

# DAVID "CARTER" BRAINERD

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## WORK EXPERIENCE

### MORSE Corp.

Jan. 2022 - June 2022

*Python Software Engineer Co-op*

Cambridge, MA

- Developed and built the backend stack of a feedback form for Air Force members on AWS via Terraform
- Created a library that implemented custom authentication methods using CAC Identification Cards
- Ran biweekly assessment of infrastructure for a project delivering accurate weather data to military personnel dropping payloads out of airplanes

### Poloniex

Jan. 2021 - Dec. 2021

*Security Engineer Co-Op (Jan. - June 2021) | Wallets Engineer (July 2021 - Dec. 2021)*

Boston, MA (remote)

- Built a suite of monitoring tools on AWS to address development issues and debugged Java code that interacts with blockchains (Bitcoin, Ethereum, etc.)
- Created Python tools to review permissions for OneLogin, Cloudflare, and 1Password using their APIs, migrated the Cold Storage Custody API from Flask to AWS Lambdas, and developed AWS Lambdas for multiple projects using CloudFormation templates
- Conducted co-op and full-time technical interviews for potential hires

### HackerOne

2017-2021

*Bug Bounty Hunter*

- Discovered and responsibly disclosed security vulnerabilities to companies like Uber, Snapchat, Sony, and Udemy

## TECHNICAL KNOWLEDGE

- **Languages:** Python, Java, Ruby, Go, Bash, SQL, Crystal, HTML/CSS, C#, Solidity, C, ASM, JavaScript, Powershell
- **Software:** Git, AWS (Lambda, CloudFormation, RDS, more), Terraform, Linux, Ghidra, Docker
- **Concepts:** Googling, Software Development Lifecycle, Cryptography, Cybersecurity Best Practices, Networking, Malware Reverse Engineering

## ADDITIONAL PROJECTS

### Maliketh *Python, C++*

Jan. 2023 - Present

- Designed and developed a multi-operator C2 framework utilizing Python, Postgres, and RabbitMQ for the server and C++ for the client targeting Windows
- Enabled multiple users to issue commands to implants and receive results via RabbitMQ
- Implemented security measures such as authenticated encryption to protect communication and data integrity

### Maze *Python* - <https://github.com/cbrnr/Maze>

Sept. 2022 - Dec. 2022

- Created an implementation of the Labyrinth board game with remote and cross-platform play capabilities
- Collaborated with partners and codebases during my Software Development capstone class

### Metasploit Framework *Ruby* - <https://git.io/JUkVk>

Dec. 2016 - Present

- Developed numerous remote and local exploits for Windows, MacOS, and Linux IOT devices
- Notable modules: Windows Silentcleanup UAC Bypass, Netgear R7000 Router Unauthenticated RCE, Microsoft Excel .SLK Command Execution

## EDUCATION

### Northeastern University

Sept 2019 - May 2023

Khoury College of Computer Sciences

Candidate for a Bachelor of Science degree in Computer Science

Boston, MA

**Honors:** National Hispanic Scholarship recipient, Dean's List

**Relevant Courses:** Foundations of Cybersecurity, Discrete Structures, Math of Data Models, Object-Oriented Design, Networks and Distributed Systems, Public Speaking, Algorithms, Network Security, Computer Systems, Systems Security, Malware, Software Development