

Corentin Léger - Research Engineer

Website, GitHub, LinkedIn, Google Scholar

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Research Engineer in Artificial Intelligence with a strong background in Machine Learning and Software Development. I'm particularly interested in Reinforcement Learning, Large Language Models, Multi-Agent Systems and Open-Endedness.

SKILLS

- **Programming:** Python, Git, Linux, Distributed Computing, CI/CD
- **Python Frameworks:** Jax, Numpy, PyTorch, Ray, Scikit Learn, Optuna, Hydra, Pandas, Gym

EXPERIENCE

- **InstaDeep** Paris, France
Research Engineer Nov 2025 - Present
 - Applied Reinforcement Learning research for industry optimization problems.
- **Huawei - Noah's Ark Lab** Paris, France
Research Engineer Mar 2025 - Nov 2025
 - LLMs and Automated Data Science research at Paris Noah's Ark Lab, supervised by Balázs Kégl.
 - Developed a tabular data preprocessing pipeline combining LLM-assisted (vLLM) and heuristic feature engineering, as well as feature selection methods to enhance the performance of an internal AutoML tool (Scikit-Learn, Pandas).
 - Contributed to two NeurIPS workshop papers studying LLM skills (hyperparameters generation, multi-agent debate), and a preprint on bilevel optimization for Reinforcement Learning.
- **Inria - Flowers Lab** Bordeaux, France
Research Engineer Dec 2023 - Jan 2025
 - LLMs and Multi-agent systems research at Flowers Lab, supervised by Clément Moulin Frier.
 - Contributed to two papers (ICLR 2025, preprint) studying text properties evolution in multi-turn LLM interactions. Built NLP (SpaCy, NLTK) and data visualization tools to evaluate metrics, as well as a web interface (Flask) in LLM-Culture
 - Co-developed Vivarium, a multi-agent simulator built in Jax for AI research and teaching. Achieved real-time communication with Web or Jupyter notebook clients to enable interacting with the simulation.
 - Supervised a software engineer intern on the project, and used the simulator in a Master's course at UPF Barcelona.
- **Research Scientist Intern** May 2023 - Nov 2023
 - Meta-Reinforcement Learning research at Flowers Lab, supervised by Clément Moulin Frier and Xavier Hinaut.
 - Published ER-MRL (EvoAPPS 2024), a method optimizing RNNs with Evolutionary Strategies, in order to improve Deep RL agents' abilities. It enabled to solve partially observable tasks, and adapt faster to unseen environments (Sb3, Gym, Optuna).
 - Co-authored a paper studying the combination of Tabular Reinforcement Learning and Symbolic data (HAL Inria).
- **Connectiv-IT** Bordeaux, France
Data Scientist Intern May 2022 - Aug 2022
 - Preprocessed helicopter maintenance data, performing cleaning, outlier detection and imputation (Pandas, Scikit-Learn).
 - Used statistical analysis (SciPy) and clustering to identify key trends in maintenance data.

SELECTED PROJECTS

- **Open Source Contributions:** Fixed issues in Stable-Baselines3 RL library (10k+ stars), and created a tutorial for parallelized hyperparameter search in ReservoirPy (600+ stars). Contributed to KanRL by co-creating this app to interpret trained RL policies, and implemented PPO and Policy Gradient algorithms with KANs.
- **Hackathons:** Optimized multi-LLM agent systems on maths tasks with evolutionary algorithms, led to creation of a Start-Up. Won the 2023 and 2024 versions of HackIRobo for analyzing text evolution in populations of LLMs, and optimizing persuasion capacities of LLMs with evolutionary strategies. Trained robotic arms with RL at HuggingFace LeRobot hackathon.

EDUCATION

- **Ecole Nationale Supérieure de Cognitique** Bordeaux, France
Master of Science in Computer and Cognitive Sciences Sept. 2020 – Sept. 2023
Activities: Bronze medal at French University Volley-Ball Championship 2023
- **Cycle Préparatoire de Bordeaux** Bordeaux, France
Bachelor of Science in Mathematics and Physics, Sport-Study contract with ASI Volley-ball Sept. 2018 – Jun. 2020