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