

# Julien CARDINAL, PHD Candidate

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## Professional Experience

- 2024 (6 months) **Research Engineer in Reinforcement Learning** Combinatorial optimization coupled with RL for component layout in microelectronics at ST Grenoble.
- 2023 (6 months) **Project Engineer** Set up a robotics challenge between CentraleSupélec and MBDA in combat drone programming. Evaluation of available equipment. Contact with all parties. Budget calculation. Consideration of human resources.
- 2020 – 2022 **Active member of CentraleSupélec's "Automatants" AI Association** Intermediary between CentraleSupélec's research AI Hub and the Automatants association. Integrator of Automatants' AI activities at CentraleSupélec. Organizer of two Machine Learning competitions. On-campus AI trainer.
- 2019 – 2020 **Computer Vision Developer** in contact with the **Météo France AI Lab** AI for short-term weather prediction from satellite data. Advanced convolutional networks and recurrent networks.

## Academic years

- 2023 – 2024 **Double M2 degree in optimization.**  
Université de Lorraine, Metz : *Complexity, Combinatorial, Linear and Convex Optimization*
- 2020 – 2024 **Student AI research engineer.**  
CentraleSupélec, Gif-sur-Yvette: *Research curriculum in Mathematics, Artificial Intelligence, Reinforcement Learning, Machine Learning, NLP, Deep learning, Data Science*
- 2022 **Student semester M1 Computer science**  
Ludwig Maximilian Universität, Munich: *Research in AI, Optimization, Computer Vision.*
- 2018 – 2020 **Classe préparatoire Maths sup math spé**  
Lycée Lazariste, Lyon : *Programme MPSI/MP\* option Informatique*

## Skills

- Programming language **python**, C/C++, SQL, UML,  $\LaTeX$ , ReactJS...
- Libraries **TENSORFLOW**, PYTORCH, GYM...
- Soft skills **Agile Scrum methodology**, Academic and applied research
- Linguistics **English (C1)**, German (B2)

## Competitions

- 2023 **Xeek Competition:** Optimization TSP - 11/150  
Optimization competition like the Travelling Salesman Problem
- 2022 **Hackathon at Ecole 42:** AI safety - 1/70  
Creation of explainable and safe AI, supervised, unsupervised, Computer Vision, in 3 days
- Kaggle Competition:** Multi-agent pathfinding - 60/469.  
Implementation of a specialized A\* algorithm, exploration and multi-agent methods