Paul Trusov

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Education

Montgomery Blair High School (4.0 GPA / 4.90 Weighted)   2021 - present
    Science, Mathematics, and Computer Science Magnet
    Program
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   2018 - 2019
    Pre-Algebra I, Algebra I
American School of Milan, Italy   2018 - 2019
Lucy Barnsley Elementary School, Magnet Program   2016 - 2018

Leadership Experience

Hack Club, Blair HS   2023 - present
President Blair's Hack club (one of the most popular clubs at Blair HS)

MC Hackathon (https://www.mchackathon.org/)   2023
Head Organizer of the MC Hackathon
- Directed the development and launch of the hackathon
- Managed a team of over 20 organizers
- 120,000 views on Instagram reel

Programming Club, Blair HS   2022 - 2023
Co-Founder of a game development club
- Developing a horror game using the Unity platform

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

Worked at Verihire, a Maryland-based startup specializing in leveraging
AI to validate job applications by cross-checking resumes.
- Collaborated on app development using React.
- Worked with the ChatGPT's API to optimize a bot for effective communication with applicants.

Hobbies

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