

Risha Manthini
301-366-6554, rmanthin@terpmail.umd.edu
Poolesville, MD

EDUCATION

University of Maryland, College Park

Expected May 2029

Bachelor of Aerospace Engineering,

- College Park Scholars Program
- Recipient of the Rales-O'Neill Scholarship

Poolesville High School, Poolesville, MD

June 2025

- Humanities Magnet Program
- 4.0 Unweighted GPA, 4.91 Weighted GPA
- Wilson Award for Literature, Best Student in Photography, Meritorious Award for Service

RELEVANT PROJECTS

Hybrid Electric Engines in General Aviation Aircrafts, Poolesville, MD

May 2024 - May 2025

AP Research Capstone

- Senior thesis on effectiveness of implementing a 1997 Toyota Prius hybrid engine into a Cessna 152
- Analyzed water-cooling systems, regenerative braking, and hybrid configurations to determine ways to modify a Cessna 152 to support a hybrid engine in terms of feasibility and performance
- Evaluated engineering challenges including weight, power-to-weight ratio, safety, and airworthiness to propose solutions to adapt practical hybrid aircrafts.

Over-Terrian Vehicle, College Park, MD

September 2025 - Present

Project Manager

- Collaborating with a team of 8 classmates to design, build, and test a vehicle to meet parameter requirements.
- Use precision to deliver hydrogen and oxygen atoms to the correct fuel cells, identify output voltage, and indicate if the fuel cell is outputting the correct power using Python and ESP32 microcontroller.

Quadrotor Biplane Drone, College Park, MD

September 2025 - Present

Team Member

- Collaborating with a team to build an innovative drone design using various methods including 3-D printing, carbon fiber pressure/heat molding and circuitry construction
- Use a flight control configurator to test and modify functionality of components and fly drone at the UMD fearless flight facility.

EXPERIENCE

Private Pilot Student

Present

- Completed 45 hours of flight training, gaining skills in communication between Air Traffic Control and other pilots, navigation, and airplane operations
- Passed the FAA private pilot license written exam

Principles of Engineering & Design, Poolesville High School

August 2024 - June 2025

Student Intern

- Assisted students in engineering lessons, graded assignments, and prepared by learning concepts in advance.
- Coordinated materials, engineering kits, and resources with the instructors in the science department to support hands-on projects and aided with troubleshooting
- Planned and organized three field trips using Microsoft Office and contributed to planning in monthly meetings.

VBS Summer Camp, Spencerville Church

June 2018 - 2025

(30 hours, one week annually)

Administration Assistance, Registration Coordinator

- Managed camper sign-in/out, attendance records, main point of communications with parents and supervisors.
- Coordinated daily operations, including materials distribution, scheduling, and activity and meal/snack logistics.

ORGANIZATION MEMBERSHIPS

- Women in Engineering, Asian Women in Flight, IEEE, AIAA, Terrapin Rocket Team