

ARIEL KWIATKOWSKI

Early Stage Researcher, Open-Source Developer

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github.com/redtachyon

Paris, France

EXPERIENCE

Early Stage Researcher

École Polytechnique

10/2020 - Ongoing Paris, France

Doctoral candidate funded by the CLIFE ITN grant

- Created a crowd simulation setup powered by reinforcement learning, including the underlying simulation and the learning code.
- Produced research papers published in peer-reviewed conferences and journals.

Lead Developer

Farama Foundation

01/2022 - Ongoing Remote

Open source developer at the Farama Foundation, maintainer of Gymnasium (previously OpenAI Gym)

- Made high-level design decisions for Gymnasium, notably the new vector API which improves environment speed by up to 1000x in certain cases.
- Implemented and reviewed crucial parts of new and legacy code.
- Delegating tasks to volunteers and coordinating their work.

Research Assistant

Bitville Oy

09/2019 - 07/2020 Helsinki, Finland

Research in association with the Probabilistic Machine Learning group at Aalto University

- Built a multi-agent reinforcement learning environment in pycolab.
- Implemented a reinforcement learning Theory of Mind module.
- This work resulted in my Master's thesis and a peer-reviewed publication.

Machine Learning Engineer

Worklytics

03/2018 - 12/2018 Remote

Freelance contract work via SharpestMinds

- Implemented an ML algorithm for employee retention prediction.
- Developed a method to interpret model predictions.
- Implemented a calibration method to estimate the certainty of a model.

Other & Internships

Details available on LinkedIn

- Visiting Researcher - KTH, Stockholm, Sweden - 2022
- Visiting Researcher - Ubisoft La Forge, Bordeaux, France - 2021
- Data Scientist I - CodiLime, Warsaw, Poland - Summer 2017
- Deep Learning Intern - SeerIT, Warsaw, Poland - Summer 2016

EDUCATION

PhD, Computer Science

École Polytechnique

10/2020 - Ongoing Paris, France

- Topic: Scenario and Interaction-ready Agents

Autonomous Systems, AI & Robotics

KTH Royal Institute of Technology, Aalto University

08/2018 - 08/2020 Stockholm, Sweden; Helsinki, Finland

- Double degree via EIT Digital
- Thesis: Improving Ad-Hoc Cooperation in Multiagent Reinforcement Learning via Skill Modeling

Physics, Individual Track

University of Warsaw

10/2015 - 07/2018 Warsaw, Poland

- Thesis: High frequency airborne temperature measurements analyzed with AI techniques

SUMMARY

AI researcher coming from a Physics background, with experience as a Data Scientist and Machine Learning Engineer.

Passionate about reinforcement learning and AI safety.

Currently working on my PhD in multiagent RL for crowd simulation.

LANGUAGES

Polish	Native
English	Fluent
French	Intermediate

SKILLS

Reinforcement Learning			Data Analysis	
Machine Learning		Python	PyTorch	
NumPy	Pandas	Transformers		Jax
Rust	Git	Flask	Pytest	Pytype
Unity	ML-Agents		Scientific Writing	
Open-Source Development				

PUBLICATIONS

Understanding reinforcement learned crowds

MIG 2022, Computers & Graphics

Ariel Kwiatkowski, Vicky Kalogeiton, Julien Pettré, Marie-Paule Cani

11/2022

A Survey on Reinforcement Learning Methods in Character Animation

Eurographics 2022, Computer Graphics Forum

Ariel Kwiatkowski, Eduardo Alvarado, Vicky Kalogeiton, C Karen Liu, Julien Pettré, Michiel van de Panne, Marie-Paule Cani

05/2022

Behaviour-conditioned policies for cooperative reinforcement learning tasks

ICANN 2021

Antti Keurulainen, Isak Westerlund, Ariel Kwiatkowski, Samuel Kaski, Alexander Ilin

09/2021