Caleb Wheeler

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Education

University of Maryland, College Park

College Park, MD

Bachelor of Science in Computer Science and Mathematics (In Progress), Minor in Physics (In Progress), GPA: 3.88

May 2023

• Advanced Cybersecurity Experience for Students

Fall 2019-Spring 2023

• Banneker/Key Scholar

Fall 2019-Spring 2023

Skills

Languages Python (Proficient), Java (Proficient), C (Proficient), C++ (Basic), JavaScript (Basic)

Spoken Languages French (Maryland Seal of Biliteracy), Russian (Basic)

Technologies Linux (Proficient), Arduino/Raspberry Pi (Proficient), Ghidra (Basic), Wireshark

(Basic), AutoDesk Inventor (Proficient), Microsoft Office Suite (Advanced),

Tools Eudiometer, Cary UV Spectrophotometer, Veeco Vacuum Chamber, KLA

Profilometer

Experience

NASA Goddard Space Flight Center

Greenbelt, MD

Full-Year Intern June 2018-August 2019

- Evaluated and developed chemical processes to improve the adhesion of thermal coatings
- Quantified the effects of oxygen plasma exposure on the erasure rates of the coating
- Aided in determining the effects of variant concentrations of Lotus coating on the hydrophobicity of the paint

UMD CMS Research Group

College Park, MD

Student Researcher

October 2019-Present

- Using MadGraph, Pythia, and C++ to simulate particle collisions to potentially model experiments for the discovery of Kaluza-Klein particles
- Learned Hadoop for the purpose of file distribution across UMD's Tier 3 server.

ACES Competition Team

Greenbelt, MD

Team Member

September 2019-Present

- Utilized the Ghidra tool to do for binary analysis and exploit development.
- Utilized Wireshark to conduct network analysis and for software development to inhibit network exploitation.

Engineers Without Borders

Greenbelt, MD

Member of CAD Team

September 2019-Present

- Worked on CAD for a project involving the construction of new water infrastructure for a village in Nicaragua.
- Designed structural components of concrete supports for the water containers, and conducted stress calculations
- Designed support components for piping as well as components for maintaining constant pressure.

Projects

- Banking: Using the MERN stack, Firebase, and Plaid API to develop a personal finance application
- **Physics**: Using CERN's CMS VM and C++ to write programs that analyze quantum particles
- Android: Developed a flashcard application that permits users to make cards & mult. choice questions

Classes

• Data Structures & Algorithms, Discrete Math, Multivariable Calculus, Differential Equations, Linear Algebra, Intro to Cybersecurity I & II, Organic Chemistry I & II (High School)