

Corentin Léger - AI Research Engineer



AI Research Engineer with a focus on Reinforcement Learning, Large Language Models, and Software Engineering. Seeking to contribute to cutting-edge research, development, or engineering in innovative projects across the AI field.

Skills

Programming: Python, Git, Bash, Web Development, SQL, Cloud Computing (Slurm), Network (Socket, grpc)

Python frameworks: Numpy, Jax, PyTorch, TensorFlow, sklearn, Optuna, Pandas, Flask, Gym, Sb3, pytest

Experiences

INRIA **Bordeaux, France**
(Jan. 2024 - Present)

AI Research Engineer - Flowers team

- Developed the [LLM-Culture](#) software to simulate text evolution in LLM-based multi-agent systems. The system models agent interactions based on neighbor output, task, and personality across generations. Created tools for text dynamics analysis and built a user-friendly web interface. Co-authored two [papers](#): “Cultural Evolution in Populations of Large Language Models” (preprint) and “When LLMs Play the Telephone Game” (under review).
 - Developed a multi-agent particle simulator in Jax with realistic physics, for AI research and teaching. It enables real-time interaction between Jax-based simulations hosted on a server, and web or Jupyter notebook clients.
- Skills: Multi-agents simulations - Software engineering - Jax - LLMs - Network programming

AI Research Intern - Flowers & Mnemosyne teams **Bordeaux, France**
(Mar. 2023 - Oct. 2023)

- Presented “Evolving Reservoir for Meta-Reinforcement Learning” at **EvoStar 2024**, exploring how evolved Reservoirs can improve Deep RL agents' adaptability. Implemented a parallelized experiment pipeline, testing agents on partially observable and 3D locomotion tasks, and evaluated their ability to generalize to unknown environments: [paper](#) - [code](#).
 - Created a [tutorial](#) for parallelized hyper parameter search in the **ReservoirPy** machine learning library (400 ☆)
- Skills: Meta-Reinforcement Learning - Evolutionary Algorithms - Reservoir Computing - Parallel Processing

Connectiv-IT **Bordeaux, France**
(May. 2022 - Aug. 2022)

Data Science Intern

- Preprocessed helicopter maintenance data using machine learning techniques (cleaning, outlier removal, imputation) for predictive maintenance. Performed statistical analysis, clustering, and data visualization to uncover insights.
- Skills: Data processing and visualization - Pandas - Scikit Learn - SciPy

Projects

Open Source Contributions

- Created a [Hugging Face app](#) in KanRL to interpret RL policies using Kolmogorov-Arnold Networks (KANs). Led experiments comparing Policy Gradient and PPO performance with KANs versus classical neural networks.
- Fixed several issues in the **Stable-Baselines3** (8000+ ☆) and **Stable-Baselines3-Contrib** RL Libraries.

Ebiose

- Participated in a two-day Hackathon where we built a tool to optimize multi-LLM agents systems on math tasks using evolutionary algorithms ([blog](#)). The project led to the creation of a start-up by two members of the team.

Symbolic Reinforcement Learning

- Published a [paper](#) on Symbolic Reinforcement Learning in HAL Inria. The research explored enhancing RL agents' learning and explainability by integrating symbolic data with the Q-Learning algorithm.

Education

Master of Science, Computer & Cognitive sciences **Bordeaux, France**
(Sep. 2020 - Sep. 2023)

ENSC - Bordeaux INP (GPA 4.0)

- Exchange programs at Laval University (Data Science) and at ENSEIRB-MATMECA (AI)

Bachelor of Science, Mathematics & Physics **Bordeaux, France**
(Sep. 2018 - Jul. 2020)

CPBx - Bordeaux University

- French integrated preparatory class in sport-study program (Volley-Ball), Mathematics and Physics