



Contact

traf@ik.me
+33 7 81 63 81 08
34090 Montpellier, France
Open to remote work

Availability

Permanent or freelance
Available within 3 months
Open to partial relocation

Profiles

GitHub: @traffailac
LinkedIn: @traffailac

Languages

French — native
English — fluent (English family)

Key Skills

- Front-end / back-end versatility
- Rigor & code quality
- Problem solving
- Autonomy & initiative
- Mentoring & teamwork
- Adaptability, continuous learning

Technical Stack

Languages:

- C, C++, C#, Python, JS/TS
- Java, Lua, SQL, Bash, HTML/CSS

Front-end:

- React, Tailwind, Bootstrap
- D3.js, Vega, WebGL, jQuery

Back-end:

- Node.js, Flask, REST API, CQRS

Databases:

- PostgreSQL, MySQL

DevOps & tools:

- Git, CI/CD (GitLab, Jenkins)
- CMake, testing, fuzzing

Hosting:

- OVH, PythonAnywhere

LLMs & vibe fixing:

- Kiro, Claude, Gemini

Interests

Choir singing (invited to perform with the choir at the "Clair Obscur: Expedition 33" concert, Zénith Toulon, July 2026)
Dance (urban & contemporary)
DIY / hacking

Thibault RAFFAILLAC

Full-Stack Software Engineer

Software engineer with 14 years of experience across the stack, from back-end (C, C++, C#, Python) to front-end (React, TypeScript, D3.js), including database design and production deployment. Used to building end-to-end tools, alone or within a team, I have also maintained an open-source video decoder for 12 years — proof of my commitment to code quality, performance, and testing.

Work Experience

Full-Stack Software Engineer

Since 2025 · [Quantum Surgical](#) · Montpellier

- Full-stack development, within a 6-person team, of the software controlling a robotic arm for percutaneous cancer treatment: C++ / C# back-end, TypeScript / React front-end, REST API and CQRS architecture.
- Solution deployed across 20+ hospital centers, treating over 1,800 patients.

Research Engineer — Web Interfaces & Data Visualization

2022 – 2024 · [INRAE](#) · Montpellier

- Design, development and deployment of 4 interactive web tools (data visualization) to support multi-stakeholder dialogue between agriculture, livestock farming and tourism.
- Requirements gathering through interviews, facilitation of 3 group sessions and workshops (10-50 people); supervision of 2 interns and courses for PhD students, scientific writing (11 presentations).

Teaching & Research Engineer — Web Development & Teaching

2019 – 2022 · [École Centrale de Lyon](#) · Écully

- Design, development and deployment of 5 web tools and visualizations for educational innovation.
- Teaching in object-oriented design, graphical interfaces, advanced algorithms and web development (~30 students supervised); CSR projects and weekly coding-contest training sessions.

R&D Engineer

2012 – 2014 · [Celticom \(start-up\)](#) · Paris

- Development of a prototype set-top box able to record the entire French terrestrial TV broadcast and make it available through a web interface.
- Started an open-source software decoder for the H.264/AVC format, developed and maintained ever since in my spare time (see Key Achievements).

Key Achievements

edge264 — open-source H.264/AVC video decoder

- Developed and maintained solo for 12 years, with unit and validation tests, fuzzing, and formal proofs; 15% faster and 4x lighter in code than ffmpeg.
- Used in production at Oku3D, in deployment at Netflix (300+ million users); 3 technical talks at FOSDEM (2024, 2025, 2026).

Front-end / back-end web projects

- Designed and deployed the institutional website for the competency-based approach at Centrale Lyon (400+ regular users).
- Website for editing and visualizing a network of metaphors, presented at the 2024 Paris International Agricultural Show.
- IT manager and volunteer webmaster for the French Association for Human-Computer Interaction: hosting of 60 websites, online payments, mailing lists (2023-2024).

Competitive programming

- Regular training; ranked 1st in France on the Kattis algorithmic problem-solving platform. Google Hash Code and Google Code Jam top 5% rankings; coached students for international competitions (4th place worldwide in 2021).

Education

PhD in Human-Computer Interaction and Software Engineering

2015 – 2019 · [Inria / University of Lille](#) · Lille

- New architectures and language syntaxes for programming graphical interfaces; proofs of concept in Java, Lua, C, Smalltalk and JS.
- 2 best paper awards (EICS'19, EICS'22).

Master of Science in Engineering

2008 – 2012 · [Centrale Marseille](#) · Marseille

- 2010 specialization: Master of Science in HCI, KTH Stockholm.
- President of the GInfo Computer Science student association in Marseille.