

Jeffery O. Achamfuor

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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