Braeden Allen

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Objective

Cybersecurity and CS undergraduate with DoD Secret clearance and NSA Cyber Operations focus. Top 1000 global rankings on Hack the Box. Skilled in penetration testing, threat detection, and log analysis. Proficient in Python, C++, Linux, and tools like Wireshark, Metasploit, and Splunk. Effective team player in red and blue team roles.

Relevant Experience

University of New Haven, West Haven, CT — June 2025-August 2025

AI/ML Intern

- Developed a Python program to scrape web data and generate JSON profiles in a test environment.
- Trained and utilized the Phi3 LLM on leaked password data to generate password lists from scraped profiles using grammar and substitution methods.

Peer Tutor in Computer Science and Cybersecurity — July 2024-Present

- Provided tutoring services in networking, system security, and programming concepts
- Assisted peers with academic tools and coursework in the Center for Learning Resources

Cybersecurity Club (Cyber@CIT) — January 2024-Present

- Engaged in weekly meetings covering global cyber news, red team tactics, and CTF training
- Placed 2nd in a semester-long CTF and co-developed a hosted event with challenges in forensics, OSINT, and cryptography

Projects

Penetration Test – Kumquat Global (Cybersecurity Project)

- Followed the PTES utilizing tools like Nmap, Gobuster, Hydra, and Metasploit to exploit the company
- Delivered a professional-style report with risk analysis and mitigation strategies

AI-Driven Password Generator (Python, QLoRA, OSINT)

- Developed an AI tool to generate personalized password lists using OSINT from LinkedIn, GitHub, and other platforms.
- Fine-tuned a language model with QLoRA on rockyou.txt to predict realistic, user-specific credentials
- Automated social media scraping and profile summarization for red team wordlist generation

Additional Software Projects (Python & C++)

- Developed *Ocean Defender*, a 2D Python game with dynamic difficulty and scoring mechanics
- Built *Can't Stop* in C++ using OOP, STL containers, and unique_ptr for safe memory management

Virtual Network Simulation (Cisco Packet Tracer)

- Designed and configured a scaled-down CAN using virtual routers and switches
- Set up static routing, RIP, VLAN segmentation, and basic ACLs to simulate enterprise networking

Hack The Box (Red & Blue Team Platform – Global Top 1000)

- Ranked in the top 1000 globally, completing machines with privilege escalation, web exploitation, and lateral movement.
- Solved Sherlock forensic challenges: log analysis, memory forensics, and incident reconstruction

Education

University of New Haven, West Haven, Connecticut — May 2026

B.S Computer Science, Concentration in Cybersecurity (NSA Cyber Ops) || GPA: 3.91/4.0

Skills & Achievements

Tools & Platforms: Kali Linux, Metasploit, Nmap, Wireshark, Burp Suite, HashCat, Volatility, Splunk
Frameworks & Standards: CVE/CVSS, MITRE ATT&CK, OWASP, NIST
Programming: Python, C/C++, Bash, SQL, Java
Operating Systems: Linux, Windows, MacOS
Networking: TCP/IP, UDP, Subnetting, Cisco IOS, IPv4/IPv6
Awards: C.S. Undergraduate of the Year (2024-25), Tau Sigma & Upsilon Pi Epsilon Honors, Dean's List (Fall 23-Spring 25)
Certifications: CompTIA Security+, Red Hat Enterprise System Administration
Security Clearance: DoD Secret Clearnce (Granted July 2025)