Nicholas Condoleo

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EDUCATION

Northeastern University *(Boston, MA)* **May 2027**
B.S. in Mechanical Engineering and Bioengineering **GPA:** 3.98
Honors: Honors Program, Dean's List, Honors Propel Grant
Activities: American Society of Mechanical Engineers, Tau Beta Pi Engineering Honors Society
*Relevant Courses (*with lab):* Heat Transfer, Dynamics*, Fluid Mechanics, Mechanics of Materials*, Thermodynamics, Material Science*, Biomaterials, Systems, Signals & Controls, Bioelectricity*, Quantitative Physiology

SKILLS

Software: SolidWorks (CSWA-certified), Finite Element Analysis, MATLAB, AutoCAD, ImageJ, LTspice, 3D Slicer
Technical Skills: 3D Printing, Instron Testing, Test Method Development, Test Fixture Design, Protocol Writing, Design Verification and Validation (V&V), Root Cause Analysis, Rapid Prototyping

WORK EXPERIENCE

Abbott | Heart Failure **Burlington, MA**
MCS R&D Engineering Co-op July 2025 – Dec. 2025
- Led and executed multiple design verification activities, including protocol development, execution, and formal report writing aligning with regulatory standards to support product submissions
- Developed and refined new test methods by reviewing technical literature and external standards (IEC 60601), and helped update design input requirements to ensure clear and measurable performance criteria
- Supported senior engineers in structured root-cause investigations, contributing to data analysis and failure-mode assessments across cross-functional teams
- Designed and built several custom test fixtures and developed characterization protocols to evaluate mechanical and electrical performance of critical device components
- Assisted in wet lab testing using human blood to evaluate hemolysis and thrombosis in LVAD systems, including loop setup, data collection, and interpretation of results

ACADEMIC EXPERIENCE AND PROJECTS

Innovators for Global Health, Northeastern University **Boston, MA**
Mechanical Design Team Engineer Sep. 2023 – Present
- Awarded the Northeastern Honors Propel Grant ($2,000) to support development of a neonatal phototherapy device
- Design and prototype a blue light phototherapy system to treat infants suffering from neonatal jaundice
- Collaborate with RIDGE Regional Hospital in Ghana to tailor the device for clinical usability and reliability
- Conduct rapid, iterative prototyping within a team of engineers to refine product performance and functionality

Northeastern Electric Racing **Boston, MA**
Vehicle Dynamics Engineer Sep. 2024 – May 2025
- Designed and modeled suspension system components and mounts, ensuring compatibility
- Performed finite element analysis (FEA) using SolidWorks to optimize for structural integrity and weight reduction
- Coordinated effectively with other subgroups, including aerodynamics and chassis groups for vehicle integration

Educational Children's Science Exhibit **Boston, MA**
Cornerstone of Engineering Project Oct. 2023 – Dec. 2023
- Created a "Whac-A-Mole" inspired game using SolidWorks and CAD to teach children about invasive species
- Programmed servo motor pulley system and integrated custom game code into Arduino for seamless functionality
- Analyzed user feedback to improve engagement and educational impact, optimizing the exhibit design

Hofstra University **Hempstead, NY**
Research Assistant June 2022 – May 2023
- Extracted keratin-associated proteins (KAPs) from human hair and confirmed protein presence with SDS-PAGE
- Utilized tensile testing on damaged hair and analyzed structural changes with scanning electron microscopy
- Interpreted statistical data to demonstrate effectiveness of KAPs in restoring strength to damaged hair
- Achieved 3rd in Materials Science at the New York State Science and Engineering Fair (NYSSEF)

INTERESTS

- Soccer and Formula 1 enthusiast who finds inspiration in teamwork and precision engineering
- Passionate about traveling, exploring diverse cultures, and experiencing global cuisines
- Enjoys building and creating functional projects, with a curiosity for solving complex engineering challenges