

Nicholas Martin

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EDUCATION

University of Michigan

Ann Arbor, MI

Master of Science in Aerospace Engineering

Dec. 2026

Courses: Compressible Flow, Computer Fluid Dynamics, Solid & Structural Mechanics, Intermed. Dynamics

Tufts University

Medford, MA

Bachelor of Science in Mechanical Engineering

May 2024

GPA 3.65/4.0, Magna Cum Laude

WORK EXPERIENCE

RMD, Inc.

Watertown, MA

Laboratory Technician

July 2024 – March 2025

- Designed novel vacuum systems for thin film growth in SolidWorks and contributed to their fabrication and testing, directly enabling the successful execution of multiple DoD and DoE contracts
- Built COMSOL and SolidWorks simulations coupled with mathematical analysis to ensure vacuum systems did not exceed mechanical stress limits and maintained proper fluid flow
- Created the basis for an automated film growth and measurement system using LabVIEW

Microwave Engineering Corp.

North Andover, MA

Mechanical Engineering Intern

Jan. 2024 – June 2024

- Authored research-based operating procedures to standardize manufacturing, upgrade equipment, and ensure federal regulatory compliance, enabling the pursuit of new contracts
- Drafted engineering drawings in SolidWorks and used Mastercam for the manufacture of dozens of part models, coordinating with machinists and manually revising G-Code to achieve aerospace tolerances

Allegro MicroSystems

Manchester, NH

Package Engineering Intern

May 2023 – Aug. 2023

- Created Ansys simulations and used Siemens hardware testing for thermal characterization of an upcoming gate driver, verifying product complied with allowable limits and ensuring a timely release
- Used Instron systems and Ansys to ascertain the mechanical and thermal stress limit for sensors

Werfen North America

Bedford, MA

Mechanical Engineering Intern

May 2022 – Aug. 2022

- Developed Python tools for error identification and visualization alongside a custom recording setup to identify mechanical issues in automated healthcare diagnostic equipment, enabling root cause analysis
- Redesigned prototype in Creo and tested improvements to enhance user experience in clinics and hospitals

PROJECT EXPERIENCE

Tufts Rocketry Team

Medford, MA

Mechanical Team Lead

Sept. 2023 – June 2024

- Led the Mechanical Team for Spaceport America Cup; supervised and delegated tasks to ~10 engineers
- Modeled rocket subsystems in OnShape and conducted materials research to validate prototype
- Performed design validation through Ansys FEA, manual calculations, and Instron testing, ensuring multiple successful test flights and achieving 34th place out of 121 teams at the competition

SKILLS

CAD & CAM: SolidWorks, Onshape, Creo, Mastercam, Fusion

FEA & CFD: Ansys, COMSOL, SolidWorks

Programming: Python, LabVIEW, MATLAB, Microsoft Office Suite

Hardware: Testing (Instron & Siemens), machining, composites, material analysis, circuitry