

Jeffery O. Achamfuor

jefferyachamfuor@gmail.com | (703) 901-3233 | www.linkedin.com/in/jefferyachamfuor/

Profile

Computer Science student at Virginia Tech with hands-on experience in data structures, AI, systems programming, and human-centered security research, seeking a Summer 2026 software engineering internship.

Education

Virginia Tech, *B.S. Computer Science, Dean's List* | Blacksburg, VA Expected Graduation: May 2027
Relevant Coursework: Artificial Intelligence, Computer Systems, Data Structures & Algorithms, Computer Organizations I & II, Software Design, Problem Solving in CS, Multi-Variable Calculus, Discrete Math, & Linear Algebra

Technical Skills

Programming Languages: Java, Python, C, JavaScript, SQL, x86 Assembly
Web Technologies: HTML, CSS
Systems & Tools: Linux, PowerShell, Git, GitHub, Docker, Visual Studio Code
Other Tools: MATLAB, LaTeX, Microsoft Office

Technical Projects

- Course: Data Structures & Algorithms**, Geographic Information System November 2025
- Built a geographic information system using BSTs and KD-Trees, applying object-oriented programming principles to efficiently store, index, and query large spatial datasets
 - Implemented and tested memory-managed disk I/O, record parsing, and command processing, optimizing data retrieval and range search performance for large datasets
- Course: Data Structures & Algorithms**, Movie Rater Database September 2025
- Developed a scalable movie rating database using a sparse matrix with linked header nodes to store user-movie interactions efficiently
 - Implemented, tested, and debugged insertion and retrieval operations, demonstrating proficiency with dynamic memory management, pointer-based data structures, and optimized traversal algorithms

Relevant Work Experience

- Research Assistant**, REACH Human-Computer Interaction Lab | Blacksburg, VA August - December 2025
- Conducted human-centered security research, analyzing user behavior and evaluating how users detect suspicious activity across cultural and generational contexts
 - Contributed to 50+ literature reviews and qualitative research workflows, supporting data analysis, protocol refinement, participant coordination, and ethical data collection and methodological rigor.
- Data Analyst Intern**, Onwe Hospital | Onwe, Ghana June 2022
- Led a digital transformation of patient databases, improving data accuracy, reducing manual paperwork for 300+ patients, and enhancing on-site data access for medical staff, reducing administrative processing time by 63%
 - Optimized data accessibility and workflow efficiency for medical staff, reducing patient lookup time by 50% through database optimization

Additional Work Experience

- Test Proctor**, Virginia Tech, Service for Students with Disabilities | Blacksburg, VA August 2025 - Present
- Volunteer**, Pre-College Initiative (National Society of Black Engineers) | Blacksburg, VA August 2023 - Present
- Personal Assistant**, Corporate Marketing Executive | Vacaville, CA June - August 2025
- Digital Personal Shopper**, Walmart, Inc. | Vacaville, CA June 2024
- Architecture Design Intern**, XL Management Services Ghana Ltd | Accra, Ghana July 2022

Leadership & Activities

- Sustainability Initiative Lead**, Sustainable Fashion Society | Blacksburg, VA August 2025 - Present
- Board Member**, Vêtement De Rue Fashion Organization | Blacksburg, VA August 2024 - Present
- Member**, VT Chapters, National Society of Black Engineers & ColorStack | Blacksburg, VA August 2023 - Present
- Well-Being Resident Advisor**, Virginia Tech | Blacksburg, VA December 2024 - June 2025
- Peer Mentor**, Center for Engineering Excellence and Discovery | Blacksburg, VA August 2023 - June 2025