

MARTIN POIROUX

Software engineer · Full-stack and algorithms · AI-augmented development

TOULOUSE, FRANCE · REMOTE FROM FRANCE, OR ON SITE IN TOULOUSE

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Day-to-day developer, and de facto technical lead, of a fibre-network design product of more than five hundred thousand lines of C#, deployed at telecom operators, and on the TypeScript and Azure chain around it. The domain is geospatial throughout: routing, cabling, service areas, connectivity. Alongside it, since 2022, a C++ chess engine and products taken end to end, from idea to production.

◆ STACK

LANGUAGES	TypeScript · C++ · C# · Rust · Python · C · JavaScript · AssemblyScript · Kotlin · OCaml · PHP · GLSL · NetLogo
FRAMEWORKS	.NET · WPF · Blazor · EF Core · Next.js · React · React Native · Astro · NestJS · Node.js · Expo · Tailwind · Express ·
AND PLATFORMS	raylib · Unity · Phaser · Three.js · SDL2 · WebAssembly · Pygame · Android · Processing · Arduino
DATA AND	PostgreSQL · SQLite · Supabase · Azure SQL · Cosmos DB · Firestore · Firebase · Azure · Azure Pipelines · Vercel ·
INFRASTRUCTURE	Nginx · Stripe · Socket.IO · WebRTC · CUDA · numba · NumPy
GEOSPATIAL	ArcGIS Pro · QGIS · shapely · networkx · GDAL
MODELS AND	Claude Code · Ollama · llama.cpp · LM Studio · PyTorch · RAG · Microsoft Graph
AGENTS	
LANGUAGES	French (native) · English (fluent, C1+) · German (basic notions)
ELIGIBILITY	French national · EU work authorisation

◆ EXPERIENCE

2023 →

SETICS

Developer on the software portfolio of a Toulouse company in fibre networks, and its de facto technical lead.

- ◆ Sttar, the flagship product: over five hundred thousand lines of C# and WPF, deployed by telecom operators in Europe, the United States and Asia.
- ◆ Main algorithm made modular, optimisation pipeline designed end to end (case-based reasoning, Delaunay triangulation): a critical operation went from several minutes to a few seconds.
- ◆ Technical lead in practice: daily review, architecture decisions, licence operations, coordination of an external contractor through a single point of contact.

2026 →

SAAS PRODUCTS

Three sold products whose roadmap the company decides and whose technical choices sit with the position.

- ◆ FiberState (TypeScript, React, .NET, Azure): field tracking of fibre rollout, then a native physical inventory, dependency scheduling, offline-first field work, as-built reconciliation.
- ◆ STEM and the network-supervision component (NestJS, Next.js, Cosmos DB): multi-tenant platform and supervision sold as a service, API and frontend as separate services on Azure App Service.

2026 →

INTERNAL WEB APPS

Three internal tools proposed and written alongside the rest, outside the roadmap.

- ◆ Licensing chain rebuilt from scratch (.NET, Blazor Server, EF Core, Azure SQL): request, template-prefilled quote, human sales validation, then automatic generation and delivery.
- ◆ Unified portal in Blazor Server with its single sign-on; internal assistants (prototype) for Teams, multi-agent on Claude, retrieval-augmented search and the Graph API.

2026 →

GIS TOOLING

Two GIS extensions in two languages, an ArcGIS Pro add-in in C# and a QGIS plugin in Python, on top of a computation core that knows neither.

- ◆ WKB exchange boundary, core depending on shapely and networkx alone: a business-logic fix lands on both sides instead of being written twice.
- ◆ The QGIS plugin covers QGIS 3 and QGIS 4 from a single delivery.

2023

FINAL-YEAR INTERNSHIP

- ◆ Six months of development in Germany, before being hired in Toulouse.

2022

SILVACO INTERNSHIP

- ◆ Integrated-circuit netlist reduction and the simulations around it, in Python and XML, inside the pre-release test framework.

◆ PROJECTS

- 2022 → **OPTICHESS**
Chess engine and analysis interface written from scratch in C++ with raylib, without a line borrowed from another engine.
- ◆ Hybrid search, a UCT-style tree above an alpha-beta and a quiescence, rather than the more common plain alpha-beta.
 - ◆ Hand-written evaluation rendered as outcome probabilities; runs as a bot on Lichess, so against real opponents, at real time controls and under a real protocol.
- GITHUB.COM/POIROUXMARTIN/OPTI_CHESS
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- 2026 → **BLITZVOLLEY**
Two-player online volleyball game in the browser: designed, written, deployed and operated end to end.
- ◆ Real time: state synchronisation, server authority, matchmaking, Elo rating, bots and a career mode.
 - ◆ Self-administered server: updates, monitoring, backups, incidents.
- BLITZVOLLEY.COM
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- 2026 → **LUCENA**
Chess training platform in Next.js and Supabase, in production.
- ◆ Game import from Lichess, Chess.com or a PGN file: common format, duplicates discarded, resynchronisation limited to what is new.
 - ◆ The sign-in link sent by email broke outside the originating browser: authentication flow changed rather than patched.
- LUCENACHESS.COM
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- 2026 → **CONFORMERGPD**
GDPR compliance service in production since July 2026.
- ◆ Site scanner producing a report scored by category, embeddable cookie banner in plain JavaScript inside a Shadow DOM, legal document generator.
 - ◆ Registered micro-enterprise, European hosting, row-level data isolation in the database.
- CONFORMERGPD.FR
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- 2026 → **LOCAL FACTORY**
Software workshop putting open-weight models to work on a local GPU: a specification goes in, a diff comes out, the tests decide.
- ◆ A ladder of models, the smallest trying first and only failures moving up a rung, and guardrails that execute rather than being written on a wall.
 - ◆ A register of optimisations where ideas are marked falsified when the numbers say so.
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- 2026 → **CLAUDE-REMOTE**
Orchestration layer on top of Claude Code: several agent sessions in parallel, each isolated in its own worktree.
- ◆ Graph scheduler, forced compaction of idle sessions, supervisor that restarts what falls over.
 - ◆ PWA and push notifications: approving a tool call from a phone stops a session started in the morning from waiting until the evening.
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- 2024 → **AI-ASSISTED CODING**
Daily practice since May 2024, followed along the whole curve: autocompletion, then agents, then custom layers on top.
- ◆ A specification, diff, regression, review loop, with a second reviewer taken from a different model family, because a model reviews its own work badly.
 - ◆ No productivity figure claimed: the verification flaws in the custom harness all leaned towards success, and without a clean protocol a percentage means nothing.
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- 2026 → **MARTINPOIROUX.COM**
Portfolio in Astro and Tailwind, fully static, bilingual, with a CV and a score reader rendered from the same content.
- ◆ Editorial rules execute rather than being written down: fact parity across both languages, French typography, drafts excluded from the production build.
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- 2026 → **OCTAVE**
Personal assistant reached from a phone, in writing or by voice: incoming email triage, memory, actions gated on approval.
- ◆ Every outgoing action waits for explicit approval: the model has no tool able to confirm what it proposes.
 - ◆ Dictation transcribed on the machine: word error rate down from 20.8% to 4.1%, measured on 61 real voice notes.

◆ EDUCATION

- 2020-2023 **ENSIIE, ENGINEERING DEGREE**
- ◆ JIN major: Digital Interaction and Video Games.
 - ◆ The school chess association, EchequillE: OptiChess's first real opponents.
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- 2021 **BSC IN MATHEMATICS**
- ◆ A double degree run alongside the engineering school.