

B EPSTEIN-REYES

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Education

Tufts University, Medford, MA Expected Graduation: May 2028

B.S., Double Major in Mechanical Engineering and Physics • GPA: 3.50 / 4.00

Relevant Coursework: Engineering Design, Dynamics, Materials & Manufacturing, Differential Equations, Electronics & Controls, Thermodynamics, Intro to Computing for Engineering.

Leadership & Engineering Experience

Tufts Electric Racing Team (Formula SAE), Medford, MA

Chief Mechanical Engineer *May 2026 – Present*

- Oversee mechanical design and manufacturing across vehicle subsystems, enforcing design standards and FSAE rules compliance.
- Direct mechanical sub-teams, overseeing SolidWorks FEA simulations and precision tolerance stack-ups.
- Train composites members on X-Carve CNC router operations to produce precision foam molds for composite layups.
- Establish manufacturing schedules, quality control, and design reviews to drive completion of the new electric race car.

Drivetrain Project Lead / Mechanical Team Member *Sep. 2024 – May 2026*

- Engineered power transmission assemblies, using FEA to optimize safety margins and structural strength under load.
- Designed and fabricated custom pedal box and brake assemblies, balancing driver ergonomics and performance under dynamic loads.
- Programmed a MATLAB steering simulation calculating wheel angles and Ackermann percentages while cornering.
- Executed hands-on MIG welding, manual lathe turning, precision milling, and waterjet cutting for sub-assemblies.

Facility Supervision & Technical Fabrication

Nolop FAST Facility, Tufts University School of Engineering, Medford, MA

"Red Zone" Supervisor *Sep. 2025 – Present*

- Supervise woodshop and advanced machining operations, maintaining equipment safety and assisting student makers.
- Prepare safety curriculum to train students on table saws, miter saws, band saws, and drill presses.
- Gain hands-on machining expertise operating the X-Carve CNC router, setting up workholding, tool offsets, and G-code.

Pre-College Program Technical Assistant *Summer 2026*

- Supported instruction across Engineering Investigations, Design Lab, and Music Engineering summer programs.
- Led woodworking workshops and guided participants through rapid prototyping, 3D printing, and laser cutting.

Technical Skills

- **Software & CAD:** SolidWorks (FEA), Onshape, Fusion 360, MATLAB, Python, MS Office.
- **Machining & Tools:** X-Carve CNC Router, Manual Lathe & Mill, Waterjet, Laser Cutter, Woodshop Power Tools.
- **Fabrication & Prototyping:** Toolpathing & G-Code, Sheet Metal Forming, 3D Printing, MIG Welding, DFM.

Interests

CNC machining & composite tooling; aerospace structures & robotics; alto saxophone; sketching & visual arts.