

Phillip Swazinna

Education

Technical University of Munich

PhD Candidate in Offline Reinforcement Learning

Munich, Germany

April 2019 – February 2023

- * Multiple publications in model-based offline RL at [top venues](#) (e.g. [ICLR 2023](#))
- * Among first to propose model-based RL methods addressing learning from static, non-random datasets
- * First to propose proximity conditioned policies for offline RL

M.Sc. Informatics

October 2016 – November 2018

- * Cumulative GPA: 1,2 (3.9) / Master's Thesis Grade: 1,0 (4.0) → ["High Distinction" \(Top 10%\)](#)
- * Master's Thesis: Weakly Supervised Deep Learning for Diffusion MRI Brain Scans
- * Exchange semester @ **Télécom Paristech** (Paris, France) with GPA 1,4 (3.8)

Technical University of Dortmund

B.Sc. Informatics

Dortmund, Germany

October 2013 – September 2016

- * Cumulative GPA: 1,7 (3.6) / Bachelor's Thesis Grade: 1,3 (3.8)
- * Exchange semester @ **University of Pennsylvania** (Philadelphia, USA) with GPA 1,0 (4.0)

Work Experience

Siemens AG

Machine Learning Research Scientist

Munich, Germany

Since April 2019

- * Reinforcement learning for autonomous trains: Training goal conditioned policies in Tensorflow to follow predicted time series of power curves using model-based reinforcement learning
- * Multi-agent reinforcement learning based control strategies for package logistics machines: Training model-free policies against Unity simulations of the system using custom Ray[rllib] algorithms
- * Generative machine learning based design of combined cycle power plants: Leveraging ML based uncertainty quantification in design space to identify promising parameters
- * CNN-based classifiers & anomaly detection for blood cell image classification: Improving diagnostic capabilities by automating the identification and counting of white blood cells using Keras

Selected Publications

- Swazinna, P., Udluft, S., & Runkler, T. (2023). User-interactive offline reinforcement learning. *11th International Conference on Learning Representations (ICLR)*
- Swazinna, P., Udluft, S., & Runkler, T. (2021). Overcoming model bias for robust offline deep reinforcement learning. *Engineering Applications of Artificial Intelligence (EAAI)*, 104, 104366.
- Swazinna, P., Udluft, S., Hein, D., & Runkler, T. (2021). Behavior Constraining in Weight Space for Offline Reinforcement Learning. *European Symposium on Artificial Neural Networks (ESANN)*.

Other Skills

Programming: Python (Torch+Lightning / Tensorflow / Ray / Scipy / ...), AWS, Docker, etc.

Languages: German (native), English (C2, TOEFL score 115/120), French (B2)