Yousif Nazhat

(973)-382-5159 | yousif.snazhat@gmail.com | www.linkedin.com/in/yousif-nazhat

EDUCATION

Rutgers University, New Brunswick, NJ

School of Arts and Science

Major: Information Technology **Minor:** Critical Intelligence Graduation: January 2027

- **Relevant Coursework:** Data Structures, Computer Architecture, Discrete Structures, Linear Algebra

ORGANIZATIONS

Phi Mu Delta Fraternity - Alumni Chair September 2025 - Present

RU Airborne – Avionics & Integration Design Team - Deputy Lead January 2025 - Present

RU Cybersecurity Club - Team Member September 2025 - Present

PROFESSIONAL EXPERIENCE

RU Airborne, Avionics & Integration, New Brunswick, NJ

Design Team Deputy Lead January 2025 - Present

- **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 and leading tri-weekly design reviews.
- **Optimized aircraft propulsion efficiency** , achieving a **1.46 Thrust-to-Weight (T/W) ratio** and projected **80 m/s cruise speed,** by modeling motor-propeller combinations in eCalc and validating results via custom load-cell thrust stand testing .
- **Enhanced high-load system reliability** as measured by **zero critical failures** during 130A peak-current flight operations, by authoring the team's official "Testing Methodology" report and implementing rigorous pre-flight safety checklists.

LEADERSHIP & INVOLVEMENT

Phi Mu Delta Fraternity | Alumni Relations Chair January 2024 - Present

- **Surpassed fundraising targets by 625%**, raising over **$5,000** for the Embrace Kids Foundation, launching the inaugural charity golf outing and securing sponsorships from **32 local organizations**

PROJECTS

- **Achieved 100% execution fidelity for the RISC-V ISA subset :** measured by passing all unit tests for memory and arithmetic operations, by developing a cycle-accurate 5-stage instruction pipeline (Fetch, Decode, Execute, Memory, Writeback) and set-associative cache simulator.
- **Network Diagnostics & Security Analysis (Python/Tools)** – Used ping, traceroute, dig, nmap, and Wireshark to analyze DNS behavior, routing paths, open ports, and network traffic; applied TCP/IP, OSI, and CIA triad principle
- **Symbiote Host Compatibility Tree (Java):** Designed a binary search tree modeling compatibility operations.
- **Election Data Analysis Tool (Java): Optimized hierarchical data query efficiency** for thousands of historical voter records, by architecting a custom triply-nested linked list structure (Year → Circular State → Election) to parse and aggregate CSV datasets without external database libraries..
- **128-bit Arithmetic Toolkit (C): Enabled high-precision cryptography-grade computation**, exceeding standard 64-bit hardware limits by **2x** , by engineering low-level bitwise algorithms (**shifting/masking**) to manipulate raw memory and custom structs.
- **Filesystem Emulator (C):** Created a memory-based file system supporting directory/file operations

SKILLS

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