Onno Eberhard, B.Sc.

Machine Learning Student

University of Tübingen, MPI-IS, Siemens

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Education

M.Sc. Machine Learning, *University of Tübingen.*
2020 – 2022 *Current GPA: 1.0**, International Master's Program in Machine Learning

B.Sc. Electrical Engineering and Information Technology, *University of Duisburg-Essen.*
2016 – 2020 *GPA: 1.6**, *ECTS-Grade: A*, Estimated ranking: ~3.5 / 60 graduates. Thesis: [2] (*Grade: 1.1**)

2018 – 2020 **Computer Science**, *University of Duisburg-Essen.* 90 ECTS points (= half a B.Sc.), *GPA: 1.5**

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

2016 – 2019 **Vocational Education**, *Siemens Professional Education*, Mülheim an der Ruhr.
IHK Diploma, Apprenticeship as Electronics Technician for Machines and Drive Technology.

2008 – 2016 **Abitur**, *Georg-Büchner-Gymnasium Seelze*, Hanover. GPA: 1.3*, *Best in Maths, Physics, English.*

Experience

Many of my personal projects can be seen at https://blog.onnoeberhard.com/projects.

MPI-IS **Research Intern (Reinforcement Learning)**, *Max Planck Institute for Intelligent Systems*, Tübingen.
Jun 2021 – In the Autonomous Learning Group led by Georg Martius, I currently work on a project about using time-correlated exploration processes in deep RL algorithms like TD3 and SAC.

Siemens **Working Student (Data Science)**, *Siemens AG*, Mülheim an der Ruhr.
Sep 2017 – I work in an R&D department for operation and control of combined cycle power plants. So far, I have mostly worked on projects for predicting output power and fuel consumption during start-up processes, for which I developed machine learning pipelines using Python. I wrote my Bachelor's thesis [2] on how to apply this approach to new plants lacking historical data.

UDE **Student Research Assistant (NLP)**, *University of Duisburg-Essen.*
Oct 2019 – May 2021 In the Language Technology Lab led by Torsten Zesch, I worked on automatic speech recognition for low-resource languages and wrote a paper [1] about using transfer learning in this context. Before that, I worked on building a spell checking program specialized on errors from language learners.

May – Aug 2019 **Teaching Assistant (Physics Lab)**, *University of Duisburg-Essen.*

Engineering Internships — Jul 2015 · *Audi AG*, Ingolstadt — Jan 2014 · *Continental AG*, Hanover

Volunteering

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

2017 – 2020 I worked at my university's student radio station as a volunteer editor. *CampusFM e.V., Essen*

Honours & Awards

MPI-IS · 2021 Third place in the Reinforcement Learning Hockey Tournament of the Autonomous Learning Group.

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

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

DMV, DPG · 2016 Abiturpreis of both the German Mathematical Society and the German Physical Society.

RoboCup Fed. Second place at the RoboCup World Cup 2012 in Mexico City in the league *Rescue A Primary*,
2010 – 2014 Fourth place at the RoboCup World Cup 2014 in João Pessoa in *Rescue A Secondary (Superteam).*

Publications

2021 [1] O. Eberhard and T. Zesch. "Effects of Layer Freezing on Transferring a Speech Recognition System to Under-resourced Languages". In: *Proceedings of the 17th Conference on Natural Language Processing (KONVENS 2021).* Link to paper and talk

Preprints & Theses

2020 [2] O. Eberhard. "Data-driven operational forecasts for newly built power plants". Supervised by Steven X. Ding, non-disclosure agreement with Siemens AG. Bachelor's Thesis

Skills

Python Very skilled in Python and many of its scientific libraries (*NumPy, PyTorch, SciPy, Scikit-Learn, ...*). I have been using Python professionally since 2017 and have contributed code to the library *pandas.*

Languages I have had separate courses at university on each of the following languages: *Java*, *C*, *C++*, *Haskell*, *Prolog*, *Assembly*, *MATLAB*. I have used all of them (and many more) for personal projects.

Others Comfortable with the Linux / bash command line environment. Skilled in LaTeX.

Languages

German Native
English Fluent
French Elementary (4 years at school)
Dutch Elementary (self-taught)
Latin Elementary (kleines Latinum)
Mandarin Elementary (HSK2 certificate)

Updated September 2021

* *German grade: 1.0 (best) – 4.0 (worst)*