

# MAXIME ROUARD

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Permis B

Portfolio : [maxime-rouard.fr](https://maxime-rouard.fr)

Github : [github.com/MSG LUM4X](https://github.com/MSG LUM4X)

Linkedin : [linkedin.com/in/maxime-rouard/](https://linkedin.com/in/maxime-rouard/)



CENTRALE  
LYON



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## Ingénieur Centralien

Specialized in software engineering,  
with a strong interest in AI

Final-year internship / Permanent position

### Education

#### 2025-2026:

- Internship at Tentacle Studio
- Internship at E.Leclerc

#### 2024-2025: Politecnico di Milano ; Erasmus Program :

- Master's courses in *Biomedical Engineering*
- Master's courses in *Cybersecurity*

#### 2023-2024: Gap year :

- Trip to Sri Lanka
- Internship at NeoCondo

#### 2021-2023: Ecole Centrale de Lyon; CPGE Program:

- Core curriculum with specialization in Bioengineering and web development

#### 2019-2021: Classes Préparatoires aux Grandes Écoles :

- Montaigne, PC\* track

#### 2019: Baccalauréat S, Highest Honors (Mention Très Bien)

### Areas of Expertise

#### Computer skills :

- **Languages:** Python, TypeScript, C#, SQL, Bash
- **CI/CD :** Github Actions
- **Front-end :** Next.js / React, Vue.js
- **Back-end :** Next.js, Python
- **IA / ML :** Mistral sdk, LangChain, RAG, MLP
- **DevOps / Infra :** Administration Linux, PM2, Nginx
- **Tools :** Git, Unity

#### Languages:

- **English:** C1 level. Participated in the Erasmus program in 2024–2025.
- **Japanese:** A1 level. Currently learning.

#### Science:

- Strong aptitude and interest in **Mathematics**.

### Additional certifications

- **National UNSS Badminton Referee Certificate.**
- **Citizen First Aid Certificate Level 1 (PSC1).**

### Professional experience

#### Computer Science :

- 2026, 5 months, Toulouse, Ongoing:  
**Software engineering:** Full-stack development of a web platform for managing pétanque competitions, interfaced with the Android app Pétanque : Marque Score.
- 2023, 6 months, Paris: Internship at NeoCondo:  
**full-stack development** of a web application for textile brands, aimed at facilitating product traceability and the calculation of their environmental score. Tech stack: **Python, Vue.js** and **MongoDB**.  
Development on Windows, **WebStorm** IDE. Version control: **Git**.

#### Teaching :

- 2022-2023, 6 months, Lyon:  
Tutor for the "Physics and Chemistry of Matter" course at **École Centrale de Lyon**: academic support for students not coming from a CPGE background.
- 2022, 6 months, Lyon: Supervision at the Centre Social de la Sauvegarde:  
academic support for students from Year 10 to Year 13. Private tutoring: mathematics and physics lessons for high school students.

## Personal Projects

### Linux Server :

I converted an old computer into an **Ubuntu server**, which allowed me to get familiar with **Linux system administration** and **Bash scripting**. I use it to host several modded Minecraft servers for personal use, as well as a number of **web applications**, including my portfolio ([maxime-rouard.fr](https://maxime-rouard.fr)). I also explored **VPN configuration** to secure remote access.

### lx – Open-source CI/CD tool :

I developed **lx**, an **open-source tool** designed to **automate the setup of CI/CD pipelines** for GitHub projects hosted on Linux servers. **Fully functional** and used in my personal projects, it was built with a sharing mindset aimed at beginner developers, while remaining open to feedback from experienced profiles for continuous improvement. Source code: [github.com/MSGGLUM4X/lx](https://github.com/MSGGLUM4X/lx).

### Chatbot :

I developed a **chatbot prototype** using Mistral sdk with Next.js, Auth.js and Prisma stack. The source code is available on GitHub and the **chatbot is accessible directly from my portfolio**.

### Mental Health Awareness Game :

I created a 2D platformer game using Unity as part of a mental health awareness project. **Faced with a complex architecture problem**, I adopted a **paper-based approach** — modelling, diagrams, structured thinking — to design a decoupled event system (triggers / listeners), **flexible and reusable** across many situations. **Videos and detailed explanations are available on my portfolio**.

### RAG ( Retrieval-Augmented Generation ) :

I implemented **RAG in several ways**: first **without any framework**, building from scratch to **understand the core mechanisms** (embeddings, vector databases, cosine similarity); then using **LangChain** to explore a production-oriented approach. This progression gave me an **end-to-end understanding**, from theory to industrial tooling. **One of these implementations can be tested directly on my portfolio**.

### Machine Learning / AI :

I am actively building my **foundations in Machine Learning, combining theory and hands-on practice**. I have implemented several models end-to-end: linear regression, single-layer perceptron, and multilayer perceptron. In parallel, I apply this knowledge to concrete use cases such as RAG and AI agent development. I am currently preparing to dive into the Transformer architecture.

### Hobbies :

- **Chess player**. Top Elo, **bullet** category, on chess.com: **1634**.
- **Rugby** for over 10 years.
- **Bouldering**, level ~ **7A**.
- **DIY** and home improvement, across **all building trades**. Strong theoretical understanding of domestic electrical systems.
- **Astronomy**, observation of various planets in the solar system and the Moon. Designed a measurement **protocol to approximate the Earth-Moon distance**.