

OMAR AFIFI

Software Engineer

CONTACT

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 Alexandria, Egypt

EDUCATION

Fresh Graduate | 2023

Bachelor of Engineering in
Electronics and Communications,
Alexandria University With 3 GPA
(Very Good) and A+ Excellent
Grad Project.

EXPERIENCE

ARM Embedded Systems Engineer Trainee

Information Technology Institute - ITI
Jul 2022 - Sep 2022 | Training

- Explored ARM architecture and studied various topics including:
 - ARM Architecture Basics
 - Advanced Interfacing
 - Building OS Scheduler
 - Communication Protocols
 - IOT and Applications
 - Bootloader Implementation
- Completed the final project which was establishing communication between the UART and SPI peripherals using DMA all with drivers written from scratch.

Electrical Engineer Trainee

Alexandria Electricity Distribution
Company

Sep 2021 - Oct 2021 | Training

- Learned how the electrical grid system is established and monitored in Alexandria
- Created a smart home webapp using ESP32 for the project

PROJECTS

GRADUATION PROJECT - Self driving car and Advanced Driver Assistance Systems (ADAS)

- In this project I was in the embedded development part utilizing all what was learned from past courses and projects.
- Developed BareMetal for all the STM32 MCU code (4000+ line of code).
- Experienced using a version control system (GIT) as I was developing with my colleagues.
- Established the communication Protocol between the MCU and the raspberry pi to be able to take action upon receiving the processed data from various sensors.
- Created a website with a joystick to control the car to simulate the driver to apply our ADAS.

ARM Cortex-M3 MCU Drivers

- Developed the drivers from scratch after reading the datasheet and writing BareMetal on the registers for 10+ drivers (SYSTICK, NVIC, GPIO, RCC, EXTI, TIMERS, DMA, UART and SPI) which resulted in reducing the size of the hex file.
- Used a toolchain for the building process and uploading the code.
- Learned and wrote a simplified version of the Linkerscript to adjust the memory sections.

COURSES & TECHNICAL SKILLS

- Udemy Mastering Data Structures Course
- Mahara Tech OOP Course
- ITI ARM Embedded Training
- Mastering Embedded Systems Diploma
- C / C++ | Excellent
- Interfacing With ARM/AVR Microcontrollers | Excellent
- Communication Protocols | Excellent
- Data Structure and Algorithms | Very Good
- Python | Intermediate

SOFT SKILLS

- Presentation & Communication Skills
- Self-Motivated
- Project Management
- Time and Work Management

LANGUAGES

- Arabic (Native)
- English (Fluent)