William Cusato

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EDUCATION

Tufts University | Medford, MA Expected: May 2026
Bachelor of Science in Mechanical Engineering with Minor in Computer Science
GPA: 3.95, Dean's List: Fall 2022, Spring 2023, Fall 2023, Spring 2024
Coursework: Materials and Manufacturing I, Mechanics I - Statics, Mechanics II - Dynamics, Engineering Design I, Differential Equations, Thermal Fluid Systems I, Data Structures, Algorithms, Discrete Mathematics

WORK EXPERIENCE

Type One Energy Group | Woburn, MA May 2024 - August 2024
Cryogenic Engineering Intern

- Designed cryogenic magnet testing facilities for use with both liquid nitrogen and cryogenic helium
- Tested and analyzed superconducting tape and cables to measure degradation of critical current
- Utilized Ansys to simulate thermal strains and stresses on components introduced to cryogenic temperatures
- Devised cryogenic helium-cooling arrangements for thermal shields that effectively maintain low temperatures
- Wrote technical specifications and statements of work to use in the procurement of items worth over $10,000
- Presented clearly and effectively in large-scale design reviews on work crucial to the development of stellarators

Tufts University School of Engineering | Medford, MA September 2024 – Present
Course Assistant, ME10 - Material and Manufacturing

- Grade homeworks in a timely manner belonging to over 130 students on a bi-weekly basis
- Attend and participate in regular meeting with fellow course assistants and Tufts University professors

PROJECTS

Production of Model Prosthetic Running Blade

- Modeled a scaled prosthetic running blade in SolidWorks based on drawing dimensions
- Designed and ran multiple Finite Element Analysis simulations to test the impact of a human running stride
- Prototyped and tested plastic parts with multiple filaments efficiently using Markforged and Prusa 3D printers
- Utilized an Instron Compressive and Tensile Machine to test the validity of FEA simulations

Handheld Sewing Machine Product Decomposition

- Modeled Each individual piece of the product in SolidWorks and assembled the product in SolidWorks
- Disassembled the product to further understand the inner mechanism and design choices
- Studied the design choices of the product heavily through user interviews, observations and task analysis

ACTIVITIES

Cross Country / Track and Field | Tufts University | Medford, MA August 2022 – Present
Long-Distance Runner

- Devote over 20 hours a week to practice, meetings and competition to maintain strong performance
- Contributed 5 points to lead Track and Field team to its second conference championship in a row

WMFO, Tufts Freeform Radio | Tufts University | Medford, MA September 2024 – Present
Radio Host

- Prepare, and host a weekly, one hour collaborative radio show called 'Affective Meltdown'
- Volunteer 10 hours a semester towards the improvement and maintenance of the WMFO studio

TECHNICAL SKILLS AND INTERESTS

CAD and Simulation Applications: Intermediate in SolidWorks, NX, Onshape COMSOL and Ansys
Computer Languages: Proficient in C++ and Java, Intermediate in Latex and HTML
Interests: Hiking, Reviewing and Critiquing Music, Running, Learning about Italian Culture and Language