Gaetan CANTELOBRE

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Bordeaux (33) · **Master's in Embedded Software Developement @ 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++ (11 & 17) & 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 and assured deterministic execution of tests.

Debugging Tool Reintegration & Efficiency:
- Reintegrated and optimized 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)
- Competent with Git
- Fluent English (C1+ LinguaSkill).
- Electronics & PCB design (KICAD)
- Linux, Docker
- 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 competitve shooters.
- Evolving design : ESP32C3 ➜ STM8 ➜ STM32
- ESP32 & STM32 ➜ C++
- STM8 ➜ Inline Assembler

LONG RANGE SUB 100G DELTA WINGS

- Designed for minimal weight.
- Custom STM32G4 gyrostabalised flight controller supporting ELRS.
- 58 minute flight time at 93 grams

RC AND PILOTING EXPERIENCE

- Flying & buidling 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.
- Designed and implemented drone delivery logistics system for the French Armée de terre.
- Pathfinding + live trajectory calculation.

MORE PROJECTS ON MY LINKEDIN & PORTFOLIO: