



Niaja-Amarri Mitchell

Chemical Engineering • Second year- Junior

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My objective is to leverage my background in Environmental and Chemical Engineering, combined with a background in mathematics and sciences, to contribute to sustainable development and clean energy solutions or to gain general engineering knowledge. I aim to apply my problem-solving, leadership, communication, and time management skills in a professional, academic, or volunteer setting, while continuing to grow and make meaningful contributions in the field of environmental engineering.

EDUCATION

Tuskegee University, Expected Graduation Spring 2028 Tuskegee, AL
Bachelor of Science in Chemical Engineering, Concentration Environmental Engineering; **4.0/4.0 GPA**
Westlake High school, International Baccalaureate Diploma, Graduated 2024 4.0/4.0 GPA, Top 5% of Class

SKILLS, SOFTWARE PROFICIENCIES, AND CERTIFICATIONS

Technical Skills: Python • C++ • Github • Jupyter Labs • HTML • SolidWorks • Microsoft Office • 80 WPM • Microsoft Excel
Certifications: Data Science and Machine Learning: Making Data-Driven Decisions by Massachusetts Institute of Technology IDSS
Soft Skills: Presentation Communication Skills • Determined • Fast and Eager Learner • Resilient • Conflict Resolution Skills • Passionate • Attention to Detail
Language Skills: Fluent in English, Intermediate in Spanish

WORK EXPERIENCE

Tuskegee University Physics Department Undergraduate Research August 2025-Present, Tuskegee, AL
Research - Selected as a researcher for Tuskegee University Physics Department and Oak Ridge National Laboratory and NASA

- Design and Manufacturing Photonic Light Sails for space propulsion
- Utilizing platforms such as K-layout and e-beam lithography to create simulations and polymer array arrangements for photonic crystal light sails

Meharry Medical College Minority Serving- Cyberinfrastructure Consortium Undergraduate Internship June-August 2025 Nashville, TN
Intern - Selected amongst a pool of 200 applicants to research climate sciences at Fisk University in partnership with Meharry Medical College

- Conducted original research under mentors, faculty, and graduate students
- Prepared a presentation on research concerning the spatiotemporal analysis of environmental drivers and respiratory illnesses in Tennessee using Data science and Machine Learning to generate visual representations of research findings
- Participated in Hackathon to create and code a Carbon footprint calculator in partnership with Internet 2 and Black Codes

Research Intern — Penn State University Integration to Biology REU Program June-July 2026 State College, PA

- Synthesizing heterogeneous catalysts and characterize materials using spectroscopic and sorption techniques.
- Assessing the catalytic performance of synthesized materials using batch reactors and gas chromatography.
- Conducting mechanistic insight into reaction pathways and enable development of structure-function relationships for sustainable aviation fuels.

Leadership- National Society of Black Engineers (NSBE)

- **Region III TORCH Chair** March 2026-Present
 - Elected Technical Outreach Community Help Chair to plan and lead technical community service events across the Region 3
- **Tuskegee University Secretary** April 2026-Present
 - Appointed Secretary for Tuskegee's NSBE chapter to lead communications zone and assist with administrative board
- **Tuskegee University TORCH Chair** May 2025-April 2026
 - Appointed Technical Outreach Community Help Chair for Tuskegee's NSBE chapter to plan and lead community service events
 - Conducted initiative to support students during the suspension of federal nutrition aid for university and elementary students in the community
 - Orchestrated campus beautification and clean up
 - Executed Tuskegee University's first Walk for Education Event, providing education awareness to local community

Minority Serving- Cyberinfrastructure Consortium Ambassador

March 2026-Present

Ambassador – Appointed Ambassador for MS-CC Organization to advancing student engagement in cyberinfrastructure space

Amazon Guides Program

September 2025-May 2026

Mentee - Selected as a mentee for Amazon mentorship program for career and professional development focused mentorship

HONORS AND AWARDS

• Tuskegee University Presidential Scholarship • Georgia Merit Scholar Award (Top 5% of Class)
• Tuskegee University's Dean's List and Eminent Scholar (Perfect 4.0) 2024-2025 School Year • Contestant for Miss Kappa Alpha Psi Scholarship Pageant (2026-2027) • Bioethics Honors Program (Spring 2025-Present)