# 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 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, 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.
- May 2021 In the Autonomous Learning Group led by Georg Martius, I currently work on a project about using time-correlated exploration processes in state of the art 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 In the Language Technology Lab led by Torsten Zesch, I worked on automatic speech recognition for
- May 2021 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

- $RoboCup \cdot 2019 I$  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**  $\cdot$  2017 Awarded the *Deutschlandstipendium* for excellent academic achievements (top  $\sim 0.7\%$  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: KONVENS 2021

#### Preprints & Theses.

2021 [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 IATEX.

## **Languages**

- French Elementary (4 years at school) **German** Native **English** Fluent
  - **Dutch** Elementary (self-taught)

Latin Elementary (kleines Latinum) Mandarin Elementary (HSK2 certificate)

\* German grade: 1.0 (best) - 4.0 (worst)

Last updated: August 2021