

# Abdullah Khaled

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🌐 Abdullah-A-Khaled    🗣 Squirrr    ▶ AKha1ed

## Education

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**Wakeland High School**, High School Diploma – Frisco, TX Aug 2023 – May 2027

- Unweighted GPA: 4.0
- Rigorous course load including 12 APs before senior year

**Frisco ISD Career and Technical Education Center**, Project Lead The Way – Frisco, TX Aug 2023 – May 2027

- Introduction to Engineering Design, Principles of Engineering, Digital Electronics, Engineering Design and Development
- [PLTW Engineering EPortfolio](#)

## Experience

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**Programming Lead, Chief Technical Advisor**, ITKAN Robotics (FRC 9128) – Frisco, TX Sept 2023 – present

- Led team to playoffs at Texas State Championship (89 teams) using AprilTag pose estimation, and swerve drive odometry achieving sub 2-inch precision
- Trained 4 students in Java robotics programming; created Java training website: [Mantik's FRC Curriculum](#)
- Developed custom publish-subscribe motor logging system for real-time diagnostics analyses
- Implemented finite state machine with Dijkstra's Algorithm
- Used FRC-specific Java mechanism simulation towards telescoping arm optimization

**Founder, President, Youth Mentor**, Wolverine Robotics (FTC 33791) – Frisco, TX Aug 2024 – present

- Founded inaugural Robotics Club scaling from 0 to 50+ members in first year, securing funding and registration in under 2 weeks
- Teach CAD software (Onshape) and Java programming through monthly technical workshops
- Manage club operations including mission development, curriculum design, and budget management

**Programming Mentor**, ITKAN Robotics of ICF (FTC 26357, 28931) – Frisco, TX Sept 2024 – present

- Trained 5+ students in Java, command-based programming, motor control, PID tuning, servo control, sensor integration, and dead-reckoning wheel odometry
- Created self-paced learning website and summer training programs: [Mantik's FTC Curriculum](#)
- Mentor refugee children in FLL workshops and lead weekly summer training for FTC and FRC students through self-made [OARobotics](#) curriculum

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

- Instruct K-11th grade students in mathematics (Algebra, Geometry), reading, and grammar
- Analyze student performance data to identify learning gaps and develop personalized plans
- Utilize ChatGPT for reading material level assessment and adjustment

## Projects

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### **Senior Fall Monitor Device – Samsung Solve for Tomorrow**

Jan 2024 – present

- Developed lightweight TensorFlow Lite ML model for real-time motion tracking and fall detection on mobile devices with buzzer alert system
- Engineered hybrid dataset combining public and custom annotated data, reducing false positive rate

### **Oral Disease Detector – The Conrad Challenge**

June 2024 – present

- Designed HIPAA-compliant federated learning architecture using TensorFlow Federated for distributed model training without exposing patient data
- Used Onshape 3D CAD software to design and 3D print the device, reducing manufacturing costs

## Extracurricular Activities

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### **Vice President**, Math National Honor Society – Wakeland High School, Frisco, TX

Sept 2023 – present

- Led organization as Vice President (2024-25) and Treasurer (2023-24), managing budget for 100+ members
- Designed Math Lab Program website using Google Sites and coordinated peer tutoring, attaining over 20% member participation
- Organized annual middle school math competition with 100+ participants, 3 participating schools, and 35+ volunteers

### **Secretary, Co-Founder**, Muslim Student Association – Wakeland High School, Frisco, TX

Sept 2023 – present

- Co-founded MSA as Secretary, establishing organizational structure and creating digital promotional media
- Negotiated with school administration to establish dedicated prayer room, coordinating facility setup and policies

### **Lead Math and English Instructor**, Ma'ruf Project Taleem – Dallas, TX

Sept 2023 – present

- Teach Math and English to refugee elementary and middle school students, developing differentiated curriculum
- Provide mentorship in academic skills, time management, and social integration for students transitioning to American schools

## Selected Honors

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- (2025) Collegeboard AP Scholar with Distinction; NRP School Recognition Award
- (2025) FRC 9128: Event Winner (FiT Victoria, 25 teams); Autonomous Award (FiT Plano, 31 teams); Creativity Award (FiT Amarillo, 36 teams)
- (2025-26) FTC 26357: Finalist Alliance Captain (FiT-North McKinney Qualifier, 19 teams)
- (2025-26) FTC 28931: Dean's List Semifinalist (FiT-North D-League Tournament, 19 teams)

## Skills

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**CAD/CAM:** Fusion 360, Onshape

**Software:** Python, Java, HTML, CSS, Jekyll, MS Office

**Electrical:** NI Multisim, Soldering

**Programming & Technologies:** TensorFlow Lite, Federated Learning, solvePnP AprilTag vision, Kalman Filtering, Finite State Machines, Mechanism Simulation, Control Theory