# INDEPEDENT STUDY

| 09/2023 - 01/2024 | **Independent Study Semester** (preparation for MSc applications) | Montpellier, France |
|---|---|---|

Studying Probabilistic Machine Learning, Reinforcement Learning and Mathematics:

- References:
    - Probabilistic Machine Learning: An Introduction, *Keving P. Murphy, MIT Press, 2022*
    - Reinforcement Learning: An Introduction (Second Edition), *Richard S. Sutton and Andrew G. Barto, MIT Press, 2018*
    - Mathematics for Machine Learning, *Marc Peter, Cambridge University Press, 2020*

Maintaining a Machine Learning Blog:

- Example of featured articles:
    - Temporal-Difference Learning and the importance of exploration: An illustrated guide
        - *Published on Towards Data Science, "Editors' picks" and "Data Science and ML: Must-reads" sections*
    - Markov Decision Processes, an efficient framing for RL problems
    - The Bellman Equation, the fundamental equation of RL

Litterature Study: Multi Agent RL and Open-Ended learning methods

- Papers:
    - MAESTRO: Open-Ended Environment Design for Multi-Agent Reinforcement Learning, *Mikayel Samvelyan (UCL DARK, META AI) et al. , 2023*
- Theses:
    - Deep Multi-Agent Reinforcement Learning, *Jakob N. Foerster (University Of Oxford), 2018*

# TECHNICAL SKILLS

- Programming Languagues: Python, SQL, Flutter, R
- Data Science & Machine Learning: PyTorch, JAX, Sklearn, TensorFlow
- Cloud Platforms: Amazon Web Services (AWS)
- Data Engineering: PySpark and AWS ETL pipelines
- Software Engineering & Web development: Programmed and deployed professional portfolios and web applications
- Version Control: Git, GitHub

# LANGUAGES

- French: Native
- English: Fluent (Toeic: 975/990)
- German: Native (Intermediate)
- Spanish: Intermediate