Drake Elliott

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Education

Massachusetts Institute of Technology (MIT) **Cambridge, MA**
B.S. in Mechanical Engineering, GPA: 4.8/5.0 *Class of 2026*

Relevant Coursework

- Dynamics and Control II
- Electronics for Mechanical Systems II
- Design and Manufacturing II
- Thermal-Fluids II
- Measurement and Instrumentation
- Electromechanical Design
- Mechanics and Materials II
- Product Engineering

Experience

GentleCare **Somerville, MA**
Mechanical Engineering Intern *July - September 2025*

- Engineered and rapidly prototyped critical components for a soft robotics product specializing in patient transfer and repositioning to reduce required human labor and strain
- Led design discussions and made critical technical decisions for the company's flagship product based on core mechanical engineering principles and internal research and development
- Verified flagship product performance and showcased demonstrations for potential new investors and company partners

d'Arbeloff Robotics Lab **Cambridge, MA**
Thesis Student *February - May 2026*

- Designed and rapidly prototyped an active pneumatic steering articulation system for soft growing "vine" robots, enabling dynamic, multi-directional navigation through highly constrained and complex environments
- Developed kinematic models in MATLAB to simulate and predict bending behavior during deployment

Undergraduate Researcher *February 2024 - May 2025*

- Contributed to the design, fabrication, and analysis of an exercise assistive robot to help the elderly and disabled with balancing and fall prevention as they perform daily physical exercises or rehabilitation movements
- Performed static and workspace analysis of the robotic linkage assembly in MATLAB and integrated high-precision encoders and load cells for accurate measurement of position and applied forces

The Red Laboratory **Cambridge, MA**
Undergraduate Researcher *January - December 2023*

- Developed a working prototype of a cryogenic pump intended for space application and research by employing 3D design software and fabrication techniques
- Designed and fabricated a testing loop to accurately measure various parameters of the pump to optimize performance
- Addressed design challenges such as cavitation prevention and vapor phase minimization by leveraging existing literature

Leadership

Division I Varsity Rowing **Massachusetts Institute of Technology**
Athlete & Team Captain *Fall 2022 - Present*

- Led a team of over 30 student-athletes by serving as primary communication between coaches and teammates, including discussions about competitive goals and behavior expectations
- Mentored athletes and acclimated members to team culture by modeling standards for performance and professionalism
- Competed as a rower in a national and international-qualifying boat, and engaged in rigorous training for 18 hours/week year-round

Gordon-MIT Engineering Leadership Program **Massachusetts Institute of Technology**
Gordon Engineering Leader *Fall 2024 - Spring 2026*

- Coached students in leadership development program focused on building effective leaders of industry engineering teams
- Actively practiced leadership, teamwork, and communication skills in an engineering context; complementing MIT's technical coursework

Publications

Spring Loaded Double Pantograph: A Robotic Mechanism for Safe Balance Training **August 2025**
Ravi Tejwani, John Bell, ***Drake Elliott****, Cameron Wright, Peter Wayne, Paolo Bonato, Harry Asada*
Accepted and Presented at IEEE RO-MAN 2025, Eindhoven, Netherlands, *Kazue Tanie Award Finalist*

Technical Skills

Software: CAD (SolidWorks, Fusion 360), MATLAB, C++, Processing, Photoshop
Machine Shop: Mill, Lathe, CNC, CAM, Band Saw, Drill Press, Miter Saw, Table Saw, Soldering, 3D Printing, Sewing