

Quentin GALLOUÉDEC

Research Engineer
Hugging Face
Lyon

quentin.gallouedec@huggingface.co
+33 6 34 50 03 57
gallouedec.com
github.com/qgallouedec

EDUCATION

- 2024– **Research engineer** Hugging Face
- 2020-24 **Ph.D. in Computer Science/Deep Reinforcement Learning**
Dissertation: Toward the Generalization of Reinforcement Learning
Supervisor: Associate Prof. Emmanuel Dellandréa
Graduation: March 26, 2024
- 2016-20 **Diplôme d'Ingénieur (M.S. and B.S. in Engineering Sciences),**
École Centrale de Lyon, France
Majoring in Computer Science
- 2019-20 **M.S. in Electronics, Energy, Electricity and Automation**
Dissertation: Mixed-Precision in Graphics Processing Units
Supervisor: Prof. Ian O'Connor
- 2014-16 **Classe Préparatoire (equivalent to first two years of B.S.)**
Lycée Clemenceau, Nantes, France

PUBLICATIONS

Conference Papers

- 2023 **Gallouédec, Q.**, and Dellandréa, E. “Cell-Free Latent Go-Explore.” *Proceedings of the 40th International Conference on Machine Learning (ICML 2023), Proceedings of Machine Learning Research*

Workshop Publications

- 2024 **Gallouédec, Q.**, Beeching, E., Romac, C., and Dellandréa, E. “Jack of All Trades, Master of Some, a Multi-Purpose Transformer Agent.” *Aligning Reinforcement Learning Experimentalists and Theorists (ARLET) @ ICML 2024*.
- 2021 **Gallouédec, Q.**, Cazin, N., Dellandréa, E., and Chen, L. “panda-gym: Open-Source Goal-Conditioned Environments For Robotic Learning.” *4th Robot Learning Workshop: Self-Supervised and Lifelong Learning Workshop @ NeurIPS 2021*.

Preprints and under review

- 2024 Huang, S., **Gallouédec, Q.**, Felten, F., Raffin, A., Dossa, R. F. J., Zhao, Y., Sullivan, R., Makoviyichuk, V., Makoviichuk, D., Danesh, M. H., Roumégous, C., Weng, J., Chen, C., Rahman, M. M., M. Araújo, J. G., Quan, G., Tan, D., Klein, T., Charakorn, R., Towers, M., Berthelot, Y., Mehta, K., Chakraborty, D., KG, A., Charraut, V., Ye, C., Liu, Z., Alegre, L. N., Nikulin, A., Hu, X., Liu, T., Choi, J., and Yi, B. (2024). “Open RL

Benchmark: Comprehensive Tracked Experiments for Reinforcement Learning.”
<https://arxiv.org/abs/2402.03046>. Under review.

Reports and blog posts

- 2021–2023 **Gallouédec, Q.** “Reinforcement Learning Review Series”, Toward Data Science, Medium [Web blog posts]. Retrieved from qgallouedec.medium.com/
- 2020 **Gallouédec, Q.** “Mixed-Precision in Graphics Processing Units.” *arXiv preprint*, arXiv:2110.12794
- 2020 **Gallouédec, Q.** “Deep Reinforcement Learning for soft objects grasping” Research internship report. qgallouedec.github.io/files/TFERapport.pdf

INVITED TALKS

- 2022 **Gallouédec, Q.** Pujolle G., Al Agha, K., , Perspectives of new telecommunication technologies., *2nd Symposium on applied science for firefighters, Paris*

OPEN-SOURCE CONTRIBUTIONS

- 2022– Maintainer of Stable-Baselines3 (GitHub: 8.3k ☆ 1.6k 📄), RL-Baselines3-zoo (1.9 ☆ 488 📄) and SB3-Contrib (441 ☆ 165 📄)
- 2022– Author and maintainer of panda-gym (482 ☆ 105 📄)
- 2021– Contributed to OpenAi/Gym CleanRL, rliable

TEACHING

- 2022-2023 Algorithms and Data Structures; Object-Oriented Design and Programming (Final year of the B.S. program)
- 2022-2023 Deep Learning & Artificial Intelligence : an Introduction (Final year of the M.S. program)
- 2022-2023 Machine Learning (Last year of the M.S. program)

SUPERVISED STUDENT PROJECTS

- 2022 Automatic Curriculum Reinforcement Learning for simulated robotic applications (5 M.S. students)
- 2021 Investigation of an adversarial approach for reinforcement learning with a robotic arm (2 M.S. students)
- 2021 Analysis and development of an evaluation environment for reinforcement learning methods for robotics (2 M.S. students)
- 2021 Ignition for High performance simulation of soft object grasping (M.S. intern)
- 2021 Simulation and characterisation of a tactile sensor for learning robotic tasks. (4 M.S. students)
- 2020 Soft-information for indoor positioning of firefighters (14 M.S. students)

PROFESSIONAL EMPLOYMENT

- 2019-20 **Mathematics Interrogator, *Lycée Aux Lazaristes*, Lyon**
For students in *classe préparatoire* (equivalent to the first two years of B.S.), preparing for the entrance exams to the most prestigious French universities.
- 2018-19 **Research and Development Officer, Paris Fire Brigade**
Machine learning for the prediction of rescue presentation time and optimization of operational coverage.
Realization of a prototype of indoor communication and localization system, based on LoRa/UWB technologies designed for the use of firefighters in constrained environments.
- 04-08/2018 **Reasearch intern, Polytechnique Montréal, Canada**
Supervisor: Prof. Maxime Raison
Description: development of a custom-made 3D printed robotic arm for the assistance of child amputees. Implementation of the acquisition chain (stereovision), the control chain and the learning of movements.

SUMMER SCHOOL ATTENDANCE

- 2021 Eastern European Machine Learning Summer School (EEML2021), Virtual Budapest, Hungary

MISCELLANEOUS

- 2023 Defence and Internal Security Volunteer Reservists Medal
- 2022– Volunteer firefighter (first class)
- 2021– Official author in Toward Data Science (603k followers).
- 2019 National Defence Medalist for my commitment as a firefighter.
- 2019 Letter of congratulations from the Chief of Staff of the Paris Fire Brigade.
- 2019 Finisher of my first marathon (42.195 km; 3h19min) in Paris.
- 2012 Winner of *Science et vie junior magazine's Innovez* national contest.
- 2011 Judo black belt, former national level athlete.

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