



Rahmouni Abdellah

Engineering student - 22 years old

📍 Gueliz - Marrakech - Maroc

☎ +212-652-575-568

✉ rahmouni.abdellah.0@gmail.com

🌐 [Rahmouni Abdellah](#)

SKILLS

• Software :

- MATLAB
- SIMULINK
- STM32CubeIDE
- Quartus
- KiCAD
- Code Composer Studio
- Proteus
- MPLAB
- FluidSim
- Fusion 360
- STEP7
- ARDUINO IDE

• Hardware :

- Raspberry Pi
- ARDUINO
- MIPS Architecture
- TMS320C6xxx
- STM32
- ESP32
- PIC

• Programming languages :

- C/C++
- Python
- MATLAB
- Assembly

• Hardware Description Language (HDL) :

- VHDL

• Operating systems :

- UNIX
- FreeRTOS

• Protocoles de communication :

- CAN
- LIN
- OBDII
- MQTT
- UART
- I2C
- SPI

• Other technical skills :

- Object-oriented programming
- Computer vision (YOLO v8)
- PCB design (Basic knowledge)
- 3D design and 3D printing

LANGUES

Arabe

Français

Anglais

EXTRACURRICULAR

- **Training cell leader** in Club of the Electronics and Embedded Systems Department

PROJECTS

• Secure CAN Driver for STM32 :

Development of a **CAN** driver for **STM32** with a **security layer** to ensure frame **integrity** and **authenticity**, featuring **checksum** and **secret key authentication** mechanisms.

• Predictive Maintenance System for Connected Vehicles :

Development of an embedded **predictive maintenance** system for vehicles using an **ELM327 module** to acquire **OBD-II** data transmitted to a **Raspberry Pi**. Data processing via a failure prediction model and display of results on an intuitive **graphical user interface (GUI)**.

• Control of a Two-Tank System with Simulink :

Modeling and **control** of a two-tank system in **Simulink**, including **transfer function identification**, cascade **PID regulation**, and **performance analysis** under saturation conditions.

• Robot Control via EEG Signals :

Robot control using **ESP32** and **Python**, employing a **neural network** to interpret **EEG signals** and replicate learned movements.

• Smart Guide for the Visually Impaired :

Smart guide using **Raspberry Pi 4** and **YOLO v8** for real-time object detection to assist **navigation** for the visually impaired.

• Maze-Solving Robot :

Autonomous robot with **Arduino UNO**, programmed in **C++**, using the **L293D driver** and **ultrasonic sensors** to navigate a maze. A **PID controller** adjusts its trajectory for precise movement.

EDUCATION

• Embedded Electronic Systems Engineering and Control Systems

National School of Applied Sciences, Marrakech (ENSA)

2021 - Present

• Baccalaureate - Experimental Sciences - International Track in Physical Sciences, French Option - Lycee Qualifiant Ibn Abbad - Marrakech

2020 - 2021

Honors : Very Good

EXPERIENCE

Reception Host

Event Agencies

Welcoming clients at private events such as weddings, galas, conferences, etc.

2021 - Present