Joshua Okuadido

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Education

Virginia Tech| Blacksburg, VA　　　　　　　　　　　　　　　　　　Expected Graduation: May 2027
Bachelor of Science in Computer Engineering, Focus in Networking and Cybersecurity
Courses: Physical Electronics, Embedded Systems, Signals and Systems, Integrated Design Project, Computational Engineering, Circuits & Devices, Fundamentals of Digital Systems

Skills

Programming: C++/C, Python, Verilog HDL, JavaScript, Arduino IDE, MATLAB, Assembly
Tools and Technologies: Git, React, LTSpice, SolidWorks, Quartus, Microsoft Office Certified
Cybersecurity: Linux, Bash, Azure VM, Ubuntu, Wireshark

Leadership Experience

Virginia Tech Center for the Enhancement of Engineering Diversity (CEED) | Blacksburg, VA　　*August 2024 – May 2025*
Peer Mentor

- Mentored a cohort of four first year engineering students, fostering academic growth and early technical engagement through structured weekly sessions.
- Supported first-year engineering students to develop critical academic and time management skills for STEM success.

Relevant Experience

Hume Center for National Security and Technology | Blacksburg, VA　　　　*September 2024 – October 2025*
Undergraduate Researcher/Project Manager

- Investigate applications of **Mobile distributed MIMO (Mobile dMIMO)** within military communications, aiding the advancement of future defense technologies.
- Collaborated on the development of **5G/6G hardware** integration strategies, resulting in models that showed at least 5 collaborating devices **increased the transmission capacity over 0.1 km by 300%**.
- Evaluated international telecommunications standards and contributed to the formulation of global policy strategies for secure communication infrastructure.

Capital One | Remote　　　　　　　　　　　　　　　　　　　　　　*May 2024 – May 2024*
Tech Summit Fellow

- Developed a **Java API-based debt management web app**, improving financial tracking efficiency by **20%** for target users through backend optimization and UI design.
- Gained exposure to **full stack development** (React, Node.js, APIs), strengthening system-level thinking critical for software integrated systems.

Projects

Bank System | C++　　　　　　　　　　　　　　　　　　　　　　　*Spring 2024*

- Built a secure, **object-oriented banking system** simulating real-world banking operations.
- Enabled users to perform secure transactions such as deposits, withdrawals, and balance inquiries.
- Enhanced user experience and security through **password encryption, user authentication, and transaction history logging.**

Multi-Display Digital Sign | Verilog　　　　　　　　　　　　　　　　　*Spring 2025*

- Designed a **multi-display digital sign system**, using Verilog and Quartus Prime, creating a dynamic scrolling visual sequence.
- Implemented a 4-bit counter with nine distinct states, incorporating flexible state progression with manual and automatic operation modes.
- Optimized circuit complexity through **transistor count and propagation delay analysis**, improving hardware efficiency.

Extracurriculars / Activities

Residential Well-Being | Student Leader　　　　　　　　　　　　　　　*August 2025 – Present*
IC CAE Scholar | Recipient　　　　　　　　　　　　　　　　　　　*January 2025 – Present*
CodePath Cyber 101 Certification | Recipient　　　　　　　　　　　　　　　*August 2025*
Spectrum Sizzle RF Certification | Tech Lab Fellow　　　　　　　　　　　　　　*June 2025*
ColorStack | Member　　　　　　　　　　　　　　　　　　　　　*April 2024 – Present*
Knack | Math Peer Tutor　　　　　　　　　　　　　　　　　　　*March 2024 – Present*
National Society of Black Engineers (NSBE) | Member　　　　　　　　*September 2023 – Present*