

Louis Lejaille

Artificial Intelligence Engineer

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EDUCATION

EPITECH

Master's Degree in Computer Science (RNCP Level 7)

Nancy, France

2021 – 2026

Keimyung University

International Exchange Program

Daegu, South Korea

2024 – 2025

EXPERIENCE

Teaching Assistant

EPITECH

Jul. 2025 – Aug. 2026

Nancy, France

- Mentored 100+ students across software engineering projects, improving code quality, debugging practices and software architecture understanding.
- Provided technical guidance on algorithms, software architecture and debugging strategies.
- Reviewed codebases and promoted best practices in software design, maintainability and version control.

Freelance Software Engineer

Self-employed

2024 – Present

Nancy, France

- Designed, developed and deployed 4 production-ready applications for SMEs using modern full-stack technologies.
- Designed scalable software architectures integrating REST APIs, relational databases and Docker deployment pipelines.
- Managed the complete software lifecycle from client requirements to production delivery.

Full Stack Software Engineer Intern

PwC Luxembourg

Jul. 2022 – Dec. 2022

Howald, Luxembourg

- Developed and maintained enterprise React applications used by 10+ internal IT teams.
- Improved frontend maintainability by designing reusable TypeScript components.
- Created SQL training material and delivered onboarding sessions for new developers.
- Collaborated in Agile Scrum teams using Git, code reviews and CI workflows.

AI PROJECTS

Tumor Cell Multi-Agent Simulation | Python, AI, Pygame

2026

- Designed a biologically-inspired multi-agent simulation composed of thousands of autonomous cells.
- Implemented spatial diffusion models for oxygen and nutrient concentration fields.
- Developed stochastic cell behaviour models including proliferation, apoptosis and migration.
- Integrated AI-assisted lineage analysis to identify environmental factors promoting tumour emergence.

Task Scheduling on Multi-Processor Architectures using ML | Python, AI, Matplotlib

2026

- Designed a simulation framework capable of generating thousands of synthetic DAG scheduling instances.
- Developed Machine Learning models (MLP) and Graph Neural Networks (GCN, GAT) using PyTorch Geometric.
- Evaluated model generalization across heterogeneous multi-processor architectures using makespan and resource utilization metrics.
- Benchmarked learned scheduling policies against traditional heuristics including HEFT and list scheduling algorithms.

TECHNICAL SKILLS

Machine Learning: PyTorch, PyTorch Geometric, Deep Learning, Reinforcement Learning, Graph Neural Networks (GCN, GAT), Supervised Learning, Model Evaluation, Hyperparameter Optimization

Programming: Python, C++, JavaScript, TypeScript, SQL

Frameworks & Libraries: NumPy, Pandas, Matplotlib, React, Node.js

Software Engineering: Git, Docker, Linux, REST APIs, Object-Oriented Programming, Agile, Software Architecture