

## Education

**The University of Texas at Austin** – BS in Mechanical Engineering

Expected Graduation: May 2027

## Projects

**Portfolio link:** <http://bit.ly/40etLmI>

Features carbon fiber parts, high-voltage testing, CAD/FEA design, and prototyping of mechanical/aerospace systems

## Technical skills & Certifications

**Manufacturing & Testing:** CNC Machining, Composite Fabrication, Additive Manufacturing, Laser Cutting, Tolerance Stack-up, GD&T, Finite Element Analysis, and Design for Manufacturability

**Software & Design:** SolidWorks, Femap, Autodesk Inventor, AutoCAD, and MATLAB

**Certifications:** Solidworks Cad Design Associate (CSWA), OSHA 30-Hour General Industry Safety, and UT Austin Machine Shop

## Experience

**Process Engineering Co-Op**, Collins Aerospace (RTX) – Durham, NH

Jan 2026 – Aug 2026

- Incoming intern for the spring/summer 2026 term

**Continuous Improvement Engineering Co-Op**, Emerson – Sherman, TX

Jun 2025 – Dec 2025

- Engineered a removable spacer for a 200-ton hydraulic valve tester, applying beam theory, stress calculations, and weld design principles to restore functionality for smaller valves, increasing testing capacity by avoiding capital expenditure
- Designed and assembled a modular aluminum extrusion housing with integrated shelving and a hinge access door, replacing old equipment to improve durability, organization, and ease of maintenance while enhancing shipping workflow efficiency
- Created poka-yoke quality control templates for laser-engraved tags, enabling material handlers to verify proper alignment and reject faulty vendor tags; reduced wasted tags and rework by 5%, streamlining inspection and improving consistency
- Led lean/5S+1 continuous improvement initiatives with cross-functional teams in Engineering, Quality, Maintenance, Logistics, and Production, improving safety, reducing waste, and enhancing process reliability/product quality

**Composites Engineer**, FSAE Longhorn Racing (Internal Combustion) – Austin, TX

Jan 2023 – Jan 2025

- Founded the composite subsystem team and standardized layup/testing methods, enabling repeatable fabrication cycles that reduced production time by 1.5x and cut component weight by up to 70%
- Manufactured and validated carbon fiber aerodynamic and structural parts (airfoils, nose cones, undertrays, steering wheels, mufflers) using prepreg/ dry weave layups, custom molds, and mechanical testing to confirm stiffness/ durability
- Contributed to the design and validation of a full carbon fiber monocoque chassis, applying FEA and failure analysis to enhance structural integrity while meeting FSAE safety and manufacturability requirements

**Systems Design and Integration Engineer**, EcoCar EV Challenge – Austin, TX

Feb 2025 – May 2025

- Developed and executed high-voltage test procedures for insulation resistance, ground fault insertion, and bleed-down tests, improving validation efficiency and safety compliance by 30% during vehicle inspection
- Prototyped and integrated high-voltage wiring and connector designs for the 2023 Cadillac LYRIQ platform, ensuring manufacturability, serviceability, and adherence to competition safety and reliability standards

**Mechanical Engineer**, Robomaster Robotics – Austin, TX

Aug 2024 – May 2025

- Designed and manufactured mechanical components for competitive robots, including drive modules, shooting mechanisms, and structural assemblies, ensuring manufacturability, durability, and weight compliance
- Used GD&T principles in SolidWorks to validate design intent and prevent assembly/alignment issues before fabrication
- Machine and assembled parts using CNC, laser cutting, and additive manufacturing, applying DFM principles

**President**, Modul-Air Solutions – Austin, TX

May 2024 – May 2025

- Founded an engineering organization focused on designing modular drone systems, enabling mission profiles (surveying, delivery, photography) through interchangeable payload modules and common chassis architecture
- Developed a carbon fiber airframe with integrated high-power propulsion and electronics, applying structural design and manufacturing principles to balance durability, weight, and reconfigurability

**Undergraduate Researcher**, Aerospace Systems – Austin, TX

Aug 2022 – Dec 2022

- Designed and modeled aerospace cable management solutions in SolidWorks, applying morph matrix concept generation, material selection, and design for manufacturability principles to optimize subsystem routing and maintainability