

Clemens Hutter

Curriculum Vitae

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I am most proud of

- www.klassenteiler.de, a passion project that was used during the covid pandemic by over 5000 school students to optimally split classes.
- graduating at the [top of my class](#) in MSc Data Science, despite not having a BSc in Mathematics.
- my small contribution to the documentation of [scikit-learn](#).

Education

- Sep 2018 - **MSc in Data Science, ETH Zürich, Switzerland**
Apr 2021 ○ GPA: 5.93 (out of 6.0, with 6.0 being outstanding); top of my class
- Oct 2014 - **BSc in Cognitive Science, Osnabrück University, Germany**
Sep 2018 ○ GPA: 1.0 (out of 6.0 with 1.0 being outstanding)
○ Top 3 in a class of ~ 80 students
○ Major subjects: Mathematics, Computer Science, Artificial Intelligence, Machine Learning
- Sep 2005 - **Science Stream, Albertus Magnus Gymnasium, Germany**
Jun 2013 ○ Abitur (passed my high school exit examinations)
○ GPA: 1.0

Experience

- Jun 2021 - **PhD Student, Mathematical Information Science - ETH Zürich, Switzerland**
present ○ Developed mathematical bounds for the approximation capabilities of recurrent neural networks
○ Supervised 5 theoretical and 3 applied student projects in the areas of natural language processing, time-series classification and medical image processing
○ Organized 6 exams with up to 230 students each
○ Wrote and submitted [4 journal articles](#)
- Mar 2020 - **Machine Learning Intern, DataHow AG, Switzerland**
Sep 2020 ○ Implemented hybrid machine learning models to predict biological cell culture processes
○ Developed novel algorithms to enable transfer learning between different cell cultures
○ Wrote and submitted a [journal article](#), which is now cited over 35 times
- Sep 2019 - **Research Assistant, MTEC - ETH Zürich, Switzerland**
Feb 2020 ○ Developed a system for knowledge extraction from documents regarding Swiss parliamentary proceedings
- Oct 2017 - **Research Intern, University of Oxford, UK**
Mar 2018 ○ Trained a spiking neural network on visual stimuli
○ Quantified the information content of the network
○ Wrote my BSc thesis
- Apr 2017 - **Data Engineer, Inserve (legal technology startup), Germany, (part-time, 20 hours/ week)**
Jul 2017 ○ Developed machine learning-based methods to segment and classify dates in noisy legal documents
○ Developed and tested prototypes for 6 deep learning architectures, and expanded the best performing prototype using Apache Spark and Deeplearning4j

Aug 2016 - **Research Intern, Nottingham Trent University, UK**

- Oct 2016 Developed a network that modeled the phototactic responses in the nematode *C. elegans*, and optimized the network parameters using metaheuristic methods
- Prepared a demonstration of predator behavior in a mobile robot using ROS and OpenCV ([55 Stars on GitHub](#))

Sep 2013 - **Volunteer, Prem Sewa Shikshan Sangh (local charity), India**

- May 2014 Taught English and Computer Science to ~ 50 students (aged 6 to 18) from poor, rural families
- Self-learned Hindi

Awards and Scholarships

2022 **Willi-Studer-Prize, ETH Zürich, Switzerland**

- Awarded 3000 CHF for graduating as the best student in the Data Science Master's degree program

Sep 2019 - **DAAD Graduate Scholarship, Germany**

- Sep 2020 Awarded €1000 per month

Nov 2017 **Oxford Hack (hackathon), UK**

- Was selected as one of 250 participants out of ~ 800 applicants
- Won prize (out of 5 awarded main prizes) with 3 teammates

Dec 2016 **'Cognitive Farming Solutions' hackathon, Germany**

- Developed an expert system that provided farmers with suggestions on crop rotation and explanations for the suggestions through chatbots
- Won the first prize of €1500 with 2 teammates and presented our prototype at CeBIT

Oct 2015 - **Deutschlandstipendium (national scholarship), Germany**

- Oct 2017 Awarded €300 per month (~ 20 scholarship holders at Osnabrück University)

Nov 2015 **Lower Saxony (university scholarship), Germany**

- Awarded €500 by Osnabrück University (~ 150 awards)

Jun 2013 **Max Weber (state scholarship), Germany**

- Passed the examination for the scholarship aimed at encouraging academically gifted students to study in Bavaria
- Offered a scholarship, but declined the offer because I decided to study in another state

Technologies

Python (scikit-learn, TensorFlow, pyTorch), Angular, Scala, Spark, C++, Java, Matlab

Languages

German (native), English (C2), Hindi (advanced)

