

YAA DONKOR

EDUCATION

University of Michigan, Ann Arbor

Master of Science in Engineering Education

GPA: 3.88/4.00
Expected May 2026

Lehigh University Bethlehem, PA

Bachelor of Science in Chemical Engineering

GPA: 3.05/4.00
2019- 2023

SKILLS

- Active Listening
- Canva
- Communication
- Empathy
- Problem-Solving
- Relationship Building
- Institutional Review Board (IRB)
- MATLAB
- Python
- Stata
- Project Management
- Qualitative Interviewing
- Teaching

RESEARCH EXPERIENCE

Graduate Research Student Assistant, University of Michigan, Ann Arbor, MI August 2024 - Dec 2025

- Collaborated with a research team to design a standardized codebook
- Transcribed and cleaned data for 9 participants to ensure analytical accuracy
- Executed 56% of the total study interviews investigating institutional barriers faculty face when supporting student mental health and well-being
- Spearheaded the development of a Photovoice study by applying the SHOWeD framework to design focus group protocols and participant prompts
- Developed an interview protocol to assess barriers faculty and staff may face in supporting engineering students' mental health and well-being
- Designed the website layout for a virtual Community of Transformation dedicated to creating space for engineering faculty and staff to discuss struggles and achievements in promoting mental health
- Created and developed a workflow process, consent forms and guidelines, and recruitment advertisements for study participants, submitted for review by the University of Michigan IRB

Research Assistant, Chow Biomaterials Lab, LU, Bethlehem, PA November 2019 – August 2022

- Developed MATLAB algorithms to analyze transparency data from fabricated corneal membranes, contributing to advancements in surgical implant technology.
- Utilized mechanical and transparency testing techniques to enhance the performance of surgical implants, demonstrating meticulous attention to detail and experimental rigor.

PROJECT EXPERIENCE

EnginWorld | Trauma-Informed and Healing-Centered Pedagogies | Spring 26

- Facilitated a Kitchen Table Talk qualitative research session with Engineering Education Research graduate students to critically examine the relationship between institutional cultural rigidity and the proliferation of trauma in both engineering practice and academic research.
- Developed *EnginWorld*, an original, research-informed narrative simulation that translates these qualitative findings into a fictional world-building framework to critique systemic power dynamics and institutional culture in Engineering and Engineering Education.

HONORS & AWARDS

Rackham Merit Fellowship Recipient (2025-Present)

College of Engineering Bridge to Doctorate Fellowship Recipient (2024-2025)

National Action Council for Minorities in Engineering (NACME) Scholarship Recipient (2020–2022)

Gilman Scholarship Recipient (2020)

Sponsors for Educational Opportunity (SEO) Meyerhoff Scholar (2019)

COURSEWORK

Foundations of Engineering Education Research

Theoretical and Conceptual Frameworks for Engineering Education Research

Introduction to Quantitative Methods in Educational Research

Quantitative Methods for Non-Experimental Research

Methods in Educational Research: Qualitative

LANGUAGE

English

Japanese

Twi

Measuring Severity of Trauma Response in Black Professors with An Engineering Background |

Contemporary Approaches To Assessment | Spring 26

- Conceptualized and designed a social justice-oriented tool to measure the severity of institutional trauma responses among Black engineering faculty, utilizing an Ordered Multiple Choice design to map behavioral patterns along a continuum of value-alignment.

Facilitating Belonging for Newcomer Migrant Students | Methods in Qualitative Research | Fall 2025

- Conducted on-site observations at a Detroit high school, producing detailed field notes to document school culture and social dynamics.
- Facilitated interviews with students to analyze the socio-academic experiences of newly arrived migrants within the U.S. education system
- Collaborated with a research team to develop a comprehensive codebook, ensuring consistent analysis of field notes and interview transcripts.
- Partnered with colleagues to design and deliver a final presentation to school administration, effectively summarizing key research findings and actionable insights
- Spearheaded the creation of a teacher-centered artifact to celebrate successes in fostering student belonging, while identifying strategic areas for enhanced student support

M-INTEGRATE | Psychosocial Factors in the Workplace | Fall 2025

- Contributed to a comprehensive literature review identifying systemic stressors among medical professionals within academic medical centers.
- Provided foundational research to support the Michigan Initiative for Navigating Team Efficiency and Growing Resilience Across Teams (M-INTEGRATE) in the creation of a diagnostic resilience tool.

Examining The Relationship Between Neurodivergence and Entrance Into STEM Careers |

Quantitative Methods In Educational Research | Winter 2025

- Investigated the impact of neurodivergence on STEM career entry by conducting multivariate regression analysis with interaction effects using Stata
- Synthesized multi-stage research, including literature reviews and data analysis of the High School Longitudinal Study (HSLS) dataset, to produce a final manuscript detailing barriers to STEM for neurodivergent students.

Examining The Relationship Between Minoritized Students' Motivation to Pursue Occupations in STEM and And Their Teachers' Academic Backgrounds | Quantitative Methods In Educational Research | Fall 2024

- Analyzed the impact of teacher academic specialization on the STEM career aspirations of minoritized students, utilizing Stata to perform regression analysis.
- Authored a comprehensive research paper synthesizing original data analysis with existing literature to provide actionable insights into educational equity and workforce development

TEACHING EXPERIENCE

SERVICE

Depression Center Student Advisory Board
Member (Fall 2025 - Present)

Student Teacher Fellow, North Star Academy, Newark, NJ

May 2024 – July 2024

- Internalized and adapted lesson plans to enhance student engagement, incorporating culturally responsive teaching methods and social- emotional learning strategies to meet diverse classroom needs.
- Observed and collaborated with expert teachers and directors, contributing to lesson plan reviews and implementing instructional strategies that aligned with best practices in education to optimize student learning outcomes.

Chemistry Tutor, Center for Academic Success, LU, Bethlehem, PA

August 2020 – May 2021

- Facilitated engaging virtual tutoring sessions for 5-8 students weekly, fostering critical thinking and enhancing comprehension of complex chemical principles.
- Implemented effective teaching strategies to elucidate chemistry concepts, resulting in significant improvements in students' academic performance.

WORK EXPERIENCE

PwC Remote Extern, PwC x CollegeSpring, Remote

July 2023 – September 2023

- Collaborated with the Advisory Board to identify target audiences for recruitment into the college preparatory program and tailoring communication to best maximize impact assessments for potential donors.
- Conducted in-depth competitor analysis and crafted detailed case studies through comparative analysis, providing valuable insights to the Advisory Board.
- Utilized detailed understanding of CollegeSpring impact assessments to develop compelling presentations showcasing insights, recommendations, and trends analyzed for the Advisory Board.

Information Security & Compliance Intern, Movable Ink, Remote

May 2022 – August 2022

- Managed onboarding and offboarding processes of 650 employees for the Information Security Manager utilizing advanced Excel functions including VLOOKUPS and conditional formatting to ensure data integrity and security.
- Demonstrated effective communication by presenting to 650 employees, highlighting personalized content strategies to enhance student retention and graduation rates by encouraging deeper collaboration between colleges and EdTech companies.
- Collaborated with Vice President of Human Resources to improve internship program, proposing innovative strategies such as a rotational program and personality tests to optimize team dynamics.

Research and Development (R&D) Intern, Air Products, Remote

June 2021 – August 2021

- Created MATLAB algorithms to calculate and analyze shifts in particle emissivity, gaining insights into particle behavior within a gasifier.
- Investigated particle, gas, and total emissivity within a gasifier, identifying key parameters affecting emissivity variations and contributing to process optimization efforts.