



Embedded System Engineer

PROFESSIONAL EXPERIENCE

February –
September
2024

Embedded Systems Engineer (Intern) – T&S Engineering – Lyon – France

- Created CAN database (.dbc) with Candb++
- Configured CAN communication, memory, diagnostics, and XCP
- Tested CAN communication, ECU shutdown, and diagnostics (DID, Routine, and DTC) using CANoe
- Implemented ARTI to measure CPU load and trace OS tasks
- Performed unit and integration tests on the AURIX Infineon TriCore evaluation board
- Analyzed and debugged C code using Lauterbach TRACE32

July 2021 –
September 2023

Automotive Diagnostic Engineer – Capgemini Engineering– Casablanca - Morocco

- Analyzed communication requests between automotive ECUs and diagnostic tools (UDS, KWP2000 protocols)
- Analyzed messaging diagnostics using tools like ODXViewer, CANDela
- Analyzed fault code matrices (DTC) and coding data (DOTE)
- Designed diagnostic procedures (part replacement, alignment, actuator testing ...)
- Authored and developed diagnostic functions for automotive ECUs (fault reading/clearing, parameter measurement, coding, actuator testing, part replacement procedures)
- Performed unit testing, anomaly analysis, and bug fixes

February - Jun
2019

Maintenance engineer (Intern) – Renault Nissan – Tangier – Morocco

- Improved preventive maintenance of the charging and vacuum circuit of the "FR/RM/CA" filling machine
- Deployed Poka-Yoké in the ABS block preparation area
- Enhanced the reliability of docking stations

EDUCATION

2023-2024

Master's Degree, Automation and Robotics.
University School of Physics and Engineering, UCA, France

2016-2019

Engineer's Degree, in Mechatronics
Faculty of Science and Technology, Beni Mellal, Morocco

TECHNICAL SKILLS

- **Automotive Knowledge:** ECUs (ABS, EVCU, BMS...), ADAS, Diagnostics, AUTOSAR
- **Protocols and Buses:** CAN, UDS, KWP2000, XCP, UART, I2C, SPI
- **Microcontrollers and Boards:** ATMEGA328P, STM32, Raspberry Pi, Arduino
- **Mechatronics and Modeling:** Modeling, Control, and Simulation using MATLAB/Simulink and Scripting
- **Project Development:** V-Cycle, Agile-Scrum, SharePoint, Vision, Excel, Jira, Git
- **Software:** Davinci Configurator, Davinci Developer, CANoe, CANap, CAndb++, CANDela, Git Extensions, MATLAB/Simulink, DIAGBOX, ODXviewer, Visual Studio, STM32CubeIDE, CATIA V5, Trace32, TIA Portal
- **Programming Languages:** C/C++, Python, Assembly, CAPL, Ladder

LANGUAGES

French : Fluent

English : Good

Arabic : Native