

Abraham Mudoola

Lowell, MA | [LinkedIn](#) | 508-250-7550 | abraham_mudoola@student.uml.edu

EDUCATION

University of Massachusetts-Lowell

BS in Industrial Engineering, Robotics (GPA: 3.3)

Lowell, MA

Graduation Date: December 2025

TECHNICAL SKILLS

Design: CAD, SolidWorks, Fusion360, 3D Printing

Programming & Data: Python, Excel, MATLAB, C, ROS, RapidMiner, SQL, OpenCV, Git, Allen Bradley PLC

WORK EXPERIENCE

UMass Lowell Dept. of Mechanical and Industrial Engineering

Lowell, MA

Learning Fellow, IENG.3030 Manufacturing Processes

October 2025 – December 2025

- Supported course instruction by grading assignments, delivering individual student feedback, and reporting trends in student comprehension to inform course adjustments.

Burlington Stores

Burlington, NJ

Engineering Project Management Intern

June 2025 – August 2025

- Built an Excel capacity model for 10-line induct system, giving DC leadership a live tool to forecast when infrastructure expansion will be required.
- Coordinated vendor activities for east coast DC storage expansion, adding 1.5% warehouse reserve capacity within existing infrastructure, creating space for wave of forward purchases ahead of anticipated tariff impacts.
- Conducted first systematic analysis of fragile-goods department, mapping material flow and quantifying wasted labor to give visibility into a previously unexamined process.

Granite State Manufacturing

Manchester, NH

Engineering Capstone Consultant

October 2024 – May 2025

- Analyzed manual inspection workflow via time studies, identified procedural inconsistencies driving 25% cycle time inefficiency.
- Evaluated and recommended digital inspection platforms enabling automated data-capture, guided routines and transcription error elimination, with a projected 25% cycle time reduction and \$12K annual savings per inspector.

Edwards Vacuum

Haverhill, MA

Advanced Manufacturing Engineer Co-Op

January 2024 – July 2024

- Designed flow test adapter and high-pressure stress test fixture for 3D-printed mesh components, enabling pre-qualification screening for particle release and structural failure before production insertion.
- Discovered pre-existing leak in production flow test bench during adapter validation, eliminating a source of false results that had been driving unnecessary rework.

UMass Lowell – Manufacturing & Neural Interface Lab

Lowell, MA

Research Assistant

January 2023 – May 2025

- Developed fabrication systems for brain-machine interface research at the MINI Lab, including a Python automation tool that reduced g-code writing time by 50%.

PROJECTS

Solar Tracking Plant Mover Robot – Built autonomous robot that relocates potted plants to follow sunlight using computer vision, light sensors, and a custom 3D-printed gripper; gripper design video reached 23K views on YouTube.

Automated Skee-Ball Arcade System – Designed and fabricated table-top scale arcade game as part of 3-person team; programmed Allen Bradley PLC in ladder logic for game sequencing, payment, and pneumatic ball release; designed electrical system and performed wiring integration for user interface.

LEADERSHIP EXPERIENCE

National Society of Black Engineers (NSBE)

Lowell, MA

Chapter President

May 2023 – May 2025

- Grew chapter participation by 65%, raised over \$40K in funding to fund a total of 42 students to attend national and regional conferences.

Student Society for Sustainability (SSS)

Lowell, MA

Treasurer

April 2023 – April 2024

- Established a partnership with Bay State Textiles while developing Thrift Day, to recycle surplus clothing donations diverting textile waste while generating revenue for the chapter.

AWARDS & ADDITIONAL INFORMATION

Excellence in Cultural & Advocacy Programming – Student Leadership Awards, 2025 | NSBE

Outstanding Service Award – Dept. of Mechanical & Industrial Engineering, 2025

Innovative Program of the Year – Student Leadership Awards, 2024 | Recognized for founding Thrift Day (SSS)

Languages: English, Luganda | **Hobbies:** Snowboarding, Concrete planter design, 3D Printing | **Volunteering:** service at Merrimack Valley Food Bank and Lowell Senior Center, STEM workshops at Lowell High School and Boys & Girls Club