



MOHAMMED GHANDOUR

Automotive Diagnostics & Embedded Electronics Technician

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🚗 Category B — Morocco

🐙 github.com/mohammedghandour2004-glitch

📄 PROFESSIONAL PROFILE

Automotive Diagnostics and Embedded Electronics Technician with a Bac+2 vocational qualification and practical experience in vehicle diagnostics, automotive electrical and electronic systems, sensors, actuators, microcontrollers and Embedded C programming. Hands-on experience developing and testing embedded projects using ATmega32, Arduino and STM32 platforms, including custom peripheral drivers, sensor interfacing, LCD/keypad applications, ADC, timers and communication protocols. Strong interest in automotive electronics, vehicle diagnostics, embedded systems, ECU-related technologies and technical troubleshooting. Motivated to develop professionally through practical technical work and international industry experience.

📁 PROFESSIONAL EXPERIENCE

Automotive Diagnostics Intern, Nahda Auto

04/2026 | Rabat, Morocco

- Performed and assisted with OBD-based vehicle diagnostic procedures.
- Assisted in inspection of automotive electrical and electronic systems.
- Supported troubleshooting of vehicle electrical and electronic faults.
- Used professional diagnostic tools during workshop activities.
- Assisted with mechanical and technical workshop operations.
- Followed workshop safety, quality and technical procedures.
- Developed practical teamwork, troubleshooting and technical communication skills.

🎓 EDUCATION

Specialized Technician in Automotive Diagnostics & Embedded Electronics

09/2024 – 07/2026 | Salé, Morocco

OFPPT — ISTA Salé Al Jadida

Relevant studies included:

- Automotive diagnostics
- Automotive electronics
- Vehicle electrical systems
- Sensors and actuators
- Automotive mechanical systems
- Embedded electronics
- Microcontrollers
- Electronic troubleshooting

Moroccan Baccalaureate

2023

🧠 TECHNICAL SKILLS

Automotive Diagnostics & Electronics

Vehicle Diagnostics, OBD Diagnostics, Automotive Electrical Systems, Automotive Electronics, Sensors & Actuators, Electronic Troubleshooting, Preventive Maintenance, Basic Mechanical Troubleshooting, ECU Fundamentals, CAN Bus Fundamentals, LIN Fundamentals

Communication Protocols

UART / USART, SPI, I²C, CAN Fundamentals, LIN Fundamentals

Development & Simulation Tools

Git, GitHub, VS Code, Eclipse IDE, Proteus Design Suite, Wokwi, Arduino IDE, Visual Studio

Embedded Systems

ATmega32, Arduino Uno/Mega, STM32 / STM32F103C6, ESP32 Fundamentals, GPIO/DIO, ADC, Timers, Interrupts, PWM, Watchdog, LCD, Keypad, Temperature Sensors, Ultrasonic Sensors, LEDs, Buzzers

Programming

C, Embedded C, C++, Python Fundamentals

SELECTED TECHNICAL PROJECTS

ATmega32 Reusable Driver Library, *Embedded C | ATmega32 | AVR-GCC | Eclipse*

- Developed reusable Embedded C drivers for ATmega32 peripherals and external modules using a structured MCAL/HAL-based architecture.
- Built, tested and maintained the drivers using AVR-GCC and Eclipse IDE with source-code versioning on GitHub.

ATmega32 Calculator, *Embedded C | ATmega32 | LCD | Keypad | Proteus*

- Developed a calculator application using a keypad for user input and an LCD for displaying operations and results.
- Integrated custom GPIO, keypad and LCD drivers and validated the firmware through Proteus simulation.

ATmega32 Digital Door Lock, *Embedded C | ATmega32 | Keypad | LCD | Proteus*

- Developed a keypad-based digital door-lock application with password verification and user feedback on an LCD.
- Integrated the application with reusable ATmega32 peripheral drivers and tested the system in Proteus.

Smart Vehicle Monitoring System — CS50x Final Project, *Arduino Mega | C/C++ | Wokwi | Sensors & Actuators*

- Developed a simulated automotive monitoring system using multiple sensors and actuators to collect and process vehicle-related data.
- Implemented warning logic with visual and audio alerts based on predefined operating conditions and tested the system in Wokwi.

CERTIFICATIONS & ADDITIONAL TRAINING

CS50x — Introduction to Computer Science, *Harvard University / edX*

Arduino Programming Fundamentals and Practical Projects, *EDRAAK*

Artificial Intelligence Fundamentals, *IBM SkillsBuild*

1 Million Prompts: Certificate of Completion, *Dubai Centre for Artificial Intelligence*

Additional Self-Study

- Embedded C
- Microcontrollers
- Automotive Communication Networks
- Electronics
- Git/GitHub

LANGUAGES

Arabic

Native

English

Intermediate

French

Elementary

PROFESSIONAL STRENGTHS

- | | |
|-----------------------------|---------------------------|
| • Technical Troubleshooting | • Problem Solving |
| • Analytical Thinking | • Attention to Detail |
| • Teamwork | • Adaptability |
| • Self-Learning | • Technical Documentation |
| • Logical Thinking | • Willingness to Learn |