

Brett Cavanaugh

brettwc29@gmail.com | (978) 799-3598 | linkedin.com/in/brett-cavanaugh/ | sites.google.com/view/brett-cavanaugh/

EDUCATION

Tufts University, Medford, MA

Expected May 2027

Bachelor of Science in Mechanical Engineering, Minor in Engineering Management

GPA: 3.34 | Dean's List

Relevant Coursework: Managerial and Technical Communication, Materials & Manufacturing, Mechanics

Fall 2025: Electronics & Controls I, Engineering Design II, Thermal Fluid Systems II

EXPERIENCE

Tufts University Department of Mechanical Engineering

Tufts University

Learning Assistant

Sep 2025 – Present

- Lead one lab section of Materials & Manufacturing I, where students gain proficiency in computer-aided design software such as SolidWorks, and are trained on various machines in the mechanical engineering lab.
- Collaborate with fellow learning assistants and the supervising faculty to develop assignments and presentations.
- Ensure all students in my section feel included while also fostering a supportive environment that encourages questions and active learning.

Tufts Students for Exploration and Development of Space (SEDS)

Tufts University

President, Rocketry Team Logistics Lead & Member, Secretary

Sep 2024 – Present

- Represent and advocate for the Tufts SEDS chapter beyond the Tufts Engineering community, including at Tufts Community Senate Allocation Board meetings.
- Collaborate with the Director of Finance to manage spending across the project teams within SEDS while also maintaining a comprehensive understanding of all the club's various teams involved.
- Designed, built and launched an 70-lb, 11-foot rocket for the International Rocket Engineering Competition (IREC) in Texas against universities from around the globe.
- Utilized Onshape to design several integral parts for the rocket, including the charge wells in the bulkhead and thrust plates.
- Fabricated personal rockets to earn my L1 and L2 certifications from the National Association of Rocketry.
- Coordinate and manage monthly rocket launches while maintaining spreadsheets with important team data.
- Organized a team trip to the International Rocket Engineering Competition (IREC) for twenty members.
- Recorded executive board meeting minutes and organized official documentation while noting attendance numbers for the executive board and general SEDS meetings.
- Coordinated trip logistics to the SpaceVision conference for over fifteen members.

Tufts American Society of Mechanical Engineers (ASME)

Tufts University

President

Sep 2023 – Present

- Prepare and facilitate club events while collaborating with other club leaders to create an inclusive and welcoming community for Tufts mechanical engineering students.
- Managed budget with the treasurer and coordinated trip logistics for ten members to the IMECE conference.

Pro AV Systems

Chelmsford, MA

Junior Engineer

Sep 2020 – Present

- Audited previously completed projects to ensure the company was accurately quoted and billed its customers.
- Generated financial reports for evaluation by company leadership using Microsoft Excel to present at weekly sales meetings.
- Evaluated and made edits to schematics for audiovisual projects.
- Kept inventory of products in the company's D-Tools catalog and sold anything left on eBay.

PROJECTS

Community Building in Playa Blanca, Engineering Design Abroad, Tufts University

Jan 2025 – May 2025

- Designed and reconstructed a more accessible for motorcycles and pedestrians entrance to the beach.
- Communicated and created relationships with community members to ensure the entrance fits all their required needs.

Material Analysis in a FEA Model, Materials & Manufacturing I, Tufts University

Dec 2024 – Dec 2024

- Generated stress-strain curves in SolidWorks by testing dog bone specimens using an Instron machine.
- Analyzed the behavior of the different materials in both linear and elastoplastic models, which allowed the exploration of practical applications and limitations of the models in engineering design.

SKILLS

Machinery: Laser Cutter, 3D Printer, Lathe, Bridgeport Mill, Waterjet

Software: SolidWorks, Onshape, AutoCAD, Fusion, OpenRocket, KiCad, Microsoft 365, Google Workspace

Programming Languages: Python, JavaScript, MATLAB