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Education

Montgomery Blair High School (4.0 GPA / 4.90 Weighted) Science, Mathematics, and Computer Science Magnet Program	2021 - present
STEM Courses at Blair HS:	
Math: Algebra 2, Functions (precalculus), Mag Analysis (calculus), Multivariable Calculus, Applied Statistics, Differential equations, Linear Algebra Computer Science: Foundation of Computer Science, Algorithm Data A&B (Java), Analysis of Algorithms, Computer Programming 3 Advanced Topics (Video Game Programming) Science: Advanced Physics, Chemistry, Biology, Earth Science	
Harvard University CS50 Computer Science Course (online)	2021
Johns Hopkins Center for Talented Youth Pre-Algebra I, Algebra I	2018 - 2019
American School of Milan , Italy	2018 - 2019
Lucy Barnsley Elementary School , Magnet Program	2016 - 2018

Leadership Experience

Hack Club, Blair HS President Blair's Hack club (one of the most popular clubs at Blair HS)	2023 - present
MC Hackathon (https://www.mchackathon.org/) Head Organizer of the MC Hackathon <ul style="list-style-type: none">- Directed the development and launch of the hackathon- Managed a team of over 20 organizers- 120,000 views on Instagram reel	2023
Programming Club, Blair HS Co-Founder of a game development club <ul style="list-style-type: none">- Developing a horror game using the Unity platform	2022 - 2023

Skills

Biomechanical Research

- Research in training improvement using Biomechanical feedback (BMF) systems

Programming Languages

- MATLAB, C++, Java, HTML, CSS, Python, SQL, React

Engineering

- Programming peripheral devices (e.g., accelerometer, GPS, gyroscope) on the Raspberry Pi platform using Python

Data Analytics

- Time series predictive modeling, using machine learning regression models with Long short-term memory (LSTM) networks and LOESS.

Accomplishments

AMC 10 competition (Mathematical Association of America)	2021, 2022
UMD math competition (advanced to the second round)	2022
USA Computing Olympiad	2019 - 2022
F = MA, Montgomery Blair HS Sponsored Physics Tournament	2022
MBIT, Montgomery Blair HS run an International Computer Science Tournament	2020 - 2022
- 1st place winner team (2020, 2021)	
Middle School Math Team	2019, 2020
- 3rd place Middle School math team finishers in 2020	
Math Kangaroo	2016
- Runner-up	
International Math Competition, Malaga, Spain	2019
- the American School of Milan team	

Projects

Foilpal intelligent gadget (www.foilpal.com)	2022 - present
- Addressing the challenge newcomers face in maintaining balance on a hydrofoil, a gadget was devised that surpasses traditional biomechanical feedback (BMF) systems. Utilizing sensors, the system collects real-time data on the board's position and movement. The data is then processed by a machine learning model, providing predictive feedback on anticipated board states to enhance the learning process.	
BattleShip Video Game	2022 - 2023
- Developed a video game version of the popular board game Battleship with a robotic opponent using Java, HTML, and CSS.	

Internships

Verihire

July - August 2023

Maryland-based startup specializing in advanced background check services using AI

- Provided business analysis and development work using cloud technologies and Large Language models (LLMs).

Hobbies

Competitive swimming, wingfoiling, volleyball, chess, programming, and engineering.