

## Murtaza Amjad

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### Objective

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Aspiring **Information Security Officer** and **Security Engineer** with expertise in cybersecurity, IT risk management, and secure systems engineering. Proven track record in developing secure cryptographic systems, real-time embedded solutions, and conducting gap analyses in collaboration with SOC and Security Engineering teams.

### EDUCATION

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#### University of New Haven

B.S. in Computer Science

West Haven, Connecticut

Expected Graduation, May 2026

- o **GPA:** 3.63/4.00, *Dean's List*
- o **Related Coursework:** Data Structures & Algorithms, Databases & SQL, Operating Systems, Network Technologies, Adv Programming C & C++, Computer Security, Ethical Hacking, Cloud Computing

### SKILLS

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**Programming:** Python, Pandas, NumPy, Matplotlib, SQL, C++, C

**Tools:** AWS, Metasploit, Wireshark, Nmap, Linux, Jupyter Notebook, MySQL, Unity, Git, Arduino IDE, Cisco Packet Tracer, VMware

### EXPERIENCE

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#### Cybersecurity & IT Risk Intern

Webster Bank

Southington, Connecticut

May 2025 – Aug 2025

- Managed and reviewed evidence for **15+ security issues**, ensuring **100% milestone completion** and maintaining audit readiness.
- Conducted **5+ 3rd-party Information Security Risk Assessments** and peer reviews, improving vendor security compliance scores by **15%**.
- Created **10+ process-specific training documents** and contributed to cybersecurity awareness initiatives, reducing onboarding time by **30%** and increasing employee engagement with security best practices.
- Partnered with the **Security Operations Center (SOC)** and **Security Engineering** teams to remediate **20+ security tickets** and perform monthly gap analyses, reducing vulnerabilities by **25%** and improving overall system resilience.
- Assisted the Operational Resiliency Team in risk assessment activities, contributing to continuity planning and incident response readiness.

#### Information Security Officer Intern

IQ4

Remote, Connecticut

Jun 2024 – Aug 2024

- As an ISO intern I analyzed real-world cybersecurity challenges, emphasizing expertise in **GRC, SOC**, and the **NIST Cybersecurity Framework's five pillars: Identify, Protect, Detect, Respond, and Recover**.
- Developed strategic solutions for data breach prevention and mitigation, ensuring 100% compliance with security policies and procedures.
- Implemented the **NIST Framework** to identify threats and formulate robust defensive strategies, effectively mapping cybersecurity function pillars in case studies.
- Conducted **threat modeling and incident response simulations**, formulating countermeasures that reduced theoretical breach impact by **30%** in case study scenarios.
- Produced **detailed security reports and executive summaries**, strengthening organizational awareness and reinforcing adherence to cybersecurity best practices.

## PROJECTS

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### Ethical Hacking Final - Penetration Test

West Haven, Connecticut

*Comprehensive Penetration Testing & Vulnerability Exploitation Lab*

*Apr 2025 – May 2025*

- Conducted a penetration test on **3 custom VMs (Ubuntu, Debian, Windows)**, exploiting **9+ CVEs** (e.g., **CVE-2018-10933, CVE-2017-0143, CVE-2019-0708, CVE-2016-5195, CVE-2022-0847**) to demonstrate **remote code execution and privilege escalation to root/SYSTEM**.
- Performed reconnaissance with **Nmap** and **Wireshark**, identifying **10+ exposed services/ports**, which enabled successful exploitation using **Metasploit Framework, Python PoCs**, and kernel exploits compiled with **gcc**.
- Built and deployed a **Docker-based libssh container** to simulate real-world service exposure, achieving an **unauthenticated root shell** via crafted packets.
- Documented all findings using **MITRE ATT&CK** and **NIST SP 800-53**, producing a **35+ page report** with executive-level summaries, technical evidence, and **8+ actionable remediation strategies**.
- Managed the testing environment with **VMware Workstation**, leveraging **snapshots and rollback** to ensure reproducibility and safe exploitation testing.

### Educational RSA CryptoSystem

West Haven, Connecticut

*CryptoniteRSA*

*Feb 2024 – Feb 2024*

- Overview: CryptoniteRSA is a C++-based tool that demonstrates the core logic of RSA encryption and decryption, showcasing secure key generation, message encoding, and modular exponentiation.
- Key Generation: Computed RSA modulus, totient, public key, and private key from two prime numbers, visualizing all mathematical steps in real time.
- Encryption & Decryption: Secured plaintext transformation using public keys and accurately recovered messages with private keys, confirming algorithm integrity.
- Modular Arithmetic: Implemented both naïve and optimized modular exponentiation to prevent integer overflow and improve performance on large inputs.

## CERTIFICATIONS

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### *Lean Six Sigma Yellow Belt Certificate – Process Optimization & Operational Excellence*

*Issued by Webster Bank on July 2025*

- Completed training in **DMAIC methodology**, applying **root cause analysis, process mapping, and variance reduction** to optimize workflows. Gained skills in **risk mitigation, incident response efficiency, and secure process design**, aligning continuous improvement with **cybersecurity operations**.

### *Cybersecurity Excellence Certificate: The Threat Within and NIST Framework – 350 Related Workforce*

*Experience Hours*

*Issued by IQ4 & Cybersecurity Workforce Alliance on August 26, 2024*

- Awarded for outstanding performance in analyzing real-world cybersecurity scenarios and developing solutions to detect and defend against cyber-attacks and contributed **350** hours of workforce experience.

## ACTIVITIES AND LEADERSHIP

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### Computer Programming Club

West Haven, Connecticut

*President*

*Aug 2023 – Current*

### University of New Haven Zeta Chapter of Upsilon Pi Epsilon

West Haven, Connecticut

*President*

*Mar 2024 – June 2025*

### NorthEast Annual Cybersecurity Summit

Quinnipiac University

*Student Ambassador*

*Nov 2024 – Nov 2024*