AVERY ROSE MILLER

U.S. Citizen
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OBJECTIVE

To work full-time in the discipline of Aeronautical Engineering with a focus in aircraft and spacecraft design.

EDUCATION

Purdue University, West Lafayette, Indiana — August 2020 – December 2023
Bachelor of Science in Aeronautical and Astronautical Engineering
Relevant Coursework: Fluid Mechanics, Fluid Dynamics, Mechanics of Materials, Thermodynamics, and Structural Analysis
Technical Skills: MATLAB, XFLR5, Fluent, Python, and C

RELEVANT EXPERIENCE

Uniform Sierra Aerospace/Purdue UAS Research and Test Facility, Purdue University AFRL — August 2023 – Present
Design and Fabrication Researcher

- Leads the design, fabrication, and testing of unmanned aerial vehicles intended for search and rescue use.
- Leads mechanical team in charge of frame design and software integration, working alongside individuals designing the SLAM algorithm to ensure that software needs are being met by hardware.
- Practices fabrication using CNC routers, 3D printing, and laser cutting machinery.

Academic Success Center, Purdue University — January 2022 – December 2023
Supplemental Instruction Leader, CS159, C Programming

- Instructed a class of 2500+ first-year engineers on C programming applications to real-world devices.
- Created and explained problems on topics such as recursion, memory allocation, and error diagnosis.

Purdue University INSPIRE Research Institute for Engineering, Purdue University — August 2021 – December 2023
Engineering Project Team Lead

- Collaborated with key researchers and faculty to collect and analyze data on engineering toys and user impact.
- Led the conceptualization, development, and distribution of Engineering Gift Guide to 50+ countries.

DESIGN PROJECTS

Introduction to Aerospace Design, Purdue University — January 2022 – May 2022

- Designed a launch vehicle capable of quickly and effectively placing satellites into orbit to provide internet connection to areas with low internet access.
- Performed cost and risk analyses of launch vehicle to determine how to best meet consumer needs.
- Developed MATLAB code to estimate orbits, delta V, and propellant losses.

Spacecraft Design, Purdue University — August 2023 – December 2023

- Designed a satellite constellation capable of using GNSS-R signals to measure ocean wind speed for NOAA.
- Acted as project manager for group of ten students, as well as structures specialist. Designed a full satellite in CAD, practicing usage of FEA on the design, and developed I&T plans.

LEADERSHIP

Purdue Association for Computing and Machinery (ACM) — August 2020 – December 2023

Vice President, August 2023 – December 2023

- Elected to represent ACM at conferences, online, and at Tech Talks. to recruit CS and Engineering students.

Treasurer, August 2022 – August 2023

- Managed a budget of $15,000+ for five special interest groups under the ACM umbrella.