

Lounes Meddahi

Experience

- 04.2025–08.2025, **Research Scientist Intern**, *Air Liquide (R&D - Data Science team)*, Paris, France
Full-time Developing high-resolution, spatio-temporal forecasting AI models from satellite data – application to solar and wind energy. Project Normand'Hy (World's largest hydrolyzer of \$400m and 200MW).
- 02.2024–08.2024, **Research Engineer Intern**, *Sony (AI & Research)*, Tokyo, Japan
Full-time Built a PoC model to train robots through visual quantitative reasoning, SonyAI's Robotics & AI flagship project.
○ Developed data-driven models and algorithms to perform real-time, high-precision visual quantitative evaluation.
○ Authored a [technical report](#) sharing my work.
- 05.2023–11.2023, **Software Engineer Intern**, *InstaDeep*, Berlin, Germany & Paris, France
Full-time Collaborated with Deutsche Bahn to implement RL algorithms for train scheduling optimization.
○ Real-time optimization of train trajectories across Germany, reducing train delays by a factor 2.
○ Authored a [technical report](#) presenting my work.
- 09.2022–04.2023, **Research Assistant**, *INRIA – EMPENN*, Rennes, France
Part-time Focused on leveraging MRI multi-modality for stroke detection and segmentation.
○ Proposed and developed a novel fine-tuning approach for multi-modality stroke segmentation.
○ [Authored](#) a research paper and **Oral Presentation** at WCNR 2024.
- 06.2022–08.2022, **Research Intern**, *IMT Nord-Europe – CERI SN*, Villeneuve d'Ascq, France
Full-time Research internship centered on advancing IoT security and scalability using blockchain.
○ [Publication](#) of results and selected **Best paper award** at IEEE ISNCC'23.
- 06.2021–07.2021, **Intern**, *Univ. Lille – School*, Villeneuve d'Ascq, France
Full-time Discovery internship in reinforcement learning and research.
○ [Interpretation and in-depth study](#) of reinforcement learning algorithms and environments; Source code shared in open source.

Education

- 09.2024–09.2025 **M.Sc. in Mathematics and Machine Learning (Master 2 MVA)**, *ENS Paris-Saclay (France)*
Master's degrees in mathematics, machine learning, and computer vision from France's top scientific school (ENS).
- 09.2022–09.2025 **M.Sc. level in Computer Science (Diplôme de l'ENS)**, *ENS Rennes (France)*
Research oriented degrees in computer science from France's top scientific school (ENS).
- 09.2019–06.2022 **B.Sc. in Mathematics and Computer Science (Summa Cum Laude)**, *University of Lille (France)*
[B.Sc. thesis](#): A Proof of Identification for a blockchain based LoRaWAN join procedure.

Publications

- [2] **[Oral presentation] Stroke lesion detection and segmentation through multi-modal MRI Analysis**
[Lounes Meddahi](#), Stéphanie s Leplaideur, Arthur Masson, Isabelle Bonan, Elise Bannier, and Francesca Galassi, 13th World Congress for Neurorehabilitation (WCNR'24), 2024.
- [1] **[Best paper award] Leveraging blockchain for a robust and scalable device identification in LoRaWAN**
[Lounes Meddahi](#), Ahmed Meddahi, Patrick Sondi and Fen Zhou, 10th International Symposium on Networks, Computers and Communications (ISNCC'23), **Best paper award**, top 4 out of 404, 2023

Skills and Interests

- Languages French (Native speaker), English (Proficient: TOEIC C1 and IELTS C1)
- Relevant Courses Deep Learning, Computer Vision, Representation Learning, LLMs (ARMs and MDMs), Software
- Programming Python, C/C++, Java
- Interests Programming, Epistemology