

Aziz ZOUARI

Industrial Electronics Engineering Student

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SUMMARY

Final-year Industrial Electronics Engineering student with hands-on experience in **embedded Linux systems, C/C++ and Python development**, and **real-time communication protocols**. Demonstrated ability to **debug software issues** and **collaborate effectively** in team environments. Seeking a Final-year-internship to apply my **technical skills** while contributing to innovative projects.

EDUCATION

- ENISO (National Engineering School of Sousse):** Bachelor's degree (BSc) in Industrial Electronics Engineering 2023-Present
- AUTOSAR, Advanced Computer Architecture (MIPS), RTOS, DSP, FPGA, C, C++
- Monastir Preparatory Engineering Institute:** Physics/Technology

PROFESSIONAL EXPERIENCE

- YUCCAINFO: IoT & Embedded Systems Intern** June, 2025
- Developed an IoT pipeline using **Raspberry Pi with Linux, Zigbee Network** and **STM32WB55**, implementing **Embedded C** for sensor data collection with **99.8% reliability**.
 - Engineered real-time monitoring via **MQTT** and **Node-RED** using **Python**, resolving communication issues through **systematic debugging** and protocol optimization.
- SINDIBAD-GROUP: Embedded systems intern** June, 2024
- Developed an automated air conditioner simulation system using **Raspberry Pi**, temperature sensors and LEDs, enhancing **system testing efficiency** by **40%**.
 - Collected **real-time** data from temperature sensors and transmitted it via an **IoT platform** for efficient monitoring.

PROJECTS

- Smart CAN-Enabled Dashboard for Thermal Monitoring in Embedded Automotive Systems** May 2025
- Developed a **CAN-based** thermal monitoring system for automotive applications using dual **STM32F103 microcontrollers**, achieving **99.2% reliability** in stress tests. **Documented** system design in automotive-grade technical documentation.
 - Triggered **PWM-controlled** fan activation based on temperature thresholds.
 - Integrated **ESP01 (ESP8266)** module to transmit live sensor data to a responsive **Node-RED** dashboard via Wi-Fi
- Dual-Board Data Transmission System (STM32/UART)** January 2025
- Developed real-time dual-**STM32 UART** system using **CubeMX/HAL** libraries.
 - Integrated interrupt-driven **ADC** with threshold LEDs & error handling (**C, STM32F4**).
- Audio Processing Panel** December 2024
- Engineered a user-friendly interface using **Python**, enabling Recording, Text to Speech functionality and Audio Classification tool with **0.94 precision rate**.
 - Implemented **Noise Filtering and Equalization techniques**, improving audio clarity by **40%** and enabling precise manipulation of audio frequencies for enhanced voice quality.
- DC-DC Buck Converter** October 2024
- Designed a **DC-DC buck converter (5–20V input, 3.3V/1.5A output)** with low voltage and current ripple, including full parameter calculations and component justification.
 - Created the PCB layout using **Altium Designer**, following strict design rules and produced full documentation with schematics.

SKILLS

- Programming Languages:** Embedded C | C++ | PYTHON | MATLAB| VHDL.
- Platforms & Tools:** Raspberry Pi | Linux-based Systems | STM32 Microcontrollers | STM32CubeIDE| IAR Workbench| ArduinoIDE | Visual Studio Code | Altium | KiCad| Proteus | LTspice | Git | UART | SPI | I2C | CAN Bus | MQTT | PWM | RS232| ETHERNET.
- Technical Skills:** Embedded Linux Development | Debugging(Logic Analyzers, Oscilloscopes) | Networking for IoT Systems| Software Integration | Technical Documentation.
- Soft Skills:** Team Collaboration | Communication | Proactive Learning | Adaptability.

EXTRACURRICULAR ACTIVITY

- Business Unit Manager & Senior Member** 2023-Present
- Led a **team of 8** to secure **10+** sponsorships and grow **client network** by **50%** through **strategic networking**.

LANGUAGES

- Arabic: Native
- English: B2
- French: B2 (Delf)
- German: B1