

MOHAMED ABDELHAQ

Cairo, Egypt 📍 +201000539560

✉ mohamed.abdelhaq99@gmail.com

🌐 [linkedin.com/in/mohamed-abdelhaq](https://www.linkedin.com/in/mohamed-abdelhaq)

🐙 github.com/mohamedabdelhaq-123

Objective

Mohamed, a motivated and meticulous undergraduate Mechatronics Engineer with a solid foundation in testing and development, particularly in embedded systems and data science. Passionate about leveraging advanced technologies to solve real-world challenges. Seeking a dynamic role to apply technical expertise, collaborate on cutting-edge projects, and contribute to impactful solutions while fostering continuous learning and professional growth. Eager to gain experience through internships and contribute to a forward-thinking company where he can utilize his skills and continue to learn and grow.

Education

Egyptian Academy for Engineering and Advanced Technology

Sep. 2020 – July 2025

Bachelor of Engineering in Mechatronics by Cumulative GPA: 3.08

Cairo, Egypt

Graduation Project: Side-Walk Autonomous Delivery Robot

The autonomous delivery robot aims to transform last-mile logistics by navigating urban sidewalks and pedestrian pathways. This project involved overcoming significant technical challenges through the integration of advanced robotics and sensor fusion technologies. Utilizing SLAM for real-time environment mapping and the A* algorithm for optimal path planning, the robot employs a multi-sensor array to ensure safe navigation in crowded settings. It processes real-time data, adheres to pedestrian traffic regulations, and features a communication system for user interaction.

Experience

Fekr-فكر

Cairo, Egypt

Co-founder & Instructor

Seb 2024– Present

- A startup dedicated to providing high-quality educational workshops, technical training, and mentorship programs. My role is to design and deliver technical workshops in programming languages, embedded systems and career development. Leadership of mentorship programs supports students in their project work and professional growth. Additionally, management of partnerships with organizations and universities enhances Fekr's outreach and impact.

Udacity

Hurghada, Egypt

Embedded Systems Session Lead in the DECI Program by the MCIT

Feb 2024– Present

- DECI program, a 5-year initiative aimed at upskilling Egyptian students aged 12–17 to become future digital leaders. My role is to deliver monthly 3-hour sessions focused on the Embedded track. These sessions involve gamified activities, technical lessons presented in child-friendly language, group activities, and reflection periods to highlight key takeaways and rewards for students who excel.

DEPI Program by the MCIT

Remotely

IBM Data Scientist

Oct 2024– Present

- The course was designed by IBM. A data scientist can leverage a unique set of skills and tools to help businesses derive value from their data. A data scientist is capable of mining the data for drivers of past and future performance, opportunities for new revenue, methods to increase efficiency, ways to improve the customer experience, and a host of other critical business insights.

Cellula Technologies

Machine learning Intern

Remotely

Feb 2025 -present

Neuornetix

Embedded Systems Intern

Remotely

March 2024

Diesel and 99 Military Factories

Engineer Intern

Helwan, Egypt

July 2022

AAV and AOI Factories

Engineer Intern

Nasr City, Egypt

July 2023

Courses

Embedded Systems Diploma Student

July 2023 – June 2024

- Some of Gained Technical Skills: C programming, Data Structures and Algorithms, Embedded C, Embedded Systems Fundamentals, knowledge in building processes (compiling, linking), AVR Processors Architecture and Interfacing, Communication Protocols, SW Layered Architecture, Real-Time Operating Systems(RTOS).

AI Career Essentials / ALX Africa

Jun 2024 – July 2024

- An insightful course designed to elevate professional skills for individuals, integrating lessons from ALX Foundations with advanced AI tools training. Focused on enhancing communication, teamwork, leadership skills, and practical AI applications. Gained proficiency in digital workplace skills and prepared for career growth in the tech industry.

Mastering of Git and GitHub / Udemy

July 2024

- Course covered topics like Version Control fundamentals, command line, Git Concepts and Architecture, Basic operations of Git, Master collaboration workflows: pull requests, "fork and clone", and hosting static websites using GitHub Pages

ISO 26262 Software Impact / Udemy

July 2024

- The course covers topics like an Overview of the ISO 26262 Automotive Functional Safety concept, use cases, implementation process, challenges, impact on the Software Requirements, HLD, LLD, Development and Testing Hazard Analysis and Risk Assessment (HARA) and Automotive Safety Integrity Levels (ASIL), Linking with V-Model SDLC.

Automotive Course / D-Bugers

Jun 2024 - July 2024

- The Bootcamp covers an Overview of Introduction to automotive, Power train systems (PTS), ADAS, Infotainment Systems, Visibility systems, Introduction to AUTOSAR, UDS and CAN communication protocol

Model-Based Design Concepts / Udemy

July 2024

- The course covered topics like MBD concepts, model development processes, and system architecture. Gained practical knowledge of MBD applications in various industries, with a focus on the automotive sector and the V-Model framework

Introduction to Software Testing Concepts and Technique / MaharaTech

Mar 2024

- The course covered topics like objectives and importance of Software Testing, Defining and reading system requirements, Addressing bugs and maintaining test cases, Differentiate between levels of testing using black and white box techniques

Introduction to the IOT and Embedded Systems / Coursera, University of California

Feb 2024

- It was an insightful course covering topics like IoT, Components of Embedded Systems, Microcontroller, Network Protocol, MANETs and their relation to IoT and Packet capturing using the Wireshark application

CS50 / Edx, Harvard University

Sep 2023

- A Rigorous computer science course delved into the core principles of computer science, mastering problem-solving, algorithmic thinking, and gaining knowledge in languages like C, Python, HTML and CSS

Effective Presentations | HP Life

Apr 2023

- Developed skills in delivering impactful presentations, structuring content effectively, and engaging audiences with clear communication.

LinkedIn Profile Development Workshop | EYouth for Development

Oct 2023

- Learned strategies to optimize LinkedIn profiles, enhance professional branding, and leverage networking opportunities for career growth.

Main Projects

Implementing Configurable Drivers for various peripherals

- * (DIO, LCD, Keypad, 7segment, Motors, ISRs, Timers, ADC, UART, SPI, I2C, External Interrupts, Sensors)

Smart Home

- * There are 2 microcontrollers, one of them works as a Master and has the right to deal with the memory, Communication between them is done via the UART protocol. It can be controlled via mobile.
- * Admin is remotd only but the user can enter by Keypad and LCD. Admin mode can register, remove, or edit any user. Usernames and passwords are kept in EEPROM

Fire Alarm System

- * Using Temperature Sensor LM35 and Smoke Sensor in addition to using Hysteresis, the System has 3 States (Fine-Heat-Fire), In case of Fire state requires a password to turn it off

Stopwatch using 7-segment 2-digit MUX

- * Simple countdown stopwatch project using AVR Atmega32 microcontroller, the Stopwatch is adjusted so that at every second elapsed the stopwatch will countdown, The stopwatch has two modes calibration and runtime.

Calculator and Converter to HEX and Binary

- * Simple Calculator that can add, subtract, multiply, or divide, Display results in Decimal, Hexadecimal and Binary Formats.

School Management System

- * Using C language to create a new student, update the information of an existing student, view and manage scores, check the details of an existing student, remove existing student and view students' list

Technical Skills

Languages: Assembly Language, C, C++, Python, HTML/CSS, Arduino C

Developer Tools: Atmel Studio, Code Blocks, LabVIEW, MATLAB, SolidWorks, VS Code, Proteus, Multisim, Dock light, Notepad++, Arduino IDE, Oscilloscope, GitHub

Office 365: Word, Excel, PowerPoint

Volunteering

IEEE

Oct. 2022 – Present

Secretary

IEEE EAEAT SB

The secretary is responsible for managing meetings, maintaining communication, keeping records, coordinating events, preparing reports, supporting the chair and board members and ensuring compliance with IEEE policies.

GDSC

Aug. 2022 – Feb 2023

Event Planner

GDSC EAEAT SB

Awards / Competitions

Egyptian Student Paper Contest (IEEE ESPC)

Oct. 2024

Got the 5th rank. Developed a research paper that explores energy harvesting technologies embedded in urban infrastructure to generate clean energy from pedestrian and vehicle movement.

IEEE Xtreme

Nov. 2023

82nd rank on Egypt

Adrift

Feb. 2023

Line follower robot Competition 3rd place