

Andrew J. D'Onofrio

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EDUCATION

Cornell University, Ithaca, NY (College of Engineering)

2022 - 2026 (Expected)

Major: Mechanical Engineering (B.S.), Dean's List for Fall 2022

Relevant Coursework

Innovative Product Development, Finite Element Analysis, Biomedical Fluid Dynamics, Biomedical Circuits & Signals

PROFESSIONAL EXPERIENCE

Siemens Healthineers - Operations Leadership Development Program (OLDP) Intern

June 2025 - August 2025

- Standardized review process for 10+ years of SAP and D2 production records to improve root-cause analysis, isolate historical lot-to-lot variability, and recommend workflow improvements in 4 Atellica and Dimension liquid calibrators
- Coordinated bulk containers scale-ups for 10+ finished-product reagents to reduce quality testing & net bottle changes

J&J MedTech: Heart Recovery - preCARDIA Product Development Co-Op

January 2025 - June 2025

- Innovated V1.0 electromechanical console burn-in fixture for software integration & isolated mechatronic testing, consolidating 3+ mechanical & 8+ electronic subassemblies into automation testing bench for design improvements
- Optimized temperatures for 30+ components using custom Data Acquisition System (DAQ) and MATLAB automation
- Designed 4 custom prototyping fixtures for failure mode analysis & stress-strain characterization of medical disposables
- Co-authored & executed 5 quality-assured verification tests for Class III medical disposable 510(k) submission

Rev: Ithaca Startup Works - Hardware Prototyping Intern

May 2024 - Present

- Accelerated design process & prototype learning sessions for 20+ start-ups in consumer & healthcare technology
- Led product development decisions & early verification testing for 3 early-stage MedTech companies
- Advised directly on regulatory standards & Design for Manufacturing (DFM) for a chemo port aligning product

RESEARCH EXPERIENCE

Cornell DEBUT - Project Manager (Former R&D Analyst)

October 2023 - Present

- Author 100+ pages of R&D, regulatory, and testing documentation for FDA Design History File, adhering to FDA medical device standards and ISO design controls for novel Class II diagnostic device
- Winner of the Medtronic BMES 2024 Student Design Competition (Mechanical Track) & \$2,500 for commercialization
- Managed IRB-approved clinical validation trials with Parkinson's patients at the SUNY Cortland Biomechanics Laboratory
- Analyzed +1 million data points with MATLAB & Python to yield about 12% reduction in experimental tremor amplitude

Rapid Prototyping Laboratory - Machine Technician

October 2023 - Present

- Operate & recondition additive manufacturing equipment in Cornell's primary Mechanical Engineering prototyping lab, including 30+ project teams, 75+ research groups, & all undergraduate classes
- Facilitate 10 customer requests per week in prototype design & 3D printing technology for academic/research applications

Orthopedic Bioengineering Research Laboratory, Stony Brook University - Research Intern

May 2023 - July 2024

- Coordinated electromechanical research for an early point-of-care, volumetric blood flow device with Dr. Yi-Xian Qin
- Synthesized a wearable device for fixturing ultrasound transducers, manufacturing 50+ PLA parts with modular sizing
- Designed a custom Arduino-based 2-Layer PCB for pressure & ultrasonic sensors for an electrically operational board
- Formulated carotid artery FEA for applanation tonometry to estimate arterial deformation & pressure with under 5% error

TECHNICAL SKILLS

Design Skills - Fusion360, SolidWorks, AutoCAD, KiCAD (Schematic/ PCB), ANSYS Structure/ Fluent, Microsoft Suite, FPGAs

Software Skills - IoT System Development, ImageJ, LabVIEW, Lab Automation, Version Control (*GitHub/ GitLab*)

Manufacturing Skills - 3D Printers (FDM / SLA), CO₂ Laser Cutter, CNC Mill, Water Jet, Manual Mill, Manual Lathe, Drill Press, SMD/ THT Soldering, Low-Volume Plastic Production (Injection Molding & Urethane Casts)

Coding Languages - *Python, MATLAB, C++, G-Code/ M-Code*

LEADERSHIP & ACTIVITIES

Cornell Circle K (Vice President, 2024-2025) • Entrepreneurship @ Cornell • Cornell Boxing • Cornell Jazz+ (Guitar & Bass)