Michael Beath

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Senior Aerospace Engineering Student graduating June 2025 with hands-on aviation maintenance experience, a strong technical foundation, a longstanding interest in aircraft systems, and a drive to deepen my expertise.

Education

Cal Poly, San Luis Obispo – BS in Aerospace Engineering – GPA: 3.46 June 2025

Coursework: Aircraft Design; Flight Test; Flight Performance; Propulsion Systems; Sensors, Actuators, & Controls

- Conducted neutral point flight testing of RV-7A as Primary Flight Test Conductor utilizing test cards, IADS, & briefings
- Analyzed aerodynamic characteristics of propellers, airfoils, and blunt bodies in subsonic and supersonic wind tunnels
- Calculated RV-7A performance such as level flight, climb, and descent using a MATLAB engine model & flight test drag

Aerospace Experience

Technician, ESAERO – San Luis Obispo, CA Jan. 2025 – Mar. 2025

- Contributed to the development of small UAS aerospace system manufacturing in a fast-paced work environment
- Supported the manufacturing team with the fabrication of composite parts, wiring harnesses, & test stands

Propulsions Team, Design, Build, Fly Cal Poly – San Luis Obispo, CA Nov. 2023 – Present

- Contributed to the construction and on-site execution of the team's 2024 aircraft at SAE Aero Design West
- Responsible for Propeller Motor configuration selection using models developed in MATLAB
- Accountable for conducting static and dynamic testing of Propeller Motor configurations to validate model data

VISTA/Learjet Mechanic Intern, CALSPAN – Edwards AFB, CA May – Sept. 2022 & July – Sept. 2023

- Enhanced CALSPAN's support of the USAF Test Pilot School by contributing to aircraft maintenance & operations
- Facilitated testing and operations with the X62A VISTA & modified Learjet for advanced flight testing and research
- Handled flight operations, such as launch, recovery, & refueling of a modified Learjet 25
- Fabricated wiring harness used for ground testing Lockheed Martin Pod equipment onto the X-62A VISTA platform

Shop Assistant, Courtney Aviation – Columbia, CA Sept. 2017 – July 2019 & June – Aug. 2021

- Performed regular maintenance on the following aircraft specializing in Wildland Fire Aviation Services: Twin Commander 690A, 690B, 500B, Helio Courier, Cessna 172, Cessna 182, and Cessna 210
- Fabricated & installed radio wiring harness to the 690B suitable for Wildland Firefighting coordination
- Created new workstations for specialized tasks to increase shop capabilities and enhance performance
- Supported maintenance away from the primary facility when active wildfires necessitated remote operation

Skills

Programs: IADS, MATLAB, Python, Visual Studio Code C++, SOLIDWORKS, Onshape, Excel, ANSYS Fluent, XFLR5, AutoCAD, Arduino IDE, PuTTY, GitHub, DCS World, QGroundControl

Skills: Technical Report Writing, Soldering, 3D Printing, Wind Tunnel Testing, Lathe Turning, Wire Harness Fabrication, Visual Inspection, Reading & Interpreting Maintenance Manuals

Projects/Accomplishments

Home Linux Server June 2024

- Repurposed a tablet computer with a broken screen to a low power Ubuntu Linux based server
- Configured server to run multiple services 24/7 including remote file storage, video game servers, and home assistant

Home Automation Integration July 2024

- Installed Home Assistant on personal Linux server to integrate custom automation independent of cloud services
- Programmed ESP8266 controller board with hall effect sensors to detect open/closed state of door to control lights

Technician Amateur Radio License April 2024

- Earned a Technician Class HAM radio license, demonstrating capabilities, excellent radio practices, and technical skills
- Regularly demonstrated technical proficiency with regular radio NET meetings with the Cal Poly Amateur Radio Club