



## CONTACT ME

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🌐 www.debled.com

## EDUCATION

### Master's Degree

UMONS | Computer Science

@Mons, 2012-2018

### High School

McCutcheon High School

@Lafayette, IN, USA 2011-2012

### Secondary studies

Math & Sciences

2005-2011

## SKILLS

### Programming

C • Rust • Python • MicroPython

### Embedded

Yocto • Buildroot • Kernel • Drivers •  
Device Tree • U-Boot • UBI/UBIFS

### SoC | MCU

i.MX6 • ESP32 • AVR

### Technology

MQTT • Docker • Kubernetes • Zigbee •  
LoRa • Grafana • InfluxDB • ESP32 • AVR

### Web

HTML • CSS • JavaScript

### Tools

Git • Jira • CLion • Altium Designer •  
Gitlab • Jenkins • Redmine

### Communication

French: Native speaker and writer

English: Fluent speaker and writer

# Benoît Debled

## Embedded Engineer

I am an **Embedded Engineer** with a **passion** for the digital world, which began at a very young age. I have always loved the interaction between the technological world and the real world. Basically, I am a **curious mind**, committed to sustainability, eager to **learn** and **improve**, and driven to find **creative solutions** to **challenges** for a better society. My professional experience allows me to provide solutions to different projects such as platform **bring-up**, **u-boot** and **kernel update**, **i.MX** related projects, **Yocto** and **Buildroot** projects, **feature development**, **bug fixing** and much more. On the other hand, personal projects allow me to provide microcontroller solutions such as **ESP32** and **AVR** with development in either C or MicroPython.

## WORK EXPERIENCE

### Mind | Leuven

### Embedded Software Developer

2024 - Now

Mind is a consultancy company bringing more than 24 years of expertise to the market.

Currently working on the development of a management platform software to reinforce Mind's market position. I worked on project development, CICD development and scalability study.

**Buildroot • Kubernetes • Gitlab**

### HMS | Nivelles

### Embedded Engineer

2018 - 2023

Ewon by HMS is an **IIoT** company making industrial routers with the goal to enable remote access and remote data to machines. As an embedded engineer, I have mainly focused on a couple projects:

- platform **bring-up** on **i.MX6** processor.
- **U-Boot** and **Linux kernel update**
- **Kernel drivers** development for Ethernet switches (KSZ8895, Realtek), multiplexers, latches
- **C Development** of a MindSphere connector
- Making firmware **UTF-8 compliant**
- Side projects: Lego Machine for trade fair event

As an Embedded Engineer, I took the responsibility for the CICD that allowed me to learn more on **Jenkins** and **linux server management**.

For a year, I have taken a **lead dev role** which allowed me to improve my soft skills such as project management, communication and much more. My role as a lead dev was to make sure that the project the team was working on had clear requirements and clear priorities. I also gave guidance on technological choices and followed the project to ensure on-time and on-budget delivery.

**C • Yocto • U-boot • Kernel drivers • bring-up • NXP imx6 • Device Tree • CICD • Docker • UBIFS • UTF-8**

### Dronee | Liège Intern

Sept 2016 - Nov 2016

Conception of a low-power sensor transmitting via **LoRa** and powered via Arduino. During this internship, I conceived from scratch the sensor using Altium Circuit Maker, managed the different LoRa layers (Router, Network, etc.), and also developed the database for the sensors's data and a web interface to visualize and analyze this data.

### Group-IPS | Nivelles

Student Job Substitution of the company's IT Manager for 3 weeks after working with him for the same amount of time.

Aug 2015

### Sollix | Orchies

Student Job Migration of a mail system of a 50+ workers company from Zimbra to Microsoft Office 365

Jul 2012

## PERSONNAL PROJECTS

More information here: <https://blog.debled.com>

### Home Automation

Automation of my house using a **MQTT broker** on a Raspberry Pi. **Custom made PCB** with **ESP32** to have a MQTT interface to outputs, inputs, Wiegand and temperature sensors.. Lights, front door, heating system, energy consumption are automated and graphics are generated.

### snapClassify Organize your photos easily!

Development of a **desktop application** using Electron and Angular. A **GPS tracker** was also developed using Arduino (microcontroller **SAMD21E18A**). The PCB of the tracker has been designed using **Altium Designer** and a custom **3D printed case** was conceived. This project received **5 prizes** during the Inno Pepites Junior contest

### Aquarium Light System

Controlling an aquarium light system. Eight LEDs are individually controlled via an Arduino (microcontroller **SAMD21E18A**). Time is synced via a NTP server. It is possible to set rules. A rule can be: set the lights at 80% every Monday and Tuesday at 6PM. There is a web interface to control the system

### Alarm Clock Wake up by a sunrise simulation and nature sounds.

An Arduino mega controls the display, the buttons, the light sensors,... A Raspberry Pi controls the audio.

### Quadcopter

Building, tinkering, flying

## AWARDS

**Citizens of Wallonia Hackathon** Jury Prize

**HackUPC Hackathon** Second Prize

**Inno Pepites Junior: snapClassify** First Prize & 4 other prizes