Corentin Léger
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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.

Experience

- **Huawei** — Paris, France
  Research Engineer — *Mar 2025 - Present*
  - Research on LLMs, Automated Data Science and RL, supervised by Balázs Kégl at Paris Noah's Ark Lab.
  - 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).
  - Conducted early-stage Reinforcement Learning research on bilevel optimization and LLM fine-tuning for code (Jax, TRL).
  - Contributed to two NeurIPS workshop papers on LLMs applications: hyperparameters generation and multi-agent debate [1].
- **Inria** — Bordeaux, France
  Research Engineer — *Dec 2023 - Jan 2025*
  - Research on AI and Multi-agent systems, supervised by Clément Moulin Frier at Flowers Lab.
  - Contributed to two papers (ICLR 2025, preprint) studying evolution of text properties in multi-turn LLM interactions [2, 3].
  - Co-developed the LLM-Culture software to simulate and analyze text evolution across generations in populations of LLMs. Built NLP (SpaCy, NLTK) and data visualization tools to evaluate text properties, as well as a web interface (Flask).
  - Co-developed Vivarium, a multi-agent simulator built in Jax for AI research and teaching, achieving real-time interaction with Web or Jupyter notebook clients. Supervised an intern and used the simulator in a Master's course at UPF Barcelona.

  Research Scientist Intern — *May 2023 - Nov 2023*
  - Research on Meta-Reinforcement Learning, supervised by Clément Moulin Frier and Xavier Hinaut at Flowers Lab.
  - Published ER-MRL [4] (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).
  - Created a tutorial for parallelized hyperparameter search in the open source ReservoirPy library (500+ stars).
- **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 Publications

Complete pubications list

- [1] *Optimizing for Persuasion Improves LLM Generalization*: Reedi, A J., **Léger, C.**, Pourcel, J., Gaven, L., Charriau, P., Pourcel, G. (2025). MTI-LLM workshop @ NeurIPS 2025
- [2] *When LLMs Play the Telephone Game*: Perez, J., Kovač, G., **Léger, C.**, Colas, C., Molinaro, G., Derex, M., Oudeyer, P. Y., Moulin-Frier, C. (2025). ICLR 2025
- [3] *Cultural evolution in populations of Large Language Models*: Perez, J., **Léger, C.**, Ovando-Tellez, M., Foulon, C., Dussauld, J., Oudeyer, P. Y., Moulin-Frier, C. (2024). Arxiv
- [4] *Evolving Reservoirs for Meta Reinforcement Learning*: ***Léger, C.**, *Hamon, G., Nisioti, E., Hinaut, X., Moulin-Frier, C. (2024). EvoAPPs 2024 (Long Talk)
- [5] *Early Empirical Results on Reinforcement Symbolic Learning*: Radji, W., **Léger, C.**, Bardisbanian, L. (2023). HAL Inria

Selected Projects

- **Open Source Contributions**: Fixed several issues in Stable-Baselines3 RL library (10k+ stars). Contributed to KanRL, helped creating this app to interpret RL policies, and benchmarked PPO and Policy Gradient algorithms with KANs.

Education

- **Ecole Nationale Supérieure de Cognitique (ENSC)** — 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 (CPBx)** — Bordeaux, France
  Bachelor of Science in Mathematics and Physics, Sport-Study contract with ASI Volley-ball — *Sept. 2018 – Jun. 2020*

Skills

- **Programming**: Python, Git, Linux, Web Development, Cloud Computing
- **Python Frameworks**: Jax, Numpy, PyTorch, Scikit Learn, Optuna, Hydra, Pandas, Flask, Gym