

SALAH-ELDIN HASSEN

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EDUCATION

- Cairo University Faculty of Engineering, Department of Electronics and Electrical Communication Engineering (CUFE EECE).

WORK EXPERIENCE

- Robotics & Embedded Instructor // Beta Engineering Training Academy // Seasonal // Jan 2023 - Present. Teaching both Arduino and AVR embedded systems, starting as technical support then becoming the main instructor for 600+ students.
- Coding AI Trainer // Outlier // Freelancing // Nov 2024 – Dec 2024. Teaching and optimizing AI models for coding tasks by training, evaluating outputs, and refining models.
- Data Entry Clerk // Covo Connect // Full time // Jun 2023 - Jul 2023. Entering banking data from photos to text, improving touch-typing skills.

SKILLS

- Digital: HDL languages (VHDL, Verilog, System Verilog)
- Software: C / C++, OOP, MATLAB, Assembly, Rust, Data Structures, Algorithms, Python, Automation, Scripting, Kali Nethunter, Ubuntu, Debian, CentOS, AI tools, Qt, Git & Git-Hub, Latex
- Embedded: Atmega16/32 (AVR), PIC18F2XK20/4XK20 (PIC), STM32, Fundamentals of Embedded Systems, ARM Cortex-M Architecture, Embedded C, FreeRTOS, SOMEIP
- Web: HTML5, CSS3, JavaScript, Bootstrap, jQuery, Laravel, SQL

PROJECTS

- Advanced Digital Multimeter on PCB
 - **Description:** Developed a PCB-based digital multimeter capable of measuring voltage, current, and resistance with specified ranges.
 - **Key Elements:** ATmega32, PCB, GPIO, LCD, ADC
- Concurrent Rust TCP Server
 - **Description:** Multithreaded TCP server in Rust with optimized testing.
 - **Key Elements:** Rust, Multithreading, Protocol Buffers
- SFML Chess Game
 - **Description:** Chess game in C++ using SFML.
 - **Key Elements:** C++, SFML
- FreeRTOS Door Locker
 - **Description:** Door security system with FreeRTOS and I2C.
 - **Key Elements:** ATmega32, I2C, FreeRTOS
- Laravel Workshops
 - **Description:** Laravel system for managing workshops.
 - **Key Elements:** Laravel, PHP, MySQL

COURSES

- Digital Design and Verification Diploma
 - **Description:** Diploma focusing on digital/RTL design, Verilog/SystemVerilog, FPGA design, and verification techniques.
- SOME/IP Workshop
 - **Description:** SOME/IP protocol workshop.
- Advanced Embedded Diploma
 - **Description:** Diploma covering ARM Cortex-M4 and embedded systems.
- Linux Fundamentals
 - **Description:** Course on Linux basics and web server setup.