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, IN   August 2020 - December 2023
Bachelor of Science in Aeronautical and Astronautical Engineering
Relevant Coursework: Fluid Mechanics, Fluid Dynamics, Mechanics of Materials, Thermodynamics, 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.

Purdue University 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
- Collaborates with key researchers and faculty to collect and analyze data on engineering toys and user impact.
- Leads 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, performing 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 5 special interest groups under the ACM umbrella.