

# Gaetan CANTELOBRE

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Bordeaux (33) · Master's in Embedded Software Development @ Université de Bordeaux

## EMBEDDED SYSTEMS ENGINEER

As a recent graduate in embedded development, eager to learn and contribute, I am seeking my first professional opportunity as a Junior Embedded Engineer. Open to work starting January 2026.

## PROFESSIONAL EXPERIENCES :

### **EMBEDDED/REAL-TIME DEVELOPER | THALES SIX GTS | 6 MONTHS**

**APRIL - SEPTEMBER 2025 | MASTER'S INTERNSHIP**

Timing Driver Development & Integration:

- Designed, developed, and integrated a critical timing driver for military tactical radio test systems using C++ & Python.

System Test Acceleration :

- Streamlined the system testing process by integrating the newly developed timing driver, resulting in best possible execution time, faster test cycles, increased test throughput.

Debugging Tool Reintegration & Efficiency:

- Reintegrated and optimized essential debugging tools and procedures within the test development environment, significantly improving diagnostic capabilities and reducing troubleshooting time for embedded systems.

Technologies : C++, Python, RTOS, embedded systems.

### **MECHATRONIC DEVELOPER (C++, ROS) | 2 MONTHS**

**CHANTIER NAVAL COUACH | JULY - AUGUST 2023**

- Engineered bearing adjustment system for nautical drone using a PID-controlled angle calculation algorithms using C++.
- Reverse-engineered CAN bus protocols through packet sniffing analysis, enabling integration of legacy marine sensors.
- Developed sensor calibration tools that improved overall measurement accuracy with legacy sensors.
- Created a ROS-based communication protocols for seamless CAN bus integration.

Technologies : C++, ROS, CAN bus protocols, embedded systems, marine electronics.

## **SKILLS :**

- |                                |                                     |                 |
|--------------------------------|-------------------------------------|-----------------|
| • Programming (C++, C, Python) | • Fluent English (C1+ LinguaSkill). | • Linux, Docker |
| • Competent with Git           | • Electronics & PCB design (KICAD)  | • RTOS          |

## PERSONAL PROJECTS :

### **ESP32-C3-H4X DEV BOARD DESIGN**

- Designed and produced a compact breakout board for the ESP32-C3-H4X microcontroller.
- Designed via KICAD & developed embedded firmware in C/C++ using the ESP-IDF framework
- Documented design decisions, schematics, and code in a GitHub repository to enable reproducibility and collaboration.

### **CUSTOM KEYBOARDS PRODUCTION**

- Designed custom keyboard PCB's.

### **SHOOTING LEVEL INDICATOR**

- STM32G4 and TI LSM6DSLTR based electronic level including built-in BMS.
- High frequency tilt detection and feedback for competitive shooters.
- Evolving design : ESP32C3 → STM8 → STM32
- ESP32 & STM32 → C++
- STM8 → Inline Assembler

### **LONG RANGE SUB 100G DELTA WINGS**

- Designed for minimal weight.
- Custom STM32G4 gyrostabilised flight controller compatible supporting ELRS.
- 58 minute flight time.

### **RC AND PILOTING EXPERIENCE**

- Flying & building FPV quadcopters since 2015.
- Light Aircraft Pilot License (Brevet de Base)

### **DRONE DÉFENSE HACKATHON**

- Participated in Challenge 4 of the 2025 Drone Défense Hackathon in Paris.
- Created drone delivery logistics system for the French Armée de terre.
- Pathfinding + live trajectory calculation.

### **MORE PROJECTS ON MY LINKEDIN & PORTFOLIO:**

