

Alexander T. Karapetkov

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Portfolio: <https://alex-karapetkov.github.io> | Github: <https://github.com/Alex-Karapetkov>

Computer Science graduate with a strong foundation in cybersecurity seeking an entry-level cyber analyst position. Skilled in problem-solving, adaptable, and collaborative, with a commitment to continuous learning and delivering innovative security solutions.

Education

Computer Science (B.S.) **May 2024**

James Madison University

Harrisonburg, VA

Technical Certifications

CompTIA Security+ CE Certified



December 2024

CompTIA Advanced Security Practitioner

Expected February 2025

Skills

- **Cybersecurity:** Familiarity with and working knowledge of cloud infrastructure, vulnerability scanning tools, endpoint security tools, Cisco AMP, network alert validation, network traffic analysis, threat identification, event reporting, cyber defense tool usage including IDS, firewalls, network traffic logs, security log review, cyber defense trend analysis, incident investigation
 - **Programming/Software:** MS Windows, Office 365, OneTrust, Viva Engage, Python, MS Azure, MS Defender, MS Sentinel, Java, HTML, CSS, C, JavaScript, C#, Ruby, Haskell, Rust
 - **Soft skills:** Excellent written and verbal communication and presentation, self-motivated, independent problem-solving, practical, analytical, confident, independent, self-management, tech-savvy, multitasking, task prioritization, regulatory compliance, teamwork
 - **Technical:** Strong understanding of computer hardware, operating systems, network protocols, common software applications, and basic troubleshooting techniques
 - **Foreign Languages:** Bilingual Bulgarian, Intermediate German
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Work Experience

Site Manager at JMU Recreation August 2022 - May 2024

- Ensured safety, compliance with policies, and efficient programming of Intramural Sports, including conducting officials' training sessions, participants' pregame meetings, and performance evaluations
- Employed first responder principles as needed (CPR, AED, Bloodborne)

Help Desk Technician at JMU April 2023 - May 2024

- Provided technical support to users by diagnosing and resolving problems related to computer hardware, software, and network access

- Responded to technical support inquiries via calls, emails, or chat messages, assisting users with computer-related concerns
- Walked users through step-by-step instructions to address technical difficulties, including password resets, application troubleshooting, and basic hardware setup

Projects

Traveling Salesman Problem Python May 2024

- Applied algorithmic techniques to solve NP-complete problems with Python, focusing on efficiency and performance analysis relevant to system optimization and threat mitigation
- Analyzed algorithm runtime to evaluate performance and identify potential vulnerabilities in computational processes
- Developed skills in technical communication, presenting findings and strategies with a focus on security and optimization metrics

8-bit RISC-V ALU Verilog April 2024

- Designed and implemented an 8-bit RISC-V Arithmetic Logic Unit (ALU) in Verilog, optimizing for efficiency and system integrity
- Developed modular designs with testbenches, ensuring thorough testing and validation to identify vulnerabilities in system components
- Enhanced skills in hardware description languages, digital circuit design, and debugging, with a focus on system security and reliability

Command Line Shell C November 2023

- Developed a secure command-line shell in C, with features like process control, environment variable management, and secure input/output handling to mitigate vulnerabilities
- Applied system-level programming concepts to enhance security, focusing on process isolation and privilege boundaries
- Implemented best practices in input validation and environmental variable management to prevent exploitation

Leadership and Involvement

- Member of JMU Delta Phi Epsilon Professional Foreign Service Society September 2021 - May 2024
- Secretary for JMU Asian Student Union December 2019 - May 2021
- Virginia Governor's German Language Academy June 2018 - July 2018