

Thomas Anderson

(435) 764-9227 • St. George, Utah 84770 • tband99@gmail.com • [linkedin.com/in/thomas-b-anderson](https://www.linkedin.com/in/thomas-b-anderson)

EDUCATION

Bachelor of Science in Mechanical Engineering

May '26

Utah Tech University | St. George, Utah

Relevant Coursework: Modern Controls, Autonomous Vehicles, Controls, Fluid Mechanics, Machinery, Thermodynamics, Prototyping

HONORS & AWARDS

- INSPIRE Scholar, National Science Foundation (NSF)
- Full-Tuition Transfer Scholarship, Utah Tech University

PROFESSIONAL EXPERIENCE

UAV Technician Intern

Jul '25 - Aug '25

Vector | Draper, Utah

- Assembled and integrated military-grade quadcopter UAV systems, including frame construction, flight controller stacks, and sensor payloads, while supporting the transition from prototype to production
- Conducted flight testing operations and post-flight analysis to validate system performance, identify design improvements, and document procedures for prototype iterations
- Collaborated with engineering teams to modify and refine UAV prototypes, translating design specifications into manufacturable solutions and streamlining production processes

Mechanical Engineering Intern

May '23 - Jan '25

Wilson Connectivity | St. George, Utah

- Used SolidWorks to innovate and implement design concepts that significantly enhanced the durability of antenna mounts in consumer electronics projects
- Improved testing by designing fixtures for PCB boards and signal boosters, boosting efficiency, workflows, and accuracy
- Utilized a variety of prototyping tools including 3D printing, CNC machining, drill press, and band saw during the creation of new test fixtures

Materials Intern

May '22 - Aug '22

RAM Aviation Space and Defense | St. George, Utah

- Collaborated with manufacturing engineers to conduct cost analysis and actively contributed to cost reduction initiatives
- Interfaced closely with manufacturing engineers and planners to optimize the pneumatics assembly area, leading to a significant efficiency improvement
- Assembled an average of 10 kits daily, each comprising varying quantities of parts ranging from tens to thousands, demonstrating efficiency and adaptability in production processes

RESEARCH

CubeSat ADCS Development Capstone | Utah Tech University

Aug '25 - Apr '26

Controls Team Member | Utah Water Conservancy Imaging Mission

Developing attitude determination and control system (ADCS) for a modular CubeSat platform designed to enable annual missions with interchangeable payloads. Leading early-phase MATLAB simulation development integrating IMU, magnetometer, sun sensor, and star tracker data for attitude estimation and control. Contributing to a scalable architecture that allows future teams to focus on mission-specific payloads while leveraging established control infrastructure.

RFID Based Tracking System | Utah Tech University

Aug '24 - Dec '25

Mechanical Design | National Science Foundation

Developing RFID-based system to provide real-time visitor density data for large venues as part of NSF-funded interdisciplinary research program. Leading enclosure design for RFID reader modules and conducting system testing to validate tracking performance across various environmental conditions. Collaborating with computer science and electrical engineering students to integrate hardware, embedded systems, and data visualization software into functional prototype.

CONFERENCE PRESENTATIONS

Anderson, T., Dockstader, L., Espinoza, A, & Montalvo, A. (2025, April 10-13) *RFID Wristband Tracking System* [Poster Presentation]. Rocky Mountain Biomedical Symposium, St. George, Utah, United States.

Anderson, T., Dockstader, L., Espinoza, A, & Montalvo, A. (2025, April 18) *RFID Wristband Tracking System* [Poster Presentation]. Trailblazer Symposium, St. George, Utah, United States.

PROJECTS

Autonomous Drone Project

Self-directed project to develop practical skills in autonomous systems by modifying an FPV drone to run ArduPilot. Teaching myself ROS and Gazebo for simulation-based development of autonomous behaviors. Working toward implementing obstacle detection algorithms with future goals of integrating computer vision for perception and navigation

Autonomous UAV Control and Path Planning

Implemented and optimized an RRT algorithm for autonomous UAV navigation; improved path efficiency via dynamic tree restructuring and neighbor-based optimization. Built and tested a full autopilot stack including modeling, control, estimation, guidance, and navigation using MATLAB in simulation and live quadcopter flight tests

Turbo Regatta

Designed and built an electric propulsion system for pedal boats with cross-disciplinary team; led waterproof (IP28-rated) mechanical UI/UX design and integrated ergonomic controls with digital interfaces; competed successfully in Engineering Design Day race and maneuverability challenges

LEADERSHIP & SERVICE

Mountain Biking Club VP	Jan '22 - Apr '23
Eagle Scout	Mar '17

SKILLS

Design & Simulation : SolidWorks, OnShape, Fusion 360, ANSYS, ROS

Fabrication: Laser Cutting, 3D Printing, CNC Machining/Operations, Manual Mill, Manual Lathe, Soldering, Welding

Programming: MATLAB, Arduino