

Jonathan Bateman

Objective: Seeking a co-op position in security, software dev, or trafficking prevention efforts | Summer 2024

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Education

Rochester Institute of Technology (RIT), Rochester, NY **GPA: 3.53/4.0**

Bachelor of Science (BS) in Cybersecurity-> Concentration: Secure Software Development & Cryptography

Bachelor of Science (BS) in Sociology and Anthropology -> Concentration: Cultural Anthropology

Programming & Security Tools: Python, Java, C, x86 Assembly, Python Scripting, Swift, Git, Wireshark, VmWare, Linux, Windows Active Directory, Immunity Debugger, TCP/IP, pfsense, OpenSSL, Xcode

Skills: Vulnerability Research, Network Security, Open Source Software, Malware Analysis, Project Management, Ethnography, Intermediate Spanish Speaker, Grant Writing, Videography, DaVinci Resolve, Beginner ASL, Entrepreneurship

Projects

Plz Clothe Me | *Swift Programming Project*

Feb. 2024 - Current

- Acquiring knowledge of Swift programming language through CodePath and YouTube
- Utilizing Apple's native IDE (Xcode) to iterate app prototypes
- Collaborating with software engineer to expand app functionality and usability

OpenSSL CVE-2011-4354 | *Vulnerability Research Project*

Jan. 2024 - Current

- Analyzing documentation related to vulnerability and ECDHE-RSA implementation
- Exploiting vulnerability in source code by reverting to OpenSSL version 0.9.8h
- Researching proposed patches and designing regression test to submit as a pull request

SHA-40 | *Adaptation of the famous SHA-1 hashing algorithm*

Sept. 2023 - Oct. 2023

- Studied Merkle-Damgard construction for creating collision-resistant cryptographic hash functions
- Implemented hashing algorithm that outputs 40 bits in C programming language

Arch Linux Immersion | *Immersion into the Linux ecosystem*

Aug. 2023 - Dec. 2023

- Enabled networking, bluetooth, and other essential functions in Arch Linux solely from command line
- Configured and Troubleshooted open source tools to customize window manager, terminal, and utilities

From Desert to Oasis | *Personal Programming Project*

Feb. 2023 - Current

- Developed a program that can locate food deserts within the US based on zip code, latitude, and longitude
- Utilized Google Geocoding API to convert zip codes to longitude and latitude
- Calculated distance of the 20 closest grocery stores to a specific zip code using Google Maps API

ChatGPT & Google Gemini Jeopardy Project | *Personal Programming Project*

Oct. 2022 - Current

- Parsed a CSV file of more than 200,000 Jeopardy questions
- Created Python program that fed the Google Search API, ChatGPT, and Gemini a random Jeopardy question
- Parsed the answer, extracted valuable data, and made strategic comparison

Professional Experience

Goshen Digital Security LLC | *Founder* | *Denver, CO*

May 2023 - Current

- Started cybersecurity consulting company serving small businesses and nonprofits in the Denver area
- Offered Network Mapping and Endpoint Identification service
- Offered password security and data storage solutions

Accessible Learning Labs | *Outreach Specialist* | *Rochester, NY*

Jan. 2023 - May 2023

- Designed curriculum for an NSF sponsored project
- Presented cybersecurity activities to high school students in Rochester, New York
- Presented labs to university students teaching them to create accessible software for those with disabilities

Activities

Security: *RITSEC (RIT Security Club)* | *CCDC (Collegiate Cyber Defense Competition)*

Sept. 2022 - Current

- Defending Linux and Windows clients, administering firewall rules via pfSense, and writing reports on weaknesses in infrastructure by attending CCDC tryout sessions

Mathematics | *Putnam Math Competition* | *Cryptography*

Dec. 2022 - Current

- Studied for the 2024 Putnam exam with specific emphasis on modular arithmetic and discrete mathematics
- Learning foundations of cryptography by studying RSA, ECC, and other cryptographic primitives