

Guilhem RATABOUIL



CONTACT

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ABOUT ME

AI Engineer at Amplitudes with a Master's degree in AI, I design LLM-based multi-agent assistants. Passionate about innovation and research, I am rigorous and persistent, qualities shaped by sport.

LANGUAGES

Spanish: native/bilingual (C2)
French: native/bilingual (C2)
English: professional proficiency

SKILLS

Programming

- Python, Java, C
- LLM, RAG, MCP, multi-agents
- FastAPI, LiteLLM, LangChain
- PyTorch, Hugging Face, scikit-learn
- Docker, Kubernetes, GitLab CI/CD
- PostgreSQL, Redis, SQL, AWS

Soft skills:

- Teamwork
- Curiosity, Rigour, Creativity
- Project management
- Building a methodology

HOBBIES

Trail running, Grappling, Chess

PROFESSIONAL EXPERIENCE

AI ENGINEER at *Amplitudes (permanent).* **Jan 2026 – Present**

- Design and development of a multi-agent conversational assistant (trip search, booking and management): architecture and orchestration of specialised agents.
- Integration of RAG, tool calling, MCP and real-time streaming; conversational context and task management with Redis.
- Deployment with Docker/Kubernetes via GitLab CI/CD. *Stack: Python, FastAPI, LiteLLM, Redis, PostgreSQL.*

AI ENGINEER at *Intent Technologies (Internship).* **Mar 2025 – Sep 2025**

- Developed an end-to-end NLP model for information extraction and generation from documents (design, data preparation, evaluation).
- Designed deep learning models for document classification (CNN, encoder-DNN), improving accuracy and scalability.
- Built a multi-agent text-to-SQL framework combining LLMs and RAG to query databases in natural language.
- Developed MCP servers to orchestrate LLMs in distributed AI pipelines.

AI ENGINEER (INTERNSHIP) — Made In Tracker **Jun 2024 – Sep 2024**

- Built an intelligent chatbot with the Groq API and Firebase, with a strong focus on prompt engineering for contextual accuracy.
- Designed and deployed a Flask-based API with multiple endpoints, ensuring smooth interaction between backend services and frontend interfaces.

RESEARCH PROJECT at *IRIT.* **May 2024 – Aug 2024**

- Developed an innovative web application to manage connected devices in a smart home, improving the autonomy of people with disabilities.
- User needs analysis, optimised architecture for efficiency and responsiveness, and research on integrating AI-based features (LLM/SLM).

EDUCATION

MASTER'S IN ARTIFICIAL INTELLIGENCE: FOUNDATIONS AND APPLICATIONS.
Université Toulouse Paul Sabatier. **2023–2025**

- Design of high-performance deep learning models (Transformers, LLM, CNN, DRL) for classification and prediction.
- Applied research project (ranked first in class): using LLM internal representations to build a visual, interactive map of a book's content.
- Probabilistic modelling with Bayesian networks for planning and decision optimisation.

BACHELOR'S IN SPORTS MANAGEMENT (STAPS). *Université Toulouse Paul Sabatier.* **2021–2022**

BACHELOR'S IN COMPUTER SCIENCE. *Université Toulouse Paul Sabatier.* **2018–2021**

FRENCH BACCALAUREATE (SCIENCE). *Lycée Français Molière, Zaragoza.* **2018**