

Habib Saadallah

Industrial Electronics Engineering Student

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Professional Profile

Motivated and detail-oriented engineering student at the **National Engineering School of Sousse (ENISO)**, passionate about emerging technologies. Skilled in developing innovative solutions in **AI** and **IoT**, with a focus on **industrial control systems** and **renewable energy**. Seeking a **final-year internship (PFE)** offering real-world impact, technical challenges, and long-term growth opportunities.

Professional Experience

KM Solutions | AI Full-Stack Developer Intern (Jul – Aug 2025)

- Developed an **intelligent chatbot** integrating voice recognition and text-to-speech, deployed via **Flask** and **SQLite** on Render.

Gharbi Trading International | Automotive Technician Intern (Jun – Aug 2024)

- Performed **OBD2 diagnostics**, maintenance, and repair of automotive electrical and mechanical systems.

Education

ENISO – National Engineering School of Sousse

Engineering degree in **Industrial Electronics** 2023–2026

IPEIK – Preparatory Institute of Kairouan

Preparatory cycle in **Mathematics and Physics** 2021–2023

Academic Projects

Wireless Bootloader for Embedded Systems

- Designed and implemented a CAN-based **Firmware Over-The-Air (FOTA)** system integrating **ESP32** and **STM32** microcontrollers.

- Developed a custom bootloader with flash memory management, WiFi-to-CAN bridge, and secure firmware transfer.

Industrial Predictive Maintenance System

- Built a real-time industrial fault detection system using **IoT** and **Machine Learning**.

- Developed a **Flask** web platform processing MQTT sensor data and applying a **Random Forest** model for predictive maintenance.

- Implemented interactive dashboards, secure authentication, and historical performance analysis.

Technical Skills

Programming & Tools

- Python, C/C++, JavaScript
- Flask, HTML/CSS, SQLite, Git, Render

Design & Simulation

- MATLAB/Simulink, LabVIEW
- Proteus, KiCad, TIA Portal, LaTeX

Languages

French: Native / Full professional proficiency **English:** Professional working proficiency