, prototyping, testing, and manufacturing of a custom impact testing fixture comprising 500+ components, from initial concept through final validation
- Designed metal and plastic components in SolidWorks with full tolerance stackup and material selection considerations to ensure accuracy, consistency, and safety of test fixture
- Supported the engineering team with hands-on testing including drop, temperature, and competitor benchmarking, as well as Keyence scanning of injection molded parts for dimensional inspection, analyzing results to inform design iterations
- Led FDM printing initiatives for the engineering department, managing in-house production of prototype and functional plastic parts to accelerate development timelines
- Created DFM compliant part and assembly drawings in SolidWorks per company drafting standards, coordinating with manufacturing vendors to ensure producibility

## ACTIVITIES

### Northeastern American Society of Mechanical Engineering (ASME)

Boston, MA

*President, Vice President of Events, Social Chair, Company Liaison*

*Jan 2024 – Present*

- Lead a 17-member executive board overseeing all chapter operations, delegating responsibilities across specialized VP roles spanning event planning, corporate sponsorship and outreach to 100+ companies, a 50-student mentorship program, and communications
- Collaborate with the MIE department and partner organizations including AIChE, BMES, and IISE to align chapter programming with departmental goals and co-host career events
- Provide 200+ mechanical engineering students per semester with professional development through weekly industry speaker sessions, technical workshops, and the CSWA SolidWorks certification course

### Northeastern GE1000 Peer Mentor

Boston, MA

*Peer Mentor*

*Jan 2025 – Present*

- Guided first-year engineering students in their transition to college, offering academic and professional advice
- Facilitated discussions and activities during class to build a supportive learning environment
- Collaborated with faculty to tailor seminar content to meet the unique needs of engineering students

## PROJECTS

### Portable Geothermal Energy Museum Exhibit

*Jan 2023 – Apr 2023*

- Collaborated with a team of four to design and fabricate a portable interactive museum exhibit teaching elementary school students about geothermal energy at a STEM expo
- Programmed Arduino microcontrollers in C++ and MATLAB to control an LED lighting system and interactive slideshow for visitor engagement