

# Mohamed Amine Kerkouri, Ph.D.

Paris, France | mohamed.a.kerkouri@gmail.com

LinkedIn | GitHub | Google Scholar | Hugging Face | kmamine.github.io

## Summary

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AI Research Scientist working on process-level evaluation of AI systems — LLM reasoning, multimodal perception, and retrieval quality. PhD (Orléans, 2024) · h-index 8 · 196 citations · 20+ publications at CVPR, ETRA, ICIP, and IEEE Access.

## Experience

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### AI Research Scientist & AI Ops Architect

Jan 2025 – Present

#### F-Initiatives / NeoPhi

Paris, France

- Shipped the production citation-verification pipeline for a scientific-literature platform indexing 100M+ papers
- Raised RAG retrieval F1 from 0.13 to 0.50; 4–6× relevance gain on private benchmarks
- Distilled Qwen3.5-0.8B via merge-corrected iterative SFT: +3.7 pts GSM8K over base ( $\approx 2\sigma$ ), MMLU retained; released on Hugging Face Hub
- Built year-aware venue ranking (SCImago × CORE) attributing Q-ranks to 100M+ papers

### Technical Lead – HeReFaNMi Project

May 2023 – Nov 2024

#### F-Initiatives / IULM University Milan

Orléans, France

- Secured EUR 130,000 in EU research funding (NGI Search, European Commission)
- Architected and shipped a production health-misinformation detection platform
- Led a cross-functional team of 4

### Doctoral Researcher

Jan 2020 – Feb 2024

#### Laboratoire PRISME, Université d'Orléans

Orléans, France

- 15+ peer-reviewed papers (CVPR, ETRA, ICIP, IEEE Access) on visual attention and scanpath modelling
- Ran eye-tracking studies with 150+ participants across 10 museums
- Secured EUR 100,000 across two projects (Louvre; INSERM)
- Supervised 7 research interns

### Teaching Associate (ATER)

Sep 2023 – Sep 2024

#### Polytech Orléans

Orléans, France

## Selected Open-Source Projects

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- **Qwen3.5-0.8B-Mythos-Distill** — iterative SFT distillation with automated model-merge selection across 7 strategies. Hugging Face
- **APEX** — agentic image-editing system with MLLM orchestration and identity-preservation gating. GitHub
- **HeReFaNMi Platform** — production health-misinformation detection (microservices, hybrid RAG, vLLM). GitHub
- **FDISS** — perceptually grounded scanpath-similarity metric; ETRA 2026 LBW. PyPI
- **SSLArtScanpath** — Barlow Twins self-supervised scanpath prediction on paintings; CVPR-W 2022. GitHub

## Selected Publications

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- **ThinkProbe: Structural Profiling of LLM Reasoning Traces via Non-Generative Thought Graphs** — EMNLP 2026 ARR (under review); AAAI 2027 (in prep). Lead author.
- **What They Saw, Not Just Where They Looked: Semantic Scanpath Similarity via VLMs and NLP Metrics** — ETRA 2026 GenAI Workshop. Lead author.
- **Modeling Beyond MOS: Quality Assessment Must Integrate Context, Reasoning, and Multimodality** — arXiv 2025. Lead author.
- **Closing the Foveal Gap: Perceptually Grounded Scanpath Comparison with Disc IoU (FDISS)** — ETRA 2026 LBW. Lead author.
- **Self-Supervised Scanpath Prediction Framework for Painting Images** — CVPR Workshop 2022. Lead author.
- *Full list: Google Scholar — 20+ papers, h-index 8, 196 citations*

## Education

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- **Ph.D., Computer Science & Artificial Intelligence** — Université d'Orléans, 2024. Thesis: Visual Attention Prediction and Scanpath Modelling for Paintings.
- **Postgraduate Diploma, Data Science & Data Engineering** — Université d'Orléans, 2022.

- **Oxford Machine Learning Summer School (OxML)** — Representation Learning & Generative AI, 2024.

## **Skills**

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**ML & Training:** PyTorch · Hugging Face (Transformers, TRL, PEFT, Accelerate) · vLLM · Model Merging · MLflow · Weights & Biases

**NLP & Retrieval:** Hybrid Retrieval (BM25s, RRF) · Rerankers · NLI · LangChain · LlamaIndex · ChromaDB

**Infrastructure:** Python · FastAPI · Docker · SQL · React · TypeScript

**Research Methods:** Experimental design · Statistical analysis (mixed-effects, signal detection theory, bootstrap CIs)

**Languages:** Arabic (native) · French (fluent) · English (fluent)