Mathieu Rigard

Embedded systems engineer · AI automation down to the hardware

mathieu.rigard@protonmail.com · mathieurigard.com · github.com/MatioRIGARD · LinkedIn

Profile

Eight years building electronic products end to end: PCB, firmware, software and test tools. Since May 2025 I have built AI into my workflow, from hardware to web apps, for better quality and productivity.

Experience

Independent engineer · since June 2019

- **AI automation (since May 2025):** my own AI agent environment (about 70 skills, MCP servers, Python tools); Connect Doorstep, a service where AI turns a spoken visit report into the organization's form.
- **Escape games and embedded systems:** 20+ custom boards, firmware and Qt touch interfaces, running in public rooms for years without a breakdown.

Sogilis · Software developer C++ / Python · 2024–2025

Defense acoustic surveillance system. Python test framework that cut average test time **by 30×**; critical bug fixes; signal processing in C++.

Elsys Design · Embedded systems engineer · 2023–2024

Took over and extended the C test framework of a hybrid ARMv7 MPU/MCU platform; automated the test runs.

Open · Embedded software engineer · 2021–2022

Security updates and maintenance of a connected EV charging station firmware (C, C++, Buildroot).

CEA · Electronics and embedded systems engineer · 2018–2020

Full hardware and software solution to test cryogenic temperature sensors: multiplexing board, Qt and web interfaces.

Skills

- **Languages:** C, C++, Python, Bash, JavaScript / TypeScript
- **Embedded and hardware:** STM32, ESP32, Raspberry Pi, FreeRTOS, embedded Linux, KiCad
- **Software and AI:** Qt, Flutter, LLM agents (Claude Code, Codex, DeepSeekHarness), MCP servers, Git, Docker, CI

Education

- **Licence professionnelle Systèmes embarqués** · Université Grenoble Alpes · 2019
- **BTS Systèmes numériques** · Lycée Saint-Louis · 2018

Languages: French (native), English (professional).