Ayoub Mohamed

GitHub | LinkedIn | Portfolio

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SUMMARY

IT student at George Mason University seeking Summer 2026 internship in software engineering, cybersecurity, or IT infrastructure. Skilled in Python, C++, and Java, with hands-on experience building system-level tools for performance, privacy, and networking. Developed and deployed 5+ original utilities across Windows, web, and embedded environments.

TECHNICAL SKILLS

Languages: Python, C++, Java, JavaScript, HTML, CSS

Frameworks & Tools: Flask, Node.js, Boost.Asio, Git, VS Code, Linux, Windows

Focus Areas: TCP/IP tuning, browser tracking detection, executable generation, asynchronous I/O,

local-first web control

Environments: GitHub, CLI, open-source workflows, project automation

PROJECTS

SpyView – Local Browser Tracker & Fingerprinting Monitor

- Developed a privacy-focused browser extension in JavaScript that detects fingerprinting and tracking attempts in real time, and assigns them a score based on risk.
- SpyView scores and logs over 5,000 known trackers client-side, classifying by risk heuristics and behavior fingerprinting.
- Delivered a fully client-side dashboard that displays all metadata and risk scoring, zero server dependency

AutoSFX Wizard - Executable Generator for Multi-File Bundling

- Created a hybrid Python/C++ CLI tool to package entire directories into .exe files, streamlining secure file delivery and automation workflows.
- Successfully bundled and executed 30+ files sequentially from one EXE for use in non local deployments.
- Built a custom CLI to streamline SFX creation allowing for customizations such as run-order, hidden execution, and file duplication management.

WINSPAR – Command-Line TCP Optimizer

- Built a Windows CLI utility to auto-tune registry-level TCP/IP settings, reducing latency and optimizing throughput for bandwidth-intensive applications.
- Improved test system throughput by up to 10% in controlled local benchmarks

ASIO Client-Server Framework – C++ Networking Core

- Engineered a non-blocking message-based client-server architecture in C++ using Boost. Asio, allowing for connection stability and scalability under concurrent load.
- Tested successfully under 100+ simultaneous client connections.
- Includes dynamic message handlers and queue-based write architecture

Desktop Tinkerer – Web-Controlled Desktop Automation

- Created, and hosted, a Flask website allowing users to select an image to be set to the host machine's wallpaper remotely, showcasing web networking skills.
- Interfaced web server with a C++ service running semi-persistently on host machine to allow for images to be retrieved by host machine from web server.

Unity Game Development – Indie PC Game

- Designed and released a full-featured 3D platformer using Unity and C#
- Released publicly with over 1,000 downloads and amassed a 2,000-follower community on Twitter through update posts.

EXPERIENCE

Peer Programming Tutor | Woodson CSHS | September 2022 – June 2025

 Provided 1-on-1 and group tutoring in AP CS A class, helping students grasp Java concepts such as recursion, syntax, and debug logic for improved performance on AP exam.

General Support Assistant (Volunteer) | Fairfax Cub Run Rec Center | April 2024 – May 2024

- Assisted 100+ visitors during scheduled events, managing transitions and sign-ins.
- Resolved visitor issues quickly and maintained schedule alignment during peak hours, reducing staff workload and ensuring smooth event flow.

General Support Assistant (Volunteer) | James Lee Community Center | April 2025 – May 2025

- Supported staff with event setup and directing guest traffic flow, improving turnaround between sessions and minimizing confusion.
- Acted as point-of-contact for visitor concerns during sessions.

EDUCATION

- Carter G. Woodson High School Fairfax, VA | 2021 2025 | GPA: 4.0 | Honor Graduate
- George Mason University Fairfax, VA | Bachelor of Science in Information Technology | Expected May 2029

CERTIFICATIONS

Google Cybersecurity: Foundations — Issued 2023

Google Cybersecurity: Manage Security Risks — Issued 2023

LinkedIn Learning: Data Analytics Foundations — Issued 2022

<u>Computer Science Achievement Certificate</u> – Woodson CSHS — Issued May 2023