

EDGAR DEMEUE

Artificial intelligence graduate student



OBJECTIVE

Master's student in Artificial Intelligence aiming to pursue a **PhD in Japan in Ethical AI (Explainability & Alignment)**. Curious and rigorous, with strong **critical thinking** and teamwork skills, I seek to advance **safe and transparent AI systems**.

LINKS

✉ edgardemeue@proton.me
🌐 edgar-demeue.com
🌐 linkedin.com/in/edgar-demeue
🔗 github.com/edgar-demeue
🏠 Lyon, France

LANGUAGES

– French (native)
– English (professional, C1)
– Japanese (JLPT N3, currently progressing toward N2)

INTERESTS

– AI ethics and safety, explainability research
– Music (guitar, drums, piano)
– Sports (gymnastics, tricking, table tennis)
– Photography, cinematography, visual creation
– Japanese culture
– Philosophy

AIMING FOR A PHD IN ETHICAL AI (EXPLAINABILITY & ALIGNMENT)

PLANNED RESEARCH INTERNSHIP

ENHANCING AI MORAL VALUE REPRESENTATION THROUGH ARGUMENTATION FRAMEWORKS WITH GRADUAL SEMANTICS **Feb–July 2026**

LIRIS (Lyon) – co-supervised by Dr. Rémy Chaput, Dr. Guillaume Muller, Dr. Bruno Yun, and Pr. Maxime Morge.

– **Neuro-symbolic research** focused on grounding **Reinforcement Learning (RL) agents** in ethical frameworks. The goal is to enable **ethically aligned behavior** by using advanced argumentation graphs to represent moral values and structure the reward function. This work contributes to **explainable and safe AI**.

- **State-of-the-art review** on Argumentation Frameworks and Gradual Semantics.
- Designing **knowledge-based argumentation graphs** for moral value representation.
- **Integration** into RL agents and assessment of learning outcomes in a simulated ecological gardening scenario.
- Deliverable: Scientific report, **Python prototype**, and presentation of the proposed approach.

EDUCATION

MASTER'S DEGREE IN ARTIFICIAL INTELLIGENCE (ONGOING) *Claude Bernard University Lyon 1* **2025–2026**

– Natural language processing, reinforcement learning, AI ethics, argumentation theory, LLMs, multi-agent systems, computer vision, data mining, visualization.

MASTER 1 IN COMPUTER SCIENCE – AI OPTIONS *Claude Bernard University Lyon 1* **2024–2025**

– Machine learning, AI fundamentals, lambda calculus, data analysis, complexity, project management, software engineering.

BACHELOR'S DEGREE IN COMPUTER SCIENCE AND MATHEMATICS *Claude Bernard University Lyon 1* **2020–2024**

– Object-oriented programming, web development, databases, logic and functional programming.

TECHNICAL SKILLS

- Languages: Python, Java, C++, TypeScript, SQL
- AI / NLP / Data: PyTorch, scikit-learn, Hugging Face Transformers, BERT, NLP pipelines, classification models
- Research: Scientific writing (LaTeX, Overleaf), reproducible research
- Visualization & Web: Next.js, D3.js, data visualization, network graphs
- Tools: Git, Jupyter, REST APIs
- Systems: Linux, Windows

RESEARCH & PERSONAL PROJECTS

CLUSTERING ANALYSIS OF FOOD RECIPE INGREDIENTS **October 30, 2025**

– Analysis of 222,705 recipes using text embeddings, Truncated SVD, and a comparative study of clustering algorithms (HDBSCAN, DBSCAN). Optimized ingredient grouping and culinary pattern discovery via TF-IDF weighting and cosine distance refinement. [\[Report Link\]](#)

ARGUMENT MINING AND DEBATE GRAPH VISUALIZATION **2025**

– Scraping debates from *Kialo*, data cleaning, and training a **BERT classification model** achieving **0.82 accuracy** on argument relations. Development of a web platform for interactive visualization of argument relations, identification of weak/strong arguments, and detection of unsupported claims. [\[Report Link\]](#)

SOCIAL NETWORK SIMULATION USING LLMs **2024**

– Exploration of the open-source platform *Y Social* to simulate interactions between **AI agents using LLMs**. Focus on behavioral analysis, data mining, and visualization of social dynamics. Written in French. [\[Report Link\]](#)

REPORT: LIMITATIONS OF LLMs **2024**

– In-depth critical analysis of hallucinations, bias, and **ethical challenges** in Large Language Models (LLMs). Written in French. [\[Report Link\]](#)

PROFESSIONAL EXPERIENCE

FRONT DESK ASSISTANT *City Hall – 1st District of Lyon* **2022-Now**

– In-person and phone reception, request management, clear and efficient communication.

FULL-STACK DEVELOPER (2 MONTHS INTERNSHIP) *Lianeli, Lyon* **2024**

– Medical sector internship focused on **data sensitivity and security**. Key contributions: **UI modularization** and optimization of a React dashboard (Ant Design, Tailwind CSS). Practical application of **software engineering rigor** in integrating the Strapi API and ensuring compliance with **best practices for sensitive data** and code quality.

VOLUNTEER RENOVATION PROJECT *Saône-et-Loire* **August 2021**

– Collective manual labor as part of the renovation of a historic manor.