



Bastien Lechardoy

RESEARCH ENGINEER
ARTIFICIAL INTELLIGENCE

FORMATION

2025 - Engineering degree ISAE - Supaéro

Speciality Data and Decision Science

2024 - Master of science : Applied AI - Cranfield University

2019 - CPGE PCSI/PSI* - Lycée Janson de Sailly

EXPERIENCES

01/04/2026 PHD MULTI-AGENT MOTION PLANNING - IN PROGRESS

Institut
Polytechnique
- Télécom Paris

- Dynamic game-theory applied to trajectory optimization under uncertainties
- Creation of a distributed solver for better scalability and efficiency
- Exploration of more intricate decision-making process in complex interactions

24/05/2025 INTERNSHIP - TRAJECTORY OPTIMIZATION FOR AIR COMBAT-6 MONTHS

Dassault
Aviation -
Saint-cloud

- Creation of a simplified 2D simulation environment
- Benchmarking of 4 methods: Dubins, MPC, MCTS, and DRL
- Comparison of methods based on embedment/performance criteria
- Application to lvl multi-agent combat using DRL

01/06/2023 MASTER THESIS - HIERARCHICAL RL - 4 MONTHS

Qinetiq -
Angletterre

- Choosing a testing framework: 2D Minigrad environment
- Implementation of hierarchical reinforcement: Option-based RL
- Comparison of different advanced methods
- Demonstration of gains in performance/explainability/robustness...

01/12/2023 RESEARCH PROJECT - EXPLAINABILITY/RL - 4 MONTHS

Cranfield
University -
Angletterre

- Design of an emergency landing assistance system for helicopters
- Reinforcement learning (RL) with human participation
- Consideration of cognitive load: heartbeats
- Human-controlled ROS2/Gazebo simulation
- Project featured in a student research publication

SKILLS





- **Classification** : SVM with scikit-learn, CNN with tensorflow/pytorch
- **Regression** : bayesian/logistic regression, LDA, decision tree, random forest
- **Segmentation** : K-nearest neighbors, graph clustering, YOLOv8
- **Explainability** : LIME for neuron networks
- **Reinforcement** : Q-learning, PPO, Hierarchical options, MCTS
- **Mathématiques** : Markov Chains, Optimization, Game-theory
- **Robotics** : ROS2/Gazebo
- **Programmation** : Python, Java, C++
- **Data engineering** : PostgreSQL, GCC

PROFIL



Engineer passionate about
mathematics and AI.

I am currently working as research
engineer in Institut Polytechnique,
Télécom Paris in dynamic multi-
agent motion planning

CONTACT

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-  Motorized

HOBBIES

-  Handball, ski
-  Hiking, scuba-diving, cinema

SOFT SKILLS

- Leadership
- Innovation
- Communication

LANGUAGES

- English : C1
 - TOEFL IBT - 104/120 - 2023
 - GMAT - 700 - 2023