Onno Eberhard, M.Sc.

Machine Learning Researcher
MPI for Intelligent Systems & University of Tübingen

onnoeberhard.com
onnoeberhard@gmail.com

Education

Ph.D. Computer Science, *Max Planck Institute for Intelligent Systems & University of Tübingen.*
Oct 2023 – now Advisors: Claire Vernade and Michael Mühlebach. Scholar in the IMPRS-IS program.

M.Sc. Machine Learning, *University of Tübingen.*
Oct 20 – Sep 22 GPA: 1.00/1.00 (top of class), degree awarded with distinction. Thesis: "Colored Noise Exploration in Reinforcement Learning," supervised by Georg Martius (Grade: 1.0/1.0, written at MPI-IS).

B.Sc. Electrical Engineering and Information Technology, *University of Duisburg-Essen.*
Oct 16 – Sep 20 GPA: 1.6/1.0 (top 5% of graduates). Thesis: "Data-driven operational forecasts for newly built power plants," supervised by Steven X. Ding (Grade: 1.1/1.0, written at Siemens).

Oct 18 – Sep 20 **Computer Science**, *University of Duisburg-Essen.* 90 ECTS points (= half a B.Sc.), GPA: 1.5/1.0

Aug – Dec 2018 Visiting Student, *Nanyang Technological University Singapore.* Schools: EEE, CSE.

Experience

Google Research · *Paris, France*

Jun 23 – Sep 23 *Research Intern* in the Operations Research team, hosted by Thibaut Cuvelier. I worked on applying reinforcement learning and graph neural networks to solve middle-mile logistics problems. [1]

Max Planck Institute for Intelligent Systems · *Tübingen, Germany*

Oct 22 – May 23 *Research Intern* in Michael Mühlebach's Learning and Dynamical Systems group. My research focused on reinforcement learning and optimal control.

Jun 21 – Sep 22 *Research Intern* in Georg Martius' Autonomous Learning group. I worked on noisy exploration for deep reinforcement learning in continuous action spaces. [2]

University of Duisburg-Essen · *Duisburg, Germany*

Oct 19 – May 21 *Research Assistant* in Torsten Zesch's Language Technology Lab. I worked on automatic speech recognition for low-resource languages and published a paper about using transfer learning in this context.

May – Aug 2019 *Teaching Assistant*, physics lab.

Siemens · *Mülheim an der Ruhr, Germany*

Sep 17 – Sep 22 *Working Student* in an R&D department for the operation and control of combined cycle power plants. I worked as a data scientist on predicting output power and fuel consumption during start-up processes.

Sep 16 – Jun 19 *Apprenticeship* as an Electronics Technician for Machines and Drive Technology (IHK Diploma).

Service

Reviewing NeurIPS 2023 Workshops

Open Source I have contributed to open source projects including *Flax* and *Pandas*, and publish my work on GitHub.

2019 – now I work as a volunteer and referee at RoboCup Junior events on a national and international level.

Honors & Awards

2023 Awarded the scholarship of the International Max Planck Research School for Intelligent Systems.

2022 Best results in the Machine Learning master's program at the University of Tübingen.

2021 Selected by Bending Spoons for *First Ascent International 2022* as one of "Europe's 20 most impressive computer science students" (out of over 600 applicants). Winner of coding competition at the event.

2018 Awarded the *PROMOS* scholarship by the German Academic Exchange Service (DAAD).

2017 Awarded the *Deutschlandstipendium* scholarship for academic achievements (top ∼0.7% of students).

2016 Awarded the *Abiturpreis* of the German Physical Society for the best results in the Physics Abitur.

2016 Awarded the *Abiturpreis* of the German Mathematical Society for the best results in the Math Abitur.

2014 Fourth place at the RoboCup World Cup 2014 in Brazil in the league *Rescue A Secondary (Superteam).*

2012 Second place at the RoboCup World Cup 2012 in Mexico in the league *Rescue A Primary.*

Selected Publications

See onnoeberhard.com/publications for more. Click any publication for details.

2023 [1] **OE**, T. Cuvelier, M. Valko, and B. De Backer. *Middle-Mile Logistics Through the Lens of Goal-Conditioned Reinforcement Learning.* GCRL Workshop, NeurIPS 2023

2023 [2] **OE**, J. Hollenstein, C. Pinneri, and G. Martius. *Pink Noise Is All You Need: Colored Noise Exploration in Deep Reinforcement Learning.* ICLR 2023. **Oral (top 25%)**

Skills

Languages English: fluent — German: native — French: elementary (A2) — Mandarin: elementary (HSK2)

Technical Machine Learning · Reinforcement Learning · Deep Learning · Bayesian Inference · Optimization & Control

Python · NumPy & SciPy · JAX & Flax · PyTorch · Julia · Haskell · Java · GNU/Linux · Git · LaTeX

Dec 2023 I am always excited to learn new things!