

Jonathan Anziani

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EDUCATION

Massachusetts Institute of Technology (MIT), Cambridge, MA

Graduation Date: May 2025

- B.S. in Mechanical Engineering

GPA: 4.4

Relevant Coursework:

- Medical Device Design, Product Design Process, Additive Manufacturing, Manufacturing and Design II, PCB Design, Mechanics and Materials II, Measurement and Instrumentation

RELEVANT EXPERIENCE

Design for Manufacturing Internship, Cambridge, MA

May 2024—Dec. 2024

- Worked with an American-based manufacturing company to develop testing strategies in order to validate prototypes for bulk production of a medical-grade device.
- Developed temperature data collection systems in MATLAB and temperature sensors for quantitative analysis of product performance
- Designed packaging for efficient device distribution and handling
- Met weekly with company executives to present on product development progress

Product Design Process, Cambridge, MA

Sept. 2024—Dec. 2024

- Worked with a team of twelve to brainstorm and design a product under a budget of \$8000
- Designed and tested a prototype underwater vision enhancement system for commercial divers rated for a depth of 50 ft of turbid water
- Used Fusion 360 to design the fluid-sealing interface between the product and the industry standard helmet to ensure compatibility
- Integrated separate electrical and mechanical subassemblies with a compact 3D-printed part

Thesis: Modeling of CNC Energy Consumption, Cambridge, MA

Feb. 2023—May 2025

- Developed a model in MATLAB for estimating the energy cost of CNC milling a part based on of G-code input as well as tool, machine, and material parameters
- Researched existing literature on the thermodynamics of machining as it relates to production rate
- Programmed a G-Code-based CNC machining simulator in MATLAB
- Studied Life Cycle Assessment literature to understand energy and material flow tracing
- Met regularly with MIT MechE Department Head John Hart to validate the model design

East Campus 2023 Castle Project Lead, Cambridge, MA

Jan. 2023—Sept. 2023

- Led design and construction of a 3-story tall, 40'x24', 100+ member construction project
- Engaged in structural analysis calculations using beam bending equations, finite element analysis in SOLIDWORKS, and cantilever approximations with Python
- Designed a 200lb load-capacity adjustable angle climbing wall with additional consideration for local wind load standards in the finite element analysis
- Consulted MIT Environmental Health and Safety and MIT Campus Construction to ensure safe construction, use, and deconstruction of the structure

Software: Fusion 360, SOLIDWORKS, MATLAB, Arduino, Python, Rhino, Altium,

Hardware: CNC/Manual Machining, Injection Molding, Waterjet, Laser Cutter, 3D-Printing, Welding