

EXPERIENCE

Armada Aeronautics, San Mateo, CA



August 2020-Present

Mechanical Engineering Intern

- Actively involved in full design cycle of a fixed-wing VTOL passenger aircraft, owning projects such as designing joints for carbon fiber tube airframe structure; iteratively redesigning/simulating/testing for strength and weight optimizations
- Maintaining documentation of production in per both internal quality systems and FAA AC 20-27G regulations
- Testing propulsive systems, characterizing performance, presenting results
- Developing comprehensive, parametric CFD study of aircraft in transition flight, continuously running simulations and processing results
- Inspecting final products to evaluate compliance with defined quality requirements
- Soldering of battery harnesses, XT60/90 connectors, in-line components, PCB boards
- Training new interns, creating a knowledgebase of fundamental concepts and key skills

EDUCATION

University of Vermont, Burlington, VT (ABET-accredited program)



Bachelor of Science in Mechanical Engineering (BSME), *Graduated May 2020*

CERTIFICATIONS

- FE Exam issued by NCEES, passed May 2020 [!\[\]\(05a3150ca7eafd44fce8deaa48838121_img.jpg\) See credential](#)
- STK MASTER Certification issued by AGI, May 2019 [!\[\]\(6ce459b4dcae8e7d92253a855b1dd385_img.jpg\) See credential](#)
- STK Certification issued by AGI, November 2018 [!\[\]\(9bc524f09d89ff34ea77fbf6b37ad4f3_img.jpg\) See credential](#)

SKILLS

Shop: 3D Printing, CNC Router/Mill, Tig/Stick welding, Riveting, Jig design, Interpreting drawings

CAD/Image: SolidWorks, Photoshop, Illustrator, GIMP

Simulation: Ansys Workbench (Fluent, CFX, Space Claim), MATLAB/Simulink

Aero/Drone: PX4, Gazebo, OpenCV, ROS, MAVROS, CAN bus, XFLR5, Rib/Spar fabrication

Electronics: Soldering, PCB layouts, High voltage circuit debugging, VESC, Oscilloscope, Arduino

Engineering: Design verification testing, Manufacturing process development, Test planning

Programming/Tech: C++, Python, Jupyter Notebooks, HTML, CSS, Markdown, JavaScript, Linux, git

PROJECTS

Satellite Dynamics Testbed

Jan 2018- May 2019

- Researched, designed, and built small satellite dynamics testbed with a primary goal of testing cold gas propulsion systems and a secondary goal of serving as a foundation to develop ADCS systems
- Modeled inertial characteristics of the testbed in SolidWorks, developed and executed static/dynamic validation procedures
- Designed and prototyped modular framework system to standardize component attachment (sensors, batteries, etc)

Air Bearing Research

Aug 2018- Dec 2018

- Utilized CFD methods alongside 3D-printing software to develop functional spherical air bearings, a strong effort was made to meet performance requirements under manufacturing limitations
- Designed framework to quickly generate and test different orifice-array-patterns
- Characterized static/dynamic behavior performance with tests
- Developed a low-cost method to obtain kinematic data with computer vision