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LounesMeddahi
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EU citizenship (French)

Lounes Meddahi

Education

09.2022–*09.2025* **M.Sc. in Computer Science ("Cursus Normalien")**, *École Normale Supérieure de Rennes*, Rennes, France

09.2019–06.2022 **B.Sc. in Mathematics and Computer Science**, *University of Lille*, Lille, France
Graduated Summa Cum Laude.
B.Sc. thesis: A Proof of Identification for a blockchain based LoRaWAN join procedure.

Experience

05.2023–*11.2023* **Applied Research Intern**, *InstaDeep*, Paris, France
Full-time At InstaDeep, I'm developing Reinforcement Learning and World Model-based train scheduling algorithms in collaboration with Deutsche Bahn. My primary tasks include:
- Leading the design and development of RL and GNNs algorithms for train scheduling.
- Collaboration and workshop trip/retreat with Deutsche Bahn in Berlin for CTMS project.

09.2022–04.2023 **Research Assistant**, *INRIA – EMPENN*, Rennes, France
Part-time During this 8-month research project with the EMPENN team of INRIA, I focused on using deep learning for segmenting strokes in medical imaging. My key contributions included:
- Conducted research on segmentation deep learning for brain stroke segmentation.
- Proposed and developed a novel approach for multi-modality stroke segmentation.
- Authored and soon submitted a research paper; Tool used at the hospital of Rennes.

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. My key contributions included:
- 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 at IEEE 2023 International Symposium on Networks, Computers and Communications.

06.2021–07.2021 **Student Intern**, *University of Lille – Scool*, Villeneuve d'Ascq, France
Full-time Discovery internship in research and Reinforcement Learning. Main activity:
- Reading and implementation of different RL algorithms from the scientific literature (Python).
- Interpretation and in-depth study of the algorithms; Source code shared in open source.

Publications

Leveraging blockchain for a robust and scalable device identification in LoRaWAN with Assoc. Prof. Fen Zhou, Prof. Patrick Sondi and Prof. Ahmed Meddahi, 10th International Symposium on Networks, Computers and Communications (ISNCC), 2023

Skills and Interests

Languages French (Native speaker), English (Proficient: TOEIC C1)

Relevant Courses	Reinforcement Learning, Game Theory, Markov Chains, Deep Learning. Details.
Programming	Python, C/C++, Java
Interests	Machine Learning, Non-stationary RL, Deep Learning, Programming, Epystemology