

# Abdullah Alshenaifi

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## Professional Summary

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Applied Electronics and Control Systems Engineer and IEEE Professional Member with experience in embedded systems, IoT, industrial inspection automation, and electronics prototyping. Develops ESP32/Arduino firmware, integrates sensors and actuators, designs PCBs, and performs SMT/THT assembly and rework. Supports manufacturing operations through inspection system calibration, troubleshooting, configuration control, quality documentation, and internal reporting tools. Delivered technical instruction and workshops to 200+ learners across university, bootcamp, and robotics program settings. Accredited by the Saudi Council of Engineers (SEC).

## Professional Experience

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### Alamat Robotics | Co-Owner | April 2019 – Present

- Led robotics, IoT, and digital manufacturing projects focused on embedded systems and automation
- Designed and implemented custom PCBs and embedded hardware with integrated firmware
- Delivered technical training to +100 students in electronics, Arduino, and 3D printing

### The National Company for Glass Industries | Electronic Engineer | December 2024 – December 2025

- Executed job-change setups, sensor alignment, and calibration for MX4, MULTI4, and MCAL4 automated inspection systems.
- Diagnosed electrical, mechanical, and software faults to maintain production uptime.
- Tuned real-time inspection parameters to reduce false rejects and improve defect detection accuracy.
- Developed internal tools: Python Streamlit (Excel logging) and a React + Node.js reporting tool to standardize maintenance reporting.

### Princess Nourah Bint Abdulrahman University | Lecturer | January 2025 – June 2025

- Lectured and facilitated applied sessions in Arduino programming, sensors, and practical electronics to 50+ students.
- Developed lab exercises and workshop materials, guided students through prototyping, circuit integration, and troubleshooting.
- Supervised project delivery and assessed outcomes through technical documentation.

### Tuwaiq Academy | Instructor | July 2024 – August 2024

- Instructed 60+ trainees in Arduino programming and electronics fundamentals through structured labs and project-based assessments.
- Authored training materials and lab activities; evaluated learner progress and reinforced safe lab practices.

### King Abdulaziz City for Science and Technology (KACST) | COOP Training | January 2021 – April 2021

- Practiced PCB design and manufacturing, including schematic-to-layout translation, datasheet-based footprint creation, and CAM processes.
- Performed hands-on assembly and system testing, specializing in precision SMT/THT soldering, sensor integration (MEMS/IMU) for Indoor Positioning Systems, and Power Quality (PQ) analyzer validation.

## Education

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- **Bachelor's degree in Applied Electronics and Control Systems Engineering** | Technical College of Riyadh | 2023
- **Diploma in Industrial Electronics and Control** | Technical College of Riyadh | 2021

## Certifications and Training Courses

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- **Training of Trainers (ToT)** | Sahm Training Center | 2025
- **3D Printing** | Tuwaiq Academy | Riyadh | 2024

- **Internet of Things (IoT)** | Tuwaiq Academy | Riyadh | 2024
- **Microelectromechanical Systems Technologies (MEMS)** | Academy 32 | 2024
- **Engineering Solutions Design and Manufacturing** | Tuwaiq Academy | Riyadh | 2024
- **Full Stack Engineer** | Smart Methods | 2021
- **PLC Programming** | SME | 2021

## Projects

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### IoT Smart Parking System | November 2024

- ESP32-based parking management system integrated with Blynk IoT for real-time occupancy monitoring and reservation control | Electronics design | Sensor integration | Embedded programming

### Smart Safety Helmet with Fall Detection and Temperature Monitoring | April 2024

- ESP32-based wearable with GPS tracking, temperature sensing, fall detection, and Telegram alert notifications | Hardware design | Embedded firmware | Communication systems

### IoT Water Monitoring System | March 2023

- Graduation project for apartment-level water metering with dashboards and SMS alerts | Electronics | Embedded programming | Testing <https://linktr.ee/smartflows>

### Custom Robotics Mainboard PCB | August 2021

- Custom robotics mainboard with full schematic and PCB layout | PCB design | Hardware integration | Documentation [https://github.com/AAShenaifi/Robots\\_MainboardPCB](https://github.com/AAShenaifi/Robots_MainboardPCB)

## Professional Memberships

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- **Saudi Council of Engineers** | Professional Accreditation – Electronics Engineer | Sep 2024 – Present | ID 1064201
- **IEEE** | Professional Member | Dec 2020 - Present | ID 101800416

## Skills

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Embedded Systems (ESP32, Arduino) | Embedded C/C++ | Sensors/Actuators Integration | Hardware–Software Interfacing | Circuit Debugging | Test & Verification/Validation | PCB Design | Prototype Bring-Up | SMT/THT Assembly & Rework | Industrial Inspection Systems | Calibration/Alignment | Technical Documentation | Logs

## Languages

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- **Arabic:** Native
- **English:** Advanced