

# Benjamin Thomson

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## EDUCATION

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**Massachusetts Institute of Technology** | Cambridge, MA

August 2022

Master of Engineering in Advanced Manufacturing and Design

- Master's Thesis: "From Prototype to Production: The Design and Manufacture of a Production Grade Industrial Product for Labby, Inc."
- Coursework included Statistical Process Control, Manufacturing System Modeling, Product Design, Machine Design, and Engineering Management

**Stevens Institute of Technology** | Hoboken, NJ

May 2021

B.E. in Mechanical Engineering, Minor in Computer Science

- Graduated with High Honors: 3.9/4.0 cumulative GPA
- Coursework included Engineering Design, Modeling and Simulation, Computer Aided Design, Additive Manufacturing, Heat Transfer, and Design for Manufacturability
- Member of the Society of Automotive Engineers, Pi Tau Sigma honor society, and Pinnacle Scholar

## WORK EXPERIENCE

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**Engineer II, JETCOOL Technologies** | Littleton, MA

8/22 - present

- Leading the development of a best-in-class CPU cooling product from design, prototyping, and testing to manufacturing and delivery
- Developed and deployed a closed loop liquid cooling system for servers following an iterative and Agile product development process
- Developed injection molded parts with novel assembly and sealing methods to reduce cost and improve thermal performance
- Designed and performed tests to validate cooling system design requirements, reliability, manufacturing methods, and performance
- Created and performed factorial design experiments to optimize micromachining process parameters

**Mechanical Engineer, Labby Inc.** | Cambridge, MA

2/22 - 8/22

- Redesigned an IoT milk analysis device from a prototype to a commercially ready and rugged industrial product, reducing part count by 50% and manufacturing cost by 75% while improving assembly and robustness
- Designed and performed validation and reliability tests for the product
- Developed a production line for low-volume assembly and test of the device
- Prototyped and developed a proof of concept for an industrial electromechanical product that interfaces an optical sensor with dairy farm equipment through the use of microcontrollers, valves, and sensors

**Project and Facilities Engineering Intern, Perrigo New York** | Bronx, NY

6/21 - 8/21

- Designed an alarm system to ensure adequate fluid flow in pharmaceutical product-critical equipment
- Developed SOPs and tools to aid technicians in the maintenance and operation of a USP grade reverse osmosis water purification system
- Analyzed and improved a manufacturing line as part of a continuous improvement program to improve uptime from 35% to 70%

**Manufacturing Engineering Intern, Dyna-Empire, Inc.** | Garden City, NY

6/18 - 8/18, 5/19 - 7/19

- Designed and updated models and drawings for aerospace parts to improve manufacturability
- Created GCode for CNC machining equipment to produce flight-ready aerospace components within a 0.0005" tolerance
- Developed software to automate administrative processes that saved 3 hours of work each day

## SKILLS

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### Software

SolidWorks, SolidWorks PDM, OnShape, Creo Pro/E, MATLAB, Fusion360, CAMWorks, MiniTab, AutoCAD, Simulink, Python, Object-Oriented Programming, ANSYS, SQL, Website Development, Microsoft Office, C++

### Engineering

GD&T, Tolerance Analysis, Injection Molding, 3D Printing, Sheet Metal, Welding, Fabrication, Manual and CNC machining, Finite Element Analysis, Arduino, PCB design, Electronics, Electro-mechanical systems, Prototyping, Mechanical Troubleshooting and Repair, Technical Writing, Agile project management, Design for Manufacturing and Assembly