

Luciana Ruggiero

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EDUCATION

Cornell University, College of Engineering – Ithaca NY

Master of Engineering in Mechanical Engineering

Cornell University, College of Engineering – Ithaca NY

Bachelor of Science in Mechanical Engineering

- J. McMullen Dean's Scholar Scholarship – Awarded by Cornell Engineering

Miami Beach Senior High School – Miami Beach FL

Graduated Magna Cum Laude; Top 10% of 500 student class – GPA: 4.92

Expected Graduation May 2026

August 2021 - December 2025

August 2017 – May 2021

RELEVANT EXPERIENCE

Intuitive Surgical, Inc. – *SP Systems Supplier Process Engineering Intern*, Sunnyvale, CA

June 2025 – November 2025

- Collaborated with suppliers to evaluate and implement cost-efficient manufacturing methods for production parts.
- Conducted root cause analyses on part failures to drive corrective actions and improve reliability.
- Applied GD&T principles to inspect parts against specifications and ensure compliance with quality standards.
- Developed and executed database queries to streamline material-based part searches, enhancing manufacturing optimization.
- Improved production line workflows to lower labor costs and create space for additional workstations.

Icarus Medical Innovations – *Design Engineering Intern*, Charlottesville, VA

May 2024 – August 2025

- Redesigned a locking mechanism for a KAFO (Knee-Ankle-Foot Orthosis) cap using Fusion 360, completing multiple design iterations, 3D printing, bead blasting, and assembly, with functionality validated through physical testing and Finite Element Analysis (FEA). The design is now in use.
- Researched foot anatomy and developed a sizing guide for Off-The-Shelf (OTS) AFOs (Ankle-Foot-Orthosis) to meet growing demand, improving product accessibility and supporting company sales efforts.
- Redesigned an AFO into a nighttime model based on material research in market demand; assembled the prototype and conducted functionality testing to ensure performance and comfort.
- Fitted and modeled knee orthotics in Fusion 360, leveraging knowledge of knee anatomy and unloading techniques (e.g. 3-point unloading) to enhance design accuracy and functionality.

Engineering World Health Project Team - *Integrative Design Team Engineer*, Ithaca, NY

October 2021 – May 2025

- Designed and manufactured a cost-effective Calmer device for premature babies using CAD Fusion 360, increasing the accessibility for lower resource communities. Calmer placed first at the 2022 EWH Design Competition.
- Engineered a one-size prosthetic foot using Fusion 360, conducted static testing to ensure functionality and reliability.

C2d Labs - Consultant, Remote

December 2023 – March 2024

- Consulted for a medical device company, excelling in SolidWorks modeling, materials research, and report writing.
- Demonstrated proficiency in SolidWorks modeling and materials research to improve medical device design, contributing to innovative solutions and the development of comprehensive Failure Modes and Effects Analysis (FMEA) reports.

Neuronal Mass Dynamics Laboratory - *Lab Member*, Miami Beach, FL

January 2023 – April 2023

- Contributed to the development of a mathematical model employing differential equations and statics to simulate vasodilation in cerebral blood vessels.
- Gained knowledge of neuroanatomy, craniotomies, functional MRI, and brain activity analysis.

LEADERSHIP & PROFESSIONAL DEVELOPMENT

Varsity Cheerleading Team - *Media, Social Chair and Member*, Ithaca, NY

August 2021 – May 2025

- Balanced athletic and academic commitments as a student-athlete.
- Managed media coverage for all team activities and organized team bonding events.

SKILLS

- Programs: Python, SQL, Microsoft Excel, PowerPoint, AutoCAD, Fusion 360, SolidWorks, SAP, Agile.
- Languages: English (Native), Spanish (Native).
- Time management and adaptability in fast-paced environments; design, prototyping, and validation; root cause analysis and structured problem solving; manufacturing process understanding; technical communication and report writing; cross-functional collaboration.