

Mahmoud Ayman

Embedded Software Engineer

Profile

As an experienced embedded engineer with a proven track record of success, I'm confident that my skills and achievements will impress you. My best qualities include attention to detail, problem-solving skills, and a strong work ethic, all of which have contributed to my success in the field. Let's work together to take your project to the next level!

Employment History

Freelancer at Livingston

January 2022 — November 2022

As a freelance engineer at Livingston Research, I can apply my skills and experience to a variety of projects while enjoying the flexibility of remote work. My strong communication skills and ability to deliver high-quality work within deadlines have allowed me to maintain positive relationships with clients and contribute to the growth of the company.

Projects

Traffic Light Control

October 2022 — November 2022

An electronic system designed to regulate traffic flow at intersections. It consists of a set of traffic lights, a PIR sensor, a pedestrian button, and an ATmega32 controller that manages the timing and sequencing of the traffic lights. The controller receives input signals that detect the presence and movement of vehicles, pedestrians, and other objects. Based on this input, the controller determines when to change the lights from red to green or yellow, and for how long.

Bank Payment Application

September 2022 — October 2022

A software-based project that provides a variety of banking services, including account management, transactions, and security features. The system is designed to provide users with a secure and reliable platform to access their accounts and perform banking operations through a graphical user interface. The project typically involves programming and integrating various modules such as user authentication, account management, transaction processing, and data storage. The embedded bank system is also expected to comply with banking regulations and standards, ensuring the safety and confidentiality of user data.

I HOME

February 2019 — June 2019

A high-security IoT smart home project designed to provide an advanced level of security and convenience to homeowners. The project typically involves the integration of various IoT devices such as cameras, door locks, motion sensors, and smoke detectors to provide real-time monitoring and alerts. The system is also designed to be controlled remotely via a smartphone app, enabling homeowners to monitor their homes from anywhere. The high-security aspect

Details

Alexandria, Egypt

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Links

[LinkedIn](#)

[GitHub](#)

Skills

Embedded Systems

Embedded C

C/C++

Computer Architecture

Python

MATLAB

Arduino

Languages

English

Arabic

German

is achieved through advanced encryption algorithms, user authentication, and secure communication protocols. The system also includes features such as automatic locking/unlocking of doors, smoke detection, and remote control of lights and appliances.

Internships

Embedded Systems Professional Nanodegree Program at Udacity (FWD)

August 2022 — November 2022

- Applied advanced knowledge of programming languages and embedded system interfacing to make real projects and applications.

Hardware Design for Machine Learning at Virginia Tech university

June 2022 — September 2022

- Developed advanced hardware design options for structures and systems by using AI and hardware implementation.

Education

B.A., Arab Academy for Science & Technology

September 2019 — June 2024

High school degree, STEM High School for Boys, 6th of October

September 2016 — June 2019

Courses

Embedded system and RTOS, AMIT Learning

November 2021 — April 2022

The Python Mega course 2022: Build 10 Real-World programs, Udemy

October 2020 — January 2021

Certified Network Associate Routing and Switching (CCNA), cisco.

July 2021 — September 2022

Extra-curricular activities

Third Place Problem solving at IEEE AAST Alexandria SB online coding.

February 2021 — February 2021

National Finalist at ECPC

August 2021

International Finalist at Future City Competition, Washington, D.C.

August 2017 — November 2018

Volunteer Experience

Head Localization team, Formula 1

September 2021 — January 2023

My experience as the head of localization team in Formula 1 has allowed me to excel in coordinating with race engineers and utilizing data analysis to optimize our car's performance on different tracks. I possess strong leadership and communication skills that enable me to work collaboratively with my team and driver to achieve success. With a passion for motorsports and a drive to win, I am constantly seeking to improve my skills and stay up to date with the latest technologies and techniques.

Project Manager, Enactus AAST Alexandria

February 2020 — June 2021

Led two groups of members to work on two projects for the 2021 competition. Coordinates between technical and non-technical teams to carry out the best implementation for the projects.

Head PR team, TEDxYouth@6October STEM

January 2019 — January 2020

Working in making one of the greatest events for high school students by gathering professional speakers and finding sponsors to support the event.

Organizer, Egyptian Engineering Day

August 2018

Work as an organizer for the famous event “Egyptian Engineering Day” in fostat village which has more than 6000 visitors

Co Fonder, Garage in street

2017 — 2018

an organization that helps the community by searching for unused landfill and turning it into free Garage to decrease the traffic congestion