Younes AMRANI

Embedded Systems & Software Engineer

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Summary

Embedded Systems Engineer with a strong interest in Low-Level development and Automotive Software. Highly motivated to excel in delivering efficient and reliable solutions, and eager to contribute effectively within a collaborative team environment.

Experience

Lear Corporation - BSW Engineer Intern
Feb - Aug 2025

- Worked on Lear's internal Bootloader:
  - Integration of **Mbed TLS** cryptographic library.
  - Integration and configuration of the **LIN** communication protocol.
  - Developed a dedicated Basic Software configuration tool.
  - Provided general improvements and optimizations to the project.
- Successfully delivered 95% of planned deliverables on schedule, according to the established Gantt chart.

Lear Corporation - E-systems Intern
Jul - Sep 2024

- Development of an application software for a basic headlight management system in Simulink.

Education

Master's in Embedded Systems,
Faculty of Sciences, Rabat
2023 - 2025

- *Core Courses: RTOS, Parallel Programming, HDL, Assembly.*
- *Distinction: Very Good*

Bachelor's in Physics,
Faculty of Sciences, Rabat
2019 - 2023

- Major in Software, Electronics, and Automation
- *Distinction: Quite Good*

Projects

Adaptive Cruise Control system -

- Developed an ACC system using CNN for object detection and sensor fusion(camera, radar) to maintain safe distances and speed adjustment.
  Keywords: Deep Learning, YOLOv8, Python, ADAS

Smart Home prototype -

- Developed a smart home system using Arduino Mega and ESP8266, ensuring wireless control through the Blynk IoT platform. Implemented software for sensor data acquisition, actuator control and Wi-Fi integration.
  Keywords: IoT, Arduino, ESP32, Wi-Fi

Technical skills

Programming:
C/C++, Python, Assembly

Engineering:
RTOS, Signal/Image Processing, Microcontroller Architecture, Digital Electronics, ML/DL, Cryptography

Communication protocols:
CAN, LIN, UART, SPI

Automotive:
AUTOSAR, UDS, Bootloader, ADAS

Tools:
MATLAB/Simulink, VS Code, TRACE32, CANcase/CANoe(basics)

Boards:
ECU, ESP32, FPGA, Arduino

Processes:
Scrum, V-cycle, Git

Certifications

- Embedded Software & Hardware Architecture - **CU Boulder**
- Introduction to AUTOSAR - **EDUCBA**
- Applied Scrum for Agile Project Management - **USMx**

Languages

Arabic (Native)
French, English (Proficient)

Soft skills

Autonomy
Problem solving
Adaptability
Continuous Learning
Collaboration - Communication

Interests

Football, Formula 1