

MARIUS AYRAULT

AI Engineer | Agentic AI · MLOps · Evaluation & Observability

✉ contact@mariusayrault.com

🌐 mariusayrault.com

🌐 linkedin.com/in/marius-ayrault

🔗 github.com/mriusero

French (native)

English (professional, TOEIC 895)

Remote · France & international

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 apply the discipline of aerospace production lines to LLM systems: measured, observable architectures, built for production.

WORK EXPERIENCE

Founding AI Engineer

Aug 2025 - Present

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

- 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.
- An R&D program run independently, structured by a Data Analytics degree at Université Paris 1 Panthéon-Sorbonne.

Production Lead

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.

Industrialization Engineer

Oct 2019 - Sep 2022

Safran Electrical & Power · Apprenticeship · Niort, France and 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 motor assembly: semi-automatic line 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.

Methods Technician

Sep 2017 - Sep 2019

Safran Electrical & Power · Apprenticeship · Niort, France

- Re-laid-out a production sector and integrated three automated production means, including a robotic cell: flows, PFMEA and machine documentation.
- Day-to-day methods support: non-conformance analysis, work order tracking, tooling management; flows reworked through Value Stream Mapping (non-value-added movements cut by 23%), 5S standards and kanban.

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