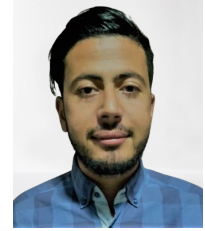


Nouredine AWLED BRAHIM

Embedded Software Engineer

+ (216) 98 790 520 @ noureddine.awledbrahim@gmail.com
Ariana 2081 ,Tunisie in linkedin.com/in/noureddine-awled-brahim
github.com/Noureddine1920



As an enthusiastic, hardworking, and motivated engineer, I am seeking new and challenging opportunities to deepen my professional knowledge and tackle technical challenges within the sector. I am equipped with exceptional organizational skills, a strong drive, and a proven ability to work effectively within a team.

EDUCATION

2020-2023 **Electronics Engineering - Embedded Systems**, Faculty of Sciences Tunis El Manar .
2018-2020 **Preparatory school for engineering** ,Higher Institute Of Science And Technology Mahdia .

EXPERIENCE

August 2023 Present **Embedded Software Engineer , ACTIA ENGINEERING SERVICES , ARIANA TUNIS,**

- > Collaborating with **STMicroelectronics** to develop a new version of the HAL library for STM32 peripherals.
- > Responsible for implementing and optimizing communication protocols (e.g., UART, SPI, I2C) and memory management protocols, including SDRAM, SRAM, and NAND.
- > Ensured robust and efficient library updates to support advanced hardware features and improve overall system performance.

Embedded C STM32Cube HAL library Communication protocols Memory management Debugging Validation

February 2023 July 2023 **Final year project , ACTIA ENGINEERING SERVICES , ARIANA TUNIS,**

- > Developed a desktop application with **Qt C++** for STM32 microcontroller control.
- > Managed STM32 peripherals : UART, SPI, I2C, ADC, DAC, timers, GPIO, ensuring seamless interaction.
- > Optimized **UART communication** with STM32H723 for efficient data transfer.
- > Designed a **modular firmware framework** enabling real-time peripheral configuration without re-compilation.
- > Created the **XCube framework** for dynamic peripheral management and device customization.

Qt C++ STM32Cube HAL library Communication protocols

July 2022 September 2022 **Software tester (Part Time) , CONFLEDIS SAS , PARIS FRANCE,**

- > implementation of web interface development frameworks (React JS, Bootstrap, javascript, Ionic Framework) and the backend with Django Cookiecutter.
- > Evolution and bug fixes with continuous testing using flake8 extension and integration of timezone using Dayjs library

Django Cookiecutter Python Docker React JS Ionic Framework Git Jira

Juin 2022 Aout 2022 **Summer Internship, PIXII MOTORS , ARIANA TUNISIA,**

development of electrical and smart e-scooter designed with removable battery and smart dashboard.

- > Implementation of CAN bus in the STM32 microcontroller and interaction with the touch screen, which made it possible to establish a supervision algorithm capable of controlling our systems.
- > develop an algorithm to display informations from Battery Management System (BMS)
- > develop a batch scripting integration for continuous automation to publish test reports using jenkins and STM32CubeProgrammer CLI

STM32 C C++ STM32CubeIDE STM32CubeProgrammer CLI Touch GFX Jenkins CAN UART BMS
Controllers Git Gitlab

July 2021 September 2021 **Summer Internship, ICANC TECHNOLOGIES , ARIANA TUNISIA,**

- > Smart cane for people with special needs including "visually impaired"
- > Mobile application control location , detect faces and keep track heart rate using sensors

Embedded C Java STM32 STM32CubeIDE PIC16F877A I2C UART Mplab IDE Android Studio Sensors

SKILLS

Programming Languages	C/C++, Embedded C, Python, Java
Frameworks	Django, Cookiecutter, React JS, Ionic Framework, Tailwind CSS
Software Tools	IAR embedded workbench, STM32CubeIDE, STM32CubeProgrammer, Visual Studio Code
Data Integration	Git, Gerrit, Github, Gitlab
Operating System	Ubuntu, Windows
Embedded Systems Tools	Raspberry Pi, STM32, Arduino
Embedded communication protocols	RCC, UART, SPI, I2C, CAN, DMA, FMC
Project Management	Jira Software

CERTIFICATIONS

Injaz Tunisia	Steer your Career
Simplilearn	Introduction to Python OpenCV CI/CD for Beginners
Microship	Introduction to Embedded Linux Building your Linux Development System
Udemy	Master C++ Programming Embedded ARM Cortex-M3 Programming Guide
Udemy	Linux Basics and Shell Programming Certification Training Introduction to ARM Cortex M3, M4 Processors

PROJECTS

END OF YEAR PROJECT - ELAB : REMOTE ACCESS TO HARDWARE TESTING BOARDS

2021 - 2022

 github.com/Nourreddine1920/pfa-front

Web Server that provides remote access to hardware development Boards Farm STM32 for students. User can upload code in binary or hexadecimal format. User can select STM32 board model and run simulation. After finishing simulation, reception of a detailed report in a log format.

[Django](#) [React JS](#) [Docker](#) [Jenkins](#) [Pyserial library](#) [STM32](#) [UART](#) [STM32 Cube Programmer CLI](#) [STM32 Cube IDE](#) [Sensors](#) [Gitlab](#) [Agile](#) [Trello](#)

END OF SEMESTER PROJECT - SMART HOME AUTOMATION

2021-2022

 github.com/Nourreddine1920/smart-house-back  github.com/Nourreddine1920/smart-house-front

Web Server Control our Smart Home which includes temperature and humidity interface with chart showing real-time data visualization using DHT11 sensor and security interface using a face Detection model using OpenCV.

[Django](#) [React JS](#) [Pyserial Library](#) [OpenCV](#) [STM32 Cube Programmer CLI](#) [STM32 Cube IDE](#) [STM32F429](#) [UART](#) [DHT11 Sensor](#) [Git](#)

COMMUNITY LIFE AND ACTIVITIES

CIPHER OUT	Web Development and IA Hackaton
GEEKS HACK	Problem Solving Hackaton
INFO HACK	Web Development Hackaton

LANGUAGES

Arabic	Native
French	Current
English	Current

STRENGTHS

- > passionate
- > Motivated
- > Enthusiastic

INTERESTS

MIND GAMES :	Chess, labyrinth
SPORT :	football, basketball