

DR. MICHAEL LOHAUS

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“My reward is the **feedback** from people that I impact with my work. My focus has been on **fair and trustworthy AI**, and I want to continue to make AI **work for everyone**.”

EDUCATION AND EXPERIENCE

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| 2017 – 2022 | Ph.D. in Theory of Machine Learning, <i>magna cum laude</i> International Max Planck Research School for Intelligent Systems Supervisor: Prof. Dr. Ulrike von Luxburg <i>Limitations of Fairness in Machine Learning</i> | University of Tübingen |
| 5/2021–10/2021 | Research Internship Led a research project on the disparate treatment of fair deep neural networks. Ran extensive experiments on AWS. | Amazon Development Center, Tübingen |
| 2017 – 2021 | Teaching Assistant Created weekly Algorithms excercises, and organised the tutorial sessions for all students. Conducted tutorial sessions for Mathematics I. | University of Tübingen |
| 2014 – 2017 | M.Sc. in Economathematics , <i>final grade: 1.6</i> Including one Erasmus semester in Budapest at the Eötvös Loránd University. Master Thesis under supervision of Prof. Dr. Frank Vallentin, <i>final grade: 1.3</i> <i>A Primal-Dual Algorithm for Semidefinite Programs.</i> | University of Cologne |
| 2013 – 2017 | Tutor Conducted tutorial sessions for Analysis I, ODEs, Numerics I. | University of Cologne |
| 2011 – 2014 | B.Sc. in Economathematics , <i>final grade: 1.5</i> Including one Erasmus semester in Lund at the Lunds Universitet. | University of Cologne |

SKILLS

Python-advanced pytorch Latex-advanced Matlab-intermediate SQL-basic
Java-intermediate C++-basic Git Bash MS Office AWS Cloud Slurm

Languages German (native), English (fluent), French (A2)

PUBLICATIONS

Are Two Heads the Same as One? Identifying Disparate Treatment in Fair Neural Networks.
M. Lohaus, M. Kleindessner, K. Kenthapadi, F. Locatello, C. Russell. NeurIPS, 2022.

Leveling Down in Computer Vision: Pareto Inefficiencies in Fair Deep Classifiers. CVPR, 2022.
D. Zietlow, M. Lohaus, G. Balakrishnan, M. Kleindessner, F. Locatello, B. Schölkopf, C. Russell.

Insights into Ordinal Embedding Algorithms: A Systematic Evaluation. Under Review, 2021.
L. C. Vankadara*, M. Lohaus*, S. Haghir, F. Ul Wahab, U. von Luxburg.

Too Relaxed to Be Fair. ICML, 2020.
M. Lohaus, M. Perrot, U. von Luxburg.

Uncertainty Estimates for Ordinal Embeddings. ArXiv preprint, 2019.
M. Lohaus, P. Hennig, U. von Luxburg.

SCHOLARSHIPS

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| 2012 – 2017 | Awarded scholarship of the Studienstiftung des deutschen Volkes – German National Academic Foundation – based on academic performance and voluntary commitment. |
| 2008 – 2009 | Awarded a scholarship for an academic year in Maryland, USA, with the Congress-Bundestag-Youth Exchange |

VOLUNTARY ACTIVITIES

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| Since 2016 | Deutsche Schülerakademie: German Summeracademy for talented High School students. Teacher of the course <i>Machine Learning – For the Common Good?</i> and the course <i>100 % Renewables? – The German Power Grid</i> . Administrator and Organizer of one German Summeracademy. |
| Since 2009 | Partnership International e. V. Active Member for the support of exchange students, conduct of seminars, and public relations activities |

Tübingen, December 13, 2022