

# Lounes Meddahi

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🌐 [lounesmd.github.io](https://lounesmd.github.io)  
in [LounesMeddahi](#)  
🔗 [LounesMD](#)  
EU citizenship (French)

## Summary

Passionate about Machine Learning, I am particularly interested in improving learning methods in complex environments. With a strong commitment to research and its applications, I aim to improve and create novel algorithms and techniques that deepen our knowledge of learning processes.

## Experience

- 05.2023–11.2023 **Applied Research Intern, InstaDeep**, Paris, France  
Full-time Improving RL train scheduling algorithms in collaboration with Deutsche Bahn.  
○ Leading the design and development of deep RL and GNNs algorithms for train scheduling.  
○ Pivotal roles at InstaDeep: Contributing to the InstaDeep x BioNTech hackathon, Workshop retreats in Berlin for the CTMS project, Nominated and Elected **AI Expert** for the CTMS initiative.
- 09.2022–04.2023 **Research Assistant, INRIA – EMPENN**, Rennes, France  
Part-time Research assistant focused on using deep learning for segmenting strokes in medical imaging.  
○ Conducted research on deep learning for brain stroke segmentation.  
○ Proposed and developed a novel approach for multi-modality stroke segmentation.  
○ [Authored](#) and soon submitted a research paper.
- 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.  
○ Conducted research on blockchain applied to IoT security and scalability.  
○ End-to-end development : model design, tests and results of the proposed approach.  
○ [Publication](#) of results and selected **Best paper award** at IEEE ISNCC'23.
- 06.2021–07.2021 **Intern, INRIA – Scool**, Villeneuve d'Ascq, France  
Full-time Discovery internship in research and Reinforcement Learning.  
○ Reading and implementation of different RL algorithms from the scientific literature.  
○ [Interpretation and in-depth study](#) of the algorithms; Source code shared in open source.

## Education

- 09.2022–09.2025 **M.Sc. in Computer Science (Track "Normalien")**, *ENS Rennes*, Rennes, France  
Master's degrees in computer science and mathematics from France's top scientific school.
- 09.2019–06.2022 **B.Sc. in Mathematics and Computer Science**, *University of Lille*, Lille, France  
Graduated Summa Cum Laude.

## Publications

- [2] **MM-STROKENet: A new Approach for Stroke Lesion Segmentation Using multi MRI Modalities** with Assoc. Prof. Francesca Galassi, Dr. Stéphanie Leplaideur, Dr. Elise Bannier and Arthur Masson, Soon to be submitted, 2023
- [1] **[Best paper award] Leveraging blockchain for a robust and scalable device identification in LoRaWAN** with Prof. Ahmed Meddahi, Prof. Patrick Sondi and Assoc. Prof. 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 Reinforcement Learning, Deep Learning, Game Theory, Computer Graphics. [Details](#).
- Programming Python, C/C++, Java
- Interests Machine Learning, POMDPs, Non-stationary RL, Graphs, Programming, Epistemology