

EMERIC DAUMARIE

AI & Software Engineer

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PROFESSIONAL SUMMARY

AI, cybersecurity, and software engineer with 3 years at Assystem, designing and building full-stack applications deployed in production at CERN, alongside two SaaS products of my own shipped for the Swiss market. Hands-on AI from real-time computer vision to local-LLM assistants, RAG and multi-agent workflows, plus applied offensive security through pentesting and CTFs. Thinks in systems and architecture rather than raw code.

TECHNICAL SKILLS

- **Programming:** TypeScript, JavaScript, Python, C#, Go, Java, PHP, C, SQL
- **Frontend:** React, TanStack Start, Next.js, Angular, shadcn/ui, Tailwind CSS, HTML, CSS
- **Backend:** Node.js, Bun, Encore.dev (microservices), Drizzle ORM, Zod, Better Auth, Spring Boot, Entity Framework (.NET), NSQ, REST APIs
- **Databases:** PostgreSQL, MySQL, SQL Server, MongoDB, DuckDB, SQLite
- **Cloud & Infrastructure:** Cloudflare (Workers, D1, R2), Infomaniak (Swiss hosting), Docker, Kubernetes (OKD/OpenShift), Linux, Windows
- **Security:** Penetration testing (Burp Suite, Nmap, SQLMap, Ngrok, Wappalyzer), secure coding, CSP, HTTPS/WSS, networking (subnetting, protocols), CTFs on Root-Me
- **AI / ML:** YOLO, OpenCV, TensorFlow, CVAT, Roboflow, Hugging Face, KubeFlow, Ollama, LM Studio, local LLMs, RAG, prompt engineering, agentic & multi-agent workflows
- **Spoken Languages:** French (native), English (professional proficiency — C1)

NOTABLE PROJECTS

- **Céyès (ceyes.ch)** — SaaS for primary-school teachers in French-speaking Switzerland: lesson logbook, timetables and yearly planning with the Plan d'études romand (PER) built in, plus an AI assistant that drafts lessons. Hosted end to end in Switzerland (Infomaniak, Geneva) for nLPD compliance, with no pupil data reaching the AI.
- **Ententes (ententes.ch)** — cross-border telework compliance platform for Swiss employers: tracks frontaliere working days against the 40% fiscal and 49.9% social-security thresholds, with audit-ready attestations for Swissdec payroll. Deployed entirely on Cloudflare (Workers, D1, R2).
- **Kernll** — full-stack platform for company operations (work orders, KPIs, scheduling), designed, built and operated end to end — in production on CERN's OKD cluster.
- **Similar-Ticket Recommendation** — recommendation system that surfaces similar historical tickets to speed up issue resolution.
- **QUARK** — data-analytics dashboard with PyQt6 + PyQtGraph UI, DuckDB and Polars for high-performance KPI analysis on large datasets.

WORK EXPERIENCE

AI & Software Engineer

September 2025 – Present

Assystem — Saint-Genis-Pouilly, France

- Engineered Kernll, a full-stack web platform managing company activities (work orders, KPIs, scheduling) — TanStack Start frontend (Bun), Encore.dev microservices (Node.js), PostgreSQL, NSQ messaging, CSP hardening.
- Deployed Kernll in production on CERN's OKD (Kubernetes) cluster — 8 containerized workloads (deployments, jobs, CronJobs, PostgreSQL StatefulSet) — integrating external APIs and LLM inference via KubeFlow endpoints.
- Led security hardening of network-connected key cabinets: reverse-engineered the proprietary software to uncover vulnerabilities, then implemented HTTPS and WSS to eliminate MITM attack paths.

Software & Cybersecurity Engineer — Work-Study (alternance)

May 2023 – August 2025

Assystem — Lyon / Saint-Genis-Pouilly, France

- Built a real-time PPE-detection system and NeuralOps, a desktop app (Python, PyQt6, OpenCV, YOLO) managing the full computer-vision lifecycle: dataset labeling, model training, live inference, performance monitoring.
- Developed the company's first internal management tool (work orders, KPIs, scheduling) as a C#/WPF desktop app with Entity Framework and PostgreSQL — later evolved into the Kernll web platform.
- Performed a cybersecurity audit for an external agency, identifying vulnerabilities across systems and practices, and delivered a prioritized report covering network, software and operational security.

AI Engineer — Internship

June 2024 – August 2024

EU Tech Engineers — Lisbon, Portugal

- Benchmarked neural-network architectures (accuracy, cost, latency) to guide model selection across client projects, and analyzed EU AI regulations (AI Act) and their implications for ongoing products.

Junior Developer

June 2022 – August 2022

Orisha — Passy, France

- Analyzed a point-of-sale product's architecture and data model, then designed and shipped widgets summarizing operational data (Pascal, Scrum workflow).
- Built a custom data-recovery tool and migrated legacy utilities to modern solutions.

EDUCATION

Engineering Degree (Diplôme d'Ingénieur) — Computer Science & Cybersecurity

2022 – 2025

CPE Lyon — Engineering School, Lyon, France