

Contact Information:

- **Name:** Omar Khaled Abdelmoez Younis
- **Address:** Mansoura, Egypt
- **Mobile Number:** +201011281789
- **E-mail:** omarkhled992@gmail.com
- **Linkedin:** [LinkedIn](#)
- **Github:** [Github](#)

Professional Summary:

Motivated Embedded Systems Engineer with a solid foundation in Mechatronics and extensive hands-on experience in IoT application development, embedded systems design, and automation solutions. Proficient in microcontroller programming (PIC, AVR), hardware design, and seamless system integration, with deep knowledge of communication protocols like SPI, UART, I2C, and CAN/LIN. Skilled in C and C++ programming, real-time system development, and circuit optimization. Successfully led a multidisciplinary team on innovative projects, including a Smart Hospital System, showcasing leadership, technical expertise, and a commitment to excellence. Dedicated to leveraging technical acumen and problem-solving skills to drive advancements in embedded systems engineering.

Education:

Bachelor's degree of Mechatronics Engineering | Mansoura University | 2019 - 2024

- **GPA:** 3.01B

Graduation Project: Advancing Healthcare: A Comprehensive Smart Hospital System Integration | Jun 2024

- Led a multidisciplinary team focused on the development of embedded systems, mechanical design, clean energy solutions, HVAC system, IoT integration, and PCB design for a smart hospital system.
- Took full responsibility for the embedded systems and app development, ensuring seamless integration and optimized functionality of each system.
- Successfully implemented the Garage Gate Control System, Safety Monitoring System, Access Control System, Real-Time Communication System, Power and Voltage Control System, and Smart Login System.
- Achieved an A+ grade, demonstrating excellence in embedded systems, app development, leadership, and project management.

Work Experience:

Research and Development Engineer | Smart Technology | Mansoura | Feb 2025 – Mai 2025

- Monitored instructor performance, provided feedback reports, and supported continuous improvement in training delivery.
- Handled all technical operations at the branch, ensuring smooth functionality of lab equipment and student tools.
- Designed and implemented educational programs, assessments, and extracurricular activities aligned with the latest engineering trends.

IoT Application Developer | Information Technology Institute (ITI) | Cairo | Sep 2024

- Delivered practical demonstrations and technical insights on IoT system design, boosting lab efficiency and user understanding.
- Operated advanced IoT lab equipment, including Sense SigFox innovation kits and Minew BLE gateways, to enhance technical expertise in IoT systems.

Projects:

Autonomous Irrigation System | Mansoura University | Jan 2024

- Designed a microcontroller-based system to optimize water usage by autonomously monitoring soil humidity and controlling water pumps.

Smart Home 2 Integration with IOT Application | Mansoura University | Grade: A+ | Sep 2023 - Jan 2024

- Developed a Smart Home system with IoT integration, enabling remote control of lighting, security, and appliances through a mobile app. Automated home functions using sensors and actuators based on environmental conditions and user preferences.

Smart Home1 Project | Mansoura University | Grade: A+ | Feb 2023 - Jun 2023

- Designed an automated Smart Home system enabling real-time control of lighting, temperature, gates, and security for enhanced efficiency and convenience.

Calculator System | Mansoura University | Jun 2023

- Developed a microcontroller-based calculator using AVR, featuring real-time arithmetic operations and robust error handling for invalid inputs.

Smart Parking System with Image Processing | Mansoura University | May 2023

- Created a parking system leveraging image processing to detect and display real-time availability of parking spaces.

Image Filtering and Enhancement Tool | Mansoura University | May 2023

- Engineered an image processing tool for noise reduction, sharpening, and contrast adjustment to improve visual quality.

Courses and Certification:

Career Development track | National Telecommunication Institute (NTI)| 144 hours | In-progress

- Developed expertise in communication, leadership, negotiation, time management, business English, project management, and freelancing.

Embedded Systems Full Diploma | 144 hours | Jul 2022 - Dec 2023

- Mastered microcontroller programming (AVR), computer architecture, hardware interfacing, RTOS, software engineering principles, data structures, automotive communication protocols (CAN/LIN), and hands-on experience in embedded system design, development, and real-time application integration.

Introduction to Python Programming Language | Mahara-ITI-Tech | 6 hours | Jun 2023

- Built a strong foundation in Python programming, covering syntax, control structures, and efficient code development.

Image Processing at MATLAB | 2 hours | May 2023

- Applied image processing techniques using MATLAB, including enhancement, segmentation, feature extraction, and object recognition for edge detection and noise reduction.

C Programming and Hardware Design | 30 hours | Sep 2022 – Dec 2022

- Acquired in-depth knowledge of C programming fundamentals, hardware design, circuit design, and component selection for embedded systems.

MATLAB Onramp | 2 hours | Jan 2021

- Gained proficiency in MATLAB, focusing on scripting, data manipulation, numerical analysis, and data visualization.

Core Skills:

- | | |
|--|---|
| • Embedded Systems Development | • Data Structures & Algorithms |
| • IoT Solutions & Applications | • Software Integration & Testing |
| • Hardware Interfacing & Circuit Design | • Proficient in C/C++ |
| • Real-Time Operating Systems (RTOS) | • Project Management |
| • Microcontrollers (PIC, AVR, Arduino) | • Freelancing Proficiency |
| • Communications (SPI, UART, I2C, CAN/LIN) | • Business English Proficiency |
| • Testing & Debugging with Logic Analyzers | • Communication & Leadership |
| • MATLAB & Image Processing | • Negotiation & Time Management |
| • Familiar with Rust | • Problem Solving & Analytical Thinking |

Events:

- **Judge at Plaza Competition** | Starks MU Team | Apr 2025
- **ITIDA Employment Fair** | Sep 2024
- **TechFury Event** | Luminous MU Team | Apr 2024
- **Valeo** | Tech Bites | Mar 2024
- **Hackathon 5.0** | Feb | 2023

Languages:

Arabic : Native

English : B2

German: A2

References:

References are available upon request.