Pierre Aumjaud

AI Engineer

Narbonne, France

https://pierreaumjaud.com/

French Citizen

About Me

AI Engineer transitioning from academia, with proven expertise in developing autonomous **AI agents**, deploying **machine learning** models, and implementing **RAG-based systems**.

Skills

- **AI Engineering**
  LangChain • LlamaIndex • HuggingFace • Ollama • Chroma DB • RAG
- **Machine Learning**
  Scikit-learn • XGBoost • Pytorch • Reinforcement Learning • Anomaly Detection • Evolutionary Optimisation
- **Software Engineering**
  Python • FastAPI • Flask • PostgreSQL • DuckDB • Git • Github Actions • Docker
- **Data Integration**
  dbt • Snowflake • Airflow • Airbyte • Azure
- **Data Analytics**
  Numpy • Pandas • Polars • Grafana • Tableau • Metabase • Streamlit • Plotly

Languages

French – C2 ●●●●●

English – C1 ●●●●○

Spanish – C1 ●●●●○

Socials

linkedin.com/in/pierreaumjaud

github.com/PierreExeter

pierreaumjaud.com

Work Experience

2026 – present — **AI Engineer** — Helicon IA, France
• Building an automated system combining web scraping and AI vision to digitize and process administrative tasks.

2021 – 2025 — **Career Transition**
• Comprehensive preparation for a career in AI, with focused training in agent orchestration, LLM inference and RAG systems.
• Developed a project portfolio showcasing AI agents, ML models deployment, and RAG systems.
• 20 volunteer work experiences in 8 different countries.

2017 – 2021 — **Marie Curie Research Fellow** — University College Dublin, Ireland
• Awarded a €245k grant to develop ML solutions for manufacturing optimisation.
• Implemented an ML-based anomaly detection system, reducing unplanned downtime by 15%.
• Developed a reinforcement learning framework to train robotic manipulators.

2016 – 2017 — **Postdoctoral Research Fellow** — University College Dublin, Ireland
• Optimised composite structures via and evolutionary optimisation, achieving a 20% improvement in stiffness-to-weight ratio.
• Developed numerical models (FEA) to predict complex mechanical behavior, validating against experimental data.
• Applied regression models to the simulation models in order to identify optimal material parameters.

2012 – 2015 — **Teaching Assistant** — University of Exeter, UK
Modules taught : solid mechanics, computational engineering, Computer-Aided Design.

Projects Portfolio

Link to Project — **RAG-Powered Textbook Assistant**
Skills : LlamaIndex, ChromaDB, Docling, Ollama, Chainlit, Python

Link to Project — **AI-Powered Email and Calendar Assistant**
Skills : LangChain, HuggingFace, Streamlit, Python, SQLAlchemy

Link to Project — **Reinforcement Learning for Robotic Arm Control**
Skills : Python, reinforcement learning, robotics, Docker, Pytorch

Link to Project — **MLOps Pipeline Deployment**
Skills : Docker, Flask, Azure, Github Actions

Education

Academia

2012 – 2016 — **PhD Mechanical Engineering** — University of Exeter, UK
Numerical modelling and computational optimisation of vibrating aerospace structures.
Focus: *evolutionary optimisation, exploratory data analysis, data visualisation, Python, numerical analysis.*

2009 – 2012 — **MSc Mechanical Engineering** — SUPMICROTECH-ENSMM, France
Modules: *mechanical engineering, computer science, engineering mathematics, electronics.*

2007 – 2009 — **BSc Engineering – 'classes préparatoires'** — Lycée Arago, France
Modules: *mathematics, physics, chemistry, engineering*

Certifications

2026	Developing LLM Applications with LangChain	DataCamp
2026	Working with the OpenAI API	DataCamp
2025	Cloud Computing Essentials with Azure	Analyst Builder
2025	Build and share a containerized app	Docker
2024	Reinforcement learning specialisation	Coursera
2021	Machine learning specialisation	Coursera
2021	Introduction to Pytorch	Pytorch