# Isaiah Duhart

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## **EDUCATION**

Virginia Tech Expected Graduation: May 2025

B.S. in Computer Science

Blacksburg, VA

• GPA: 3.31

## TECHNICAL SKILLS

Tools and Frameworks: Spring Boot, REST API, Git, Jira, Android, Linux, MacOS, Windows,

Programming Languages: C#, Java, C, Python, Kotlin, HTML, CSS, JavaScript

**EXPERIENCE** 

## **Central Intelligence Agency**

September 2023 – August 2024

• TS/SCI security clearance with a full scope polygraph

Software Engineering Intern, DDI/Center for Cyber Innovation

May 2024 - August 2024

- Maintained python framework to support close access cyber mission and allow external development teams to create tools within the framework
- Developed proof-of-concept framework plugin that automatically ingests packet captures (PCAPs) taken by the framework into an external tool that provides a webpage interface for easier PCAP analysis, especially for non-technical users
- · Demoed tool updates to users in order to refined project requirements and gather feedback
- Updated the process for validating JavaScript Object Notation (JSON) input for tools within the framework, allowing for validation of custom JSON types and enhancing data integrity

Software Engineering Intern, DDI/Center for Cyber Innovation

January 2024 - May 2024

- Developed a self-loading Linux kernel based rootkit that provides process, file, and network hiding, paired with a user-space "orchestrator"
- Created API-like relationship between "orchestrator" and rootkit to authenticate users and pass requests and responses between kernel and user-space
- · Collaborated with users to gather and prioritize rootkit requirements, while providing regular demos of tool progress

Software Engineering Intern, DST/Humint Technology Office

September 2023 - January 2024

- Developed Windows forensic solution to programmatically collect USB and network information from a device using registry keys in C#
- Coordinated with stakeholders to add a feature that highlights USB storage devices found on a device that are not on a configurable whitelist, improving device security and compliance monitoring
- Created automation tests that modify a registry backup using batch scripts in order to streamline developer testing of all registry-focused tools
- · Composed documentation describing information collected from each registry key, and other useful keys that could be collected

CapTech May 2023 – August 2023

Software Engineering Intern

Richmond, VA

- Collaborated with a team of 10 developers to successfully create an airline website, backend API, chat bot, and relational database, enhancing user experience and operational efficiency
- Formulated custom SQL queries to support flight search functionality, resulting in 3x speed up in lookup flight time compared to commercial airlines
- · Developed REST API in Spring Boot that accessed, stored, and manipulated data in an AWS-EC2 hosted SQL database
- · Implemented account authentication using Spring Security to provide users with personalized and secure accounts
- · Clearly communicated backend development to clients in order to capture updated requirements and feedback

## **ACTIVITIES**

## National Society of Black Engineers (NSBE)

September 2021 - Present

Technical Outreach and Community Help Chair (TORCH)

Blacksburg, VA

- Leading tutoring sessions for middle and high schoolers, and creating volunteer opportunities for our college member body to support the community
- Collaborating with VT NSBE's Pre-College Initiative to plan and coordinate monthly events, outreach events for black middle and high schoolers to engage with engineering disciplines
- Managing outreach events to stimulate K-12 minority students' interest engineering disciplines
- Translating complex engineering principles to easy to understand programs for middle and high schoolers