

ABAS MOHAMMED

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Education

Georgia State University Perimeter College

Jan. 2024 – May 2026

Associate of Science in Engineering, GPA: 3.88/4.00

Atlanta, GA

– Honors: President's List (Spring 2024 – Spring 2025)

– Relevant Coursework: Engineering Graphics I & II, Calculus I & II, Multivariable Calculus, Physics with Lab, MATLAB

Technical Skills

- **Programming:** Python, C/C++, Java, TypeScript
- **Software:** FastAPI, React.js, PostgreSQL, Git
- **Embedded Systems:** Arduino, Bluetooth communication, motor control
- **CAD & Tools:** AutoCAD, Autodesk Inventor, MATLAB

Leadership and Experience

Clarkston Math Club President

Aug 2025 – Present

Georgia State University

Atlanta, GA

- Planned AMATYC exam preparation workshops and weekly study sessions, encouraging a collaborative and high-performing learning environment.
- Co-led a coding competition with the Clarkston Computing and Engineering Club to strengthen cross-club technical engagement.
- Managed budgeting, event scheduling, and internal communications to support consistent club operations.
- Expanded active membership and increased event participation by approximately 20%.

Clarkston Computing and Engineering Club — Event Organizer

Aug 2025 – Present

Georgia State University

Atlanta, GA

- Standardized event operations by coordinating with campus leadership to improve promotion and logistical execution.
- Designed a digital check-in/check-out system to replace paper attendance tracking, improving accuracy and operational efficiency.
- Collected structured participant feedback and iterated event formats to improve engagement in subsequent terms.

Supplemental Instruction Leader — Calculus I

Jun 2024 – Apr 2025

Georgia State University

Atlanta, GA

- Delivered approximately 360 hours of academic support across nearly three semesters (10 hrs/week), including lecture attendance, in-class assistance, and review sessions.
- Collaborated with professors to monitor student progress and adjust instructional strategies throughout the term.
- Created original practice exams and sample tests used across multiple sections; instructor feedback indicated average class performance improved by **10%**.

Sustainable Lean Manufacturing Analysis | *Intro to Engineering*

Sep. 2024 – Dec. 2024

- Synthesized academic research connecting Lean Manufacturing, Circular Economy principles, and Industry 4.0 technologies to evaluate sustainability in production systems.
- Analyzed impacts on waste reduction, resource efficiency, and productivity; delivered a structured team presentation summarizing findings.

Research Experience

Fluid Dynamics and Flow Visualization | *Under the supervision of Dr. Kim*

Fall 2025 - Present

- Built a transparent-duct experimental setup with controlled water flow and dye injection to visualize internal fluid behavior.
- Analyzed velocity changes, streamline deformation, and flow separation around different obstacle geometries.
- Recorded and interpreted flow patterns using fluid-mechanics principles such as laminar flow, boundary layers, and acceleration zones.

Projects

Medlo Digital Medical Record Platform | *TypeScript, React.js Git*

April 2025 – Present

- Designed multiple table schemas to store records, user information in our PostgreSQL Supabase relational database with role-based access control.

- Built a React.js frontend that supports appointment scheduling, and administrative dashboards and has been piloted at eight medical institutions.

Fabric Fingerprint | *Perimeter College Innovation Challenge Finalist* **Sep. 2025 – Nov. 2025**

- Developed a fabric sourcing prototype that improved keyword-to-fabric matching consistency by approximately **20–30%** in controlled test searches versus manual filtering.
- Reduced average material discovery time from multiple minutes to under **30 seconds** per query by structuring fabric attributes and metadata.
- Selected as a finalist and presented the project live to judges and investors during the Perimeter College Innovation Challenge.

Bluetooth-Controlled RC Car | *Personal Engineering Project* **Feb. 2025 - May 2025**

- Built a four-motor remote-controlled vehicle using an Arduino microcontroller and Bluetooth module for mobile-based wireless operation.
- Completed mechanical assembly, motor wiring, embedded programming, and performance testing.

Smart Assistive Glasses | *Team Project* **Fall 2025 - Present**

- Contributed to a smart assistive glasses prototype integrating an embedded camera and NVIDIA Jetson platform for real-time, YOLO-based object detection.
- Supported integration of a lightweight, quantized language model for voice interaction and basic wireless control of peripheral devices; assisted with testing and iteration.

Community Service

Egnaw Le Egnaw (Us for Us) Foundation | *Co-Founder (Education Support Initiative)* **Mar 2023 – Present**

- Secured over \$2,800 in community donations to fund school supplies, uniforms, and textbooks for 45 students in Ethiopia during the 2025–2026 academic year.
- Coordinated a clothing distribution initiative from Addis Ababa to northern Ethiopia, supporting children affected by recent civil conflict.

Accomplishments

Physics II Student of the Semester **Fall 2025**

Georgia State University | *Three-Time President's List (4.0 GPA terms)* **2024 – Present**

Emory Hacks | *Participant* **Nov 2025**

Bridge Building Competition (CLACEC) | *First Place* **Sep. 2025**

Phi Theta Kappa | *Member* **Aug. 2025**