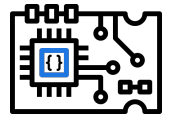


Paul VINCHON



Firmware Developer and Embedded Systems Engineer

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EXPERIENCE

TRACTIVE | FIRMWARE ENGINEER

Feb 2020 – Apr 2025 | Linz, Austria

- Bare-metal development in modern C++ for a GPS tracker for pets on nRF52.
- Working with BLE, WiFi, GPS, GSM and Accelerometer modules.
- Production of high-quality and maintainable code, delivered to 1 000 000+ devices.
- Maintenance of tools in Python or C++/Qt for production, debugging or testing.
- Implementation of activity tracking feature and several battery-saving algorithms.
- Creation of a Hardware-in-the-Loop testing system for firmware QA (see projects).

NETATMO | FIRMWARE ENGINEER INTERN

Feb 2019 – Aug 2019 | Paris, France

- C90 firmware development on FreeRTOS for weather station products on STM32.
- Working with several sensors and BLE, WiFi, Sub-GHz RF modules.
- Preparation of the firmware for Apple HomeKit certification for accessories.
- Automation of the firmware update testing process using a mock backend.
- Improvement of RF performance and reducing packet loss by more than 30%.

PROJECTS

FIRMWARE AUTOMATED TESTING SYSTEM | PYTHON, BEHAVE, ALLURE

Tractive | Mar 2024 - Mar 2025

An end-to-end testing system on real hardware for firmware QA:

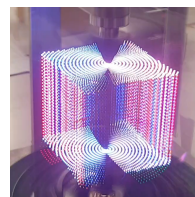
- Using test instructions in natural language, usable by multiple teams
- Fully integrated with the Continuous Integration system (BitBucket/Jenkins)
- Allowing simulation of user interactions (button, movement, phone, server, charger)
- Verifying the good behavior of the device (LED, messages, server communication)
- Ensuring the tested firmware can update itself and avoid bricks
- Providing a detailed report with logs, power consumption graph and test results

CYL3D: A 3D DISPLAY SYSTEM | FPGA, C, YOCTO

Graduate Project | Dec 2018 - Feb 2019 | hackaday.io/project/168558-cyl3d

A 3D display made of a rotating 2D LED panel:

- Using a System on Module with an FPGA to light up the LEDs at the right times, in synchronization with a motor.
- Leveraging Linux drivers to control the display buffer, allowing for user applications and live-streaming of 3D content
- Each 3D frame is 40 (width) x 30 (height) x 128 (angles) voxels.



SKILLS

PROGRAMMING

Proficient:
C • C++ • Python

Experienced:
Shell • Rust • ARMv7-M
Assembly • SystemVerilog •
Makefile • CMake • SystemC

PROTOCOLS

Hardware:
SPI • UART • I2C

Network:
TCP/IP • UDP • HTTP

TOOLS/PLATFORMS

VS Code • Confluence • Jira •
BitBucket • Jenkins • GitLab •
Git • GCC • Linux

EDUCATION

TÉLÉCOM PARIS

MASTER OF SCIENCE IN
ENGINEERING

2016 - 2019 | Paris, France

Major: Embedded Systems

Cum. GPA: 3.82 / 4.0

TOEFL ITP: 643 / 677

LYCÉE THIERS

HIGHER SCHOOL PREPARATORY
CLASSES

2014 - 2016 | Marseille, France

Specialty: Mathematics and Physics

LANGUAGES

French: Native (C2)

English: Fluent (C1)

Spanish: Conversational (B2)

Japanese: Conversational (B1)

German: Beginner (A2)

Arabic: Beginner (A1)