

Abdullah Khaled

Embedded systems engineer with robotics, vision, and on-device ML experience

📍 Frisco, TX ✉ me@aakhaled.com ☎ (469) 347-2884 🌐 www.aakhaled.com 💼 akhaled247 🔄 akhaled247

Education

Wakeland High School, High School Diploma - GPA: 4.0/4.0 Aug 2023 – May 2027

- Completing PLTW engineering coursework in digital electronics, systems design, and engineering development.
- Taking rigorous course load, including 18 AP classes, Multivariable Calculus, Physics C

Boston University, Research in Science & Engineering (BU RISE) - Electrical & Computer Engineering June 2026 – Aug 2026

- Researching under Dr. Wenchao Li in the Dependable Computing Lab
- Studying VLM/VLA-driven Sawyer robots to enable long-horizon task completion from vague human prompts

Work Experience

Summer Programs & Operations Intern, Ma'ruf Dallas – Richardson, TX June 2026 – June 2026

- Selected as first high school intern in organization history
- Built multilingual (5) client check-in for events to reduce volunteer dependency at events; preserved PII and attendance metrics for marketing and client analysis
- Designed inventory management system for 100+ items and created coding system using custom formula in Google Sheets

Math and Reading Instructor, Gideon Math and Reading Center – Frisco, TX June 2024 – present

- Design individualized instruction plans using student performance data to identify learning gaps and accelerate progress.
- Manage daily small-group sessions, adapting delivery and materials across multiple grade levels.
- Strengthen progress tracking by implementing structured checkpoints and targeted review.

Activities

Chief Technical Advisor / Programming Lead, ITKAN Robotics – Plano, TX July 2025 – present

- Direct software strategy for a multi-team robotics program with ~20 programmers, standardizing code structure, GitHub workflows, and integration practices.
- Implement reliability engineering and contingency planning that preserve system performance after critical sensor failures.

Curriculum Overhaul Coordinator, Ma'ruf Dallas – Plano, TX Aug 2023 – present

- Lead Project Taleem tutoring K–6 refugee students in small group sessions
- Recruit high-school volunteers from five schools; onboard into program
- Measured up to +45% improvement over three months

Projects

Automated Mechanical Doser – MedRock Pharmacy June 2026 – Aug 2026

- Creating system architecture for powder dispenser with $\pm 0.5\%$ precision for masses from 20mg-100g
- Leading device construction, programming, and testing to ensure deliverables were met within 10-week deadline

OralVision – Conrad Challenge; Diamond Challenge Oct 2025 – present

- Developed a privacy-preserving oral disease detection prototype using federated learning.
- Designed and programmed a low-cost imaging device using XIAO-ESP32-C6, OV5642 camera, and power-aware capture logic.
- Iterated through three PCB revisions and five 3D-printed enclosure revisions to improve reliability and manufacturability.

Additional

Honors: Texas High School Ideas Finalist (2026); FTC 5A UIL State Championship 3rd (2026); FRC State Championship Winner (2026)

Technical Skills: CAD/CAM, ROS, Python, Java, JavaScript, Digital Logic Design, PCB Software, Google Workspace, R