Yousif Nazhat

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EDUCATION

Rutgers University New Brunswick, NJ
Major: Information Technology & Informatics; Minor: Critical Intelligence *Expected Graduation: Jan. 2027*
- **Relevant Coursework**: Data Structures, Computer Architecture, Discrete Structures, Linear Algebra

PROFESSIONAL EXPERIENCE

RU Cybersecurity New Brunswick, NJ
Team Lead *Sep. 2025 – Present*
- Improved technical competency for 50+ active members as measured by a **30% increase in project participation**, by spearheading instructional workshops on **Red/Blue Team operations**, **SIEM**, and **Linux fundamentals**.
- Strengthened incident response skills as measured by the **successful execution of 4 simulated cyber-defense exercises**, by developing and leading infrastructure hardening and **threat mitigation workshops**.

RU Airborne, Avionics & Integration New Brunswick, NJ
Design Team Lead *Jan. 2025 – Present*
- Directed avionics integration for a high-performance UAV **sponsored by NASA and Lockheed Martin**, ensuring **100% compliance** with strict industry safety and reliability standards.
- Authored a **detailed design report** documenting testing methodology, data analysis, and findings related to propulsion performance and safety improvements.
- Led cross-functional system integration as measured by the **successful assembly of the "Daedalus" aircraft** within a strict **5-week prototyping window**, by coordinating technical workflows between Aerodynamics and Manufacturing sub-teams.
- Optimized aircraft propulsion efficiency, achieving a **1.46 Thrust-to-Weight ratio** and projected **80 m/s cruise speed**, by modeling motor-propeller combinations in eCalc.
- Enhanced system reliability as measured by **zero critical failures** during **130A peak-current operations**, by implementing rigorous pre-flight safety checklists.

LEADERSHIP & INVOLVEMENT

Phi Mu Delta Fraternity New Brunswick, NJ
Alumni Relations Chair *Jan. 2024 – Present*
- Surpassed fundraising targets by **625%**, raising over **$5,000** for the Embrace Kids Foundation, and securing sponsorships from **32 local organizations**.

Organizations
- **Phi Mu Delta Fraternity** - Alumni Chair Sep. 2025 – Present
- **RU Airborne** - Avionics & Integration Design Team - Team Lead Jan. 2025 – Present

PROJECTS

Virtual Honeypot Security Monitoring Lab | *VirtualBox, Cowrie, ELK Stack*
- Simulated **credential-based intrusion attempts** by deploying a virtual honeypot environment that detected and logged **Nmap reconnaissance and Hydra brute-force activity**.
- Captured **1,000+ authentication attempts** and produced **actionable security analytics dashboards** to demonstrate threat-detection capabilities.

RISC-V ISA Subset Implementation | *C, Assembly*
- Achieved **100% execution fidelity** for the RISC-V ISA subset, measured by **passing all unit tests** for memory and arithmetic operations.
- Developed a **cycle-accurate 5-stage instruction pipeline** (Fetch, Decode, Execute, Memory, Writeback) and set-associative cache simulator.

Network Diagnostics & Security Analysis | *Python, Wireshark, Nmap*
- Analyzed DNS behavior and network traffic using **Wireshark and Nmap**, identifying vulnerabilities via **TCP/IP and OSI model analysis**.

Symbiote Host Compatibility Tree | *Java*
- Designed a **binary search tree** modeling compatibility operations for a biological data simulation.

Election Data Analysis Tool | *Java*
- Optimized **hierarchical data query efficiency** for thousands of records by architecting a **custom triply-nested linked list structure**.
- Parsed and aggregated CSV datasets **without external database libraries** for high-performance data retrieval.

128-bit Arithmetic Toolkit | *C*
- Enabled **high-precision cryptography-grade computation**, exceeding standard 64-bit hardware limits by **2x**.
- Engineered low-level bitwise algorithms (**shifting/masking**) to manipulate raw memory and custom structs.

Filesystem Emulator | *C*
- Created a **memory-based file system** supporting basic directory and file operations to simulate **OS-level storage management**.

TECHNICAL SKILLS

Languages & Tools: Java, C, Python, RISC-V Assembly, HTML/CSS, Wireshark, Nmap, GDB, Git, Linux/Unix, eCalc, Microsoft Office Suite