

Mostafa Mohammad ELKady

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Training and Internships

- PCB & Analog Circuit Design at Arab-Tech (Jun 2019 – Aug 2019)
 - Introduction to Electronic Components (transistors, diode, mosfet..).
 - Explore Each Component through Datasheet.
 - Measurement Tools & Testers (multimeter, oscilloscope...).
 - Logic Circuits & PCB design using Proteus.
 - Detecting Faults in the Circuit.
 - CCNA at Arab-Tech (Oct 2020 – Dec 2020)
 - Network fundamentals.
 - Network access techniques.
 - IP Connectivity and services.
 - Security fundamentals.
 - Optical Communications (Jan 2021 – March 2021)
 - Wired & Wireless Communication, Transmission Media
 - Fiber Optics (Construction, Measurement, Characteristics, Splicing,...).
 - Telecommunication Networks and Regulations and Standards.
 - Optical Telecommunication Systems.
 - Amplifiers, Technologies and Characteristics.
 - Network surveillance, Troubleshooting, Escalation Corrective and preventive maintenance.
 - Embedded Systems Diploma at AMIT Learning (Sep 2021 – Jan 2022)
 - C Programming & Data Structure.
 - Embedded System Concepts & Tools.
 - AVR, ARM, PIC18F Architecture.
 - Microcontroller Interfacing (ADC, External Interrupt, Timers...).
 - Communication Protocols (UART, SPI, I2C).
 - RTOS & AUTOSAR.
 - Automotive Bus Technology.
 - Software Testing and Validation.
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Education

B.Sc. in Electronics and Communication Engineering (2017 – 2022).

Faculty of Engineering – El-Jazeera Higher Institute.

Accumulative Grade: Very Good with honors.

Technical Skills

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| • C/C++ Programming Language | • Embedded C Programming |
| • Object-Oriented Programming (OOP) | • Real-Time Operating Systems(RTOS) |
| • Data Structures & Algorithms | • Software Debugging & Testing |
| • AVR & ARM Architecture | • Communication Protocols |
| • Problem Solving | • PCB Design |
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- **Tools:** Eclipse - Atmel Studio –Visual Studio Code- Mplab IDE- Proteus -Matlab

Projects

1- Graduation Project: Smart Home and Garage Automation:

- **Description:** Our project consists of two parts. First, the garage can recognize the plate numbers of a car trying to enter the garage using image processing and process the image then open the door if the car plates are stored in the database and a counter to detect the number of cars in the garage. Second, the smart home has multiple features like IOT, safety sensors, streaming, and a dedicated website to control some of the features.
- **Graduation project grade: Excellent.**

2- Automatic Hand Sanitizer Dispenser:

- **Description:** Utilized Atmega32 MCU with a Fabricated PCB Combined with an Ultrasonic Sensor and Water Pump, and by putting the hand under the Ultrasonic Sensor at a fair distance, the water pump will work for a specific time.

3- FM Modulation & Demodulation Circuits:

- **Description:** Utilized different components with a Fabricated PCB to modulate the input signal and assign it to a known carrier frequency to make it easier to be sent through a medium then at the output we use the demodulation circuit to retrieve the original signal by removing the additional carrier.

4- Obstacle Avoiding Car:

- **Description:** Utilized Atmega32 MCU with a Fabricated PCB and Implemented multiple Drivers like Ultrasonic Sensor, and DIO.

5- Fan Controller with Temperature:

- **Description:** Developing a system that controls the speed of a fan depending on the temperature. Drivers: GPIO, ADC, PWM, LM35 Sensor, LCD, and DC-Motor- Microcontroller: ATmega32.

6- Pulse Meter:

- **Description:** Designed a pulse meter project utilizing the Input Capture Unit (ICU) of the Atmega32 microcontroller to measure signal frequency and duty cycle accurately.
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Competitions

- **Science Club Version 3 (2022):**

- **Rank:** 2nd Place in the Republic of Egypt
 - **Project name:** Smart Home and Garage Automation.
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Extracurricular Activities

- **Eng Break** Title: Photoshop Designer Member (Nov. 2018 – Mar. 2019)
 - **Shell** Title: Technical Member (Electric) (Aug. 2019 – Dec. 2019)
 - **IEEE** Title: Photoshop Designer Member (Aug. 2020 – Aug. 2021)
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Soft Skills

Creative problem-solving, Excellent Communication skills, Time management, Scheduling, Teamwork, Leadership, Presentation skills, Adaptability, Attention to detail, Reliability, Punctuate, and Well-organized.

Languages

Arabic: Native

English: Very Good

German: Beginner

Personal info

Nationality: Egyptian

Military status: Completed