Hamzah Zuhrah

Cybersecurity Student & IT Support Professional | Python | Network Security | Incident Response | Cloud Security

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Portfolio | **GitHub** | **LinkedIn**

PROFESSIONAL SUMMARY

Cybersecurity student at Old Dominion University (B.S. expected May 2027, GPA 3.95) and Virginia Tech Industrial Engineering graduate with hands-on IT support and security project experience. Built five practical cybersecurity tools spanning authenticated encryption, phishing defense, incident response, NIST CSF 2.0 readiness, and survivor-centered digital safety. Experienced with Python, Linux, network security, cloud security, threat modeling, testing, technical documentation, and end-user support; pursuing cybersecurity analyst, SOC, incident response, vulnerability management, cloud security, or junior security engineering opportunities.

TECHNICAL SKILLS

Security: Incident response, network security, threat modeling, vulnerability assessment, access control, system hardening, phishing analysis, cryptography, NIST CSF 2.0, NIST SP 800-61r3

Systems & Networking: Linux/Kali Linux, Windows, macOS, TCP/IP, DNS, DHCP, routing and switching fundamentals, Nmap, packet analysis, virtual machines

Programming & Tools: Python, Bash, Git, GitHub, automated testing, secure protocol design, structured audit logging, TLS 1.2+, AES-256-GCM, scrypt

Cloud: AWS IAM, EC2, S3, cloud architecture, encryption, monitoring, and cloud security fundamentals

IT Support: Tier 1 support, ticketing systems, account access, password resets, hardware/software/network troubleshooting, incident documentation, user education

SELECTED CYBERSECURITY PROJECTS

Secure File Transfer System v2 **2026**

- Re-engineered a Python socket prototype into a security-focused file exchange platform using client-side AES-256-GCM encryption, verified TLS 1.2+, salted scrypt authentication, and per-user storage boundaries.
- Designed a versioned length-prefixed protocol with rate limiting, structured audit logs, and atomic transfer verification; validated the workflow with 11 automated tests, including a real TLS end-to-end test.

BreachCoach: Nonprofit Incident Response **2026**

- Built a branching incident-response tabletop simulator with ransomware, business email compromise, and donor-account takeover scenarios covering 9 escalating injects and 27 scored decisions.
- Evaluated containment, evidence handling, coordination, and continuity; generated printable after-action reviews aligned to NIST SP 800-61r3 and CISA guidance.

MissionReady Cyber **2026**

- Built a NIST CSF 2.0-aligned readiness planner for community organizations; scored Govern, Identify, Protect, Detect, Respond, and Recover maturity through 12 assessment questions.
- Generated deterministic 30-60-90 day roadmaps with suggested owners; delivered a responsive, print-ready application with tests and no known production dependency vulnerabilities at review time.

ScamShield Community **2026**

- Developed a privacy-first, on-device scam and phishing triage application whose explainable weighted engine flags pressure tactics, credential requests, suspicious payments, impersonation, and risky URL patterns without uploading user content.
- Added FTC and IC3 reporting paths, conservative safety language, accessibility-focused responsive design, automated tests, and a documented threat model.

SafeSteps Digital Safety **2026**

- Created a session-only digital safety planner covering accounts, devices, location sharing, communications, smart-home systems, and evidence preservation.
- Implemented quick-exit controls, escalation-aware pause points, zero stored answers, print-safe planning, authoritative support resources, privacy tests, and an explicit safety boundary.

PROFESSIONAL EXPERIENCE

Information Technology Help Desk Technician | **Virginia Tech** **Jan 2025 - Jun 2025**

Blacksburg, VA | 25 hours/week

- Provided Tier 1 support to students, faculty, and staff; diagnosed hardware, software, account access, printer, Wi-Fi, and application issues across Windows and macOS.
- Completed password resets, system login troubleshooting, software installation, and device configuration in accordance with university policies and security practices.
- Documented tickets and resolutions, escalated complex issues, and coached nontechnical users on password security, phishing awareness, and safe internet use.

Industrial Engineering Intern | **Moog Space and Defense** **Jan 2022 - Aug 2022**

Blacksburg, VA | 40 hours/week

- Supported aerospace and defense production operations, analyzed workflow and operational data, identified inefficiencies, and collaborated with cross-functional teams on process improvements.
- Analyzed operational data to improve performance, support decision-making, and help teams understand process constraints.
- Collaborated with cross-functional teams on improvement initiatives and communicated findings to support operational goals.

Engineer Intern | **PepsiCo** **Jan 2020 - Dec 2020**

Dubai, UAE | 40 hours/week

- Analyzed manufacturing and supply-chain workflows, identified efficiency opportunities, and assisted with data-driven process optimization.
- Analyzed operational information and developed data-driven recommendations to support process improvement.
- Worked with team members to understand production needs, document observations, and contribute to practical solutions.

APPLIED SECURITY TRAINING

Cybersecurity Lab Practice (Self-Directed) **Sep 2025 - Present**

- Conduct hands-on labs in a virtualized Kali Linux environment, including Nmap scanning and enumeration, vulnerability identification, file permissions, user management, security configuration, and system reconnaissance.

Cloud Computing Student Project **Feb 2026 - Present**

- Complete guided AWS labs covering IAM, EC2, cloud storage, access control, encryption, monitoring, architecture, deployment models, and cloud security fundamentals.

EDUCATION

Old Dominion University | B.S. Cybersecurity **Jan 2026 - May 2027 (Expected)**

GPA: 3.95

Virginia Tech | Bachelor of Engineering, Industrial Engineering **Aug 2021 - May 2025**

Northern Virginia Community College | Associate of Applied Science

CREDENTIALS

Professional development: Preparing for CompTIA Security+ (SY0-701)

Additional credentials: Registered Behavior Technician, BACB (expires Jan 2027); Qualified Brain Injury Support Provider, NeuroRestorative (expires May 2027)