

Emmanuel Lion

AI & Full-Stack Engineer | RAG, self-hosted LLMs, Next.js / Python

Nîmes, France · remote or on-site · emmanuel.lion30@gmail.com · linkedin.com/in/lion-emmanuel
emmanuelion.fr · Freelance through my sole proprietorship: RAG / AI, n8n automation, full-stack development

Summary

Artificial intelligence (AI) engineer and full-stack developer, 4 years at BRL Ingénierie, Master's in Software Engineering, IMT Mines Alès (2026). Built from scratch a sovereign RAG (Retrieval-Augmented Generation) over 5,000+ reports on a self-hosted LLM (Large Language Model), deployed internally, now taking it to industrial scale. Develops end-to-end, from architecture to production; co-founder of the SaaS Buy&Rent.

Skills

- **AI & RAG:** RAG, open-weight LLMs, Ollama, Qdrant, e5-large, bge-reranker, BM25, RRF, LLM-as-judge
- **Frontend:** React, Next.js, TypeScript, JavaScript, Tailwind CSS, React Native
- **Backend:** Python, FastAPI, Node.js, Express, Java, Spring Boot, Strapi, PostgreSQL, SQL, MongoDB
- **DevOps & tools:** Docker, CI/CD, Git, Bash, n8n, Stripe

Experience

BRL Ingénierie, Nîmes, France · August 2022 – present (4 years)

AI & Full-Stack R&D Engineer · September 2026 – October 2027

- Designed and industrialised sovereign generative AI (GenAI) solutions, 100% on-premise, from upstream R&D to industrialisation (Docker, CI/CD, n8n)
- Architected the RAG v2: Qdrant vector database, e5-large embeddings, hybrid search dense + BM25 (RRF), GPU reranking, multi-stage retrieval with LLM arbitration
- Hardened and secured the system: intent routing, citations verified without an LLM, abstention out of scope (hallucination prevention), kill switch, per-document permissions, audit log, GDPR
- Evaluated open-weight models (LLM-as-judge): cost / latency / quality trade-offs, multilingual NLP

Apprentice Full-Stack Engineer · September 2023 – August 2026

- Designed and deployed from scratch the RAG v1, coupled with an open-source LLM and exposed through a web application: semantic search over 5,000+ indexed project reports
- Built an interactive Next.js / Strapi map module covered by unit tests; industrialised CI/CD (continuous integration / deployment)
- Automated GIS (geographic information system) processing: shapefile / raster to TIFF, render time cut by 4x

Work-Study Web Developer · August 2022 – August 2023

- Built the feature modules of an intranet (200+ employees): React (JavaScript), Spring Boot (Java), REST API, PostgreSQL

Buy&Rent, Co-founder & Full-Stack Developer · since January 2025 · buyandrent.fr

- Rental-investment simulation SaaS, final-year project (IMT Mines Alès) turned product: live, payments on, 100+ analyses run
- Next.js / TypeScript frontend, Stripe integration, Strapi blog, n8n automations, public INSEE / DVF data, PostgreSQL

Education

- **Master's degree in Software Engineering (Diplôme d'ingénieur)**, IMT Mines Alès, 2023–2026 (work-study) · Erasmus programme in Computer Engineering, CTU Prague, summer 2024
- **Bachelor's degree in Software Design and Development** (Licence pro, 2022–2023) and **two-year technical degree in Computer Science** (DUT, 2020–2022), Aix-Marseille

Languages

French (native) · English (professional, C1) · Japanese (basic, JLPT N5)

Volunteering and Interests

IMT Mines Alès (2024–2025): Head of IT Projects (Student Union), Deputy Secretary (EMA'IT), Treasurer (EMA'stro)

Interests: weight training, track and field and French boxing (ex-competitor), astronomy, entrepreneurship