

MARIUS AYRAULT

AI Engineer · Production LLM Systems

French (native)
English (professional, TOEIC 895)
Remote · France & international

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AI Engineer specializing in production-grade LLM systems: agentic AI, RAG, evaluation and observability, LLMOps. Former aerospace industrial engineer (Safran Group) turned founding engineer at a pre-seed AI startup. I bring structured problem-solving, systems thinking and a bias for measurable outcomes to AI architecture.

WORK EXPERIENCE

Founding AI Engineer & Architect

Aug 2025 - Apr 2026

Arkim AI, pre-seed startup · Freelance mission, remote (Los Angeles)

- Built a production multimodal ingestion pipeline on Databricks: OCR, image-to-text, semantic chunking and embedding at scale.
- Architected a two-level multi-agent system with LangGraph: Plan-and-Execute orchestration of ReAct sub-agents, human-in-the-loop checkpoints, SSE streaming via FastAPI and prompt caching on AWS Bedrock.
- Designed and ran a RAG evaluation framework (Ragas + LangSmith) across 5 pipeline candidates: the in-house pipeline outperformed the commercial baseline on Precision@k (0.82 vs 0.68) and Recall@k (0.70 vs 0.56).
- Worked directly with the founders, from product vision to production: observability and feedback loops in place for data-driven iteration.

Independent AI Engineering

Oct 2023 - Aug 2025

Independent · Paris, France

- Deliberate transition from industrial engineering to AI engineering, run as an R&D program alongside a Data Analytics degree at the Sorbonne.
- Systems delivered from exploration to production: industrialized credit scoring (MLOps), real-time streaming pipeline on Kafka, applied deep learning (vision, NLP, time series), RAG solutions and open-source model deployment. Each project is documented at mariusayrault.com.

Production Lead, Maintenance Documentation

Oct 2022 - Sep 2023

Docaret, for Dassault Aviation · Saint-Cloud, France

- Co-managed the outsourced production of Rafale maintenance documentation across three teams in France and abroad: technical writing standards, XML compliance and version control.
- Restructured workflows: backlog absorbed, then contractor production capacity increased by up to 50%; designed BI tooling for real-time production tracking.

Industrial & Methods Engineer

Sep 2017 - Sep 2022

Safran Electrical & Power · Apprenticeship · Niort, France & Pitstone, UK

- Lean Six Sigma Green Belt project on an automated cell: OEE from 40% to 87%, scrap from 8% to 2%, Cp/Cpk capability from below 1 to above 2, €19,419 in annual savings.
- Industrialized the ENGINEUS electric motor assembly: semi-automatic line design de-risked by POC, process PFMEA led at Pitstone (176 risks scored with 8 disciplines), post-Covid relocation of the power unit assembly to France.
- R&D studies: busbar redesign up to 30% lighter, validated in thermal testing; cobot automation sized at €79,530 in annual gains, payback in 1.94 years.

TECHNICAL STACK

Agentic AI & LLM

LangGraph, LangChain, MCP, AWS Bedrock, vLLM, SSE streaming, prompt caching, structured outputs

RAG & Document Intelligence

OCR & VLM, semantic chunking, embeddings, hybrid search, reranking, ChromaDB, knowledge graphs

Evaluation & Observability

Ragas, LangSmith, LLM-as-Judge, golden datasets, agent trajectory evaluation, cost tracking

ML & Deep Learning

PyTorch, TensorFlow, Scikit-learn, XGBoost, MLflow, Optuna

Backend & Infra

Python, FastAPI, Docker, CI/CD, Kafka, Spark, Databricks, AWS, PostgreSQL

CERTIFICATIONS

Claude with AWS Bedrock

Anthropic · 2026

Agents Course

Hugging Face · 2025

Deep Reinforcement Learning

Hugging Face · 2025

Green Belt Lean Six Sigma

CESI Certifications · 2022

EDUCATION

Data Analytics, University Degree

Université Paris 1 Panthéon-Sorbonne · 2024 - 2025

MSc in Engineering (Diplôme d'Ingénieur)

CESI École d'Ingénieurs · 2019 - 2022

DUT, Mechanical & Production Engineering

IUT Poitiers · 2017 - 2019