

Phillip Lippe

Motivated PhD student fascinated by research in causality-inspired deep learning and generative models, but still curious to increase horizon in other fields as well. Interested in connecting with other researchers.

Gender Male Age 23 years old Nationality German 📍 Amsterdam, Netherlands
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EXPERIENCE

Student Research Assistant

University of Amsterdam / Ahold Delhaize

📅 Jul 2019 – Dec 2019 📍 Amsterdam, Netherlands

- Research in task-oriented dialogue system at the ILPS and AI Retail lab in collaboration with Ahold Delhaize
- Research topic: Diversifying Dialogue Response Generation with Prototype Guided Paraphrasing ([publication](#))

Student Research Assistant

Vrije Universiteit Amsterdam

📅 Nov 2018 – June 2019 📍 Amsterdam, Netherlands

- Research in theorem proving for high-order logic
- Developing a hammer for translating high-order Lean expressions into first-order logic ([project page](#))

Student Research Intern

Daimler AG (Autonomous driving)

📅 Dec 2016 – Mar 2017 📍 Stuttgart, Germany
Apr 2018 – Sep 2018

- Research in Deep Learning for real-time multi-class object detection in complex urban traffic scenes
- Bachelor Thesis: *Hierarchical Multi-label Object Detection of Rare Classes for Autonomous Driving* ([pdf](#))

Student Research Intern

Mercedes-Benz Research and Development NA

📅 May 2017 – Aug 2017 📍 Sunnyvale, United States

- Research and development of deep generative models for predicting agent behavior in traffic environments
- Performed agile software development with Scrum
- Experimenting with unsupervised and curiosity-driven reinforcement learning approaches ([report](#))

PROJECTS

Teaching assistant

- Teaching assistant for the graduate courses Deep Learning, NLP 1, FAIR, IR 1, and Advanced Topics in Computational Semantics at UvA (2019-2021)

Tutorials

- Created and taught a series of implementation notebook tutorials for various Deep Learning topics including (Vision/Language) Transformers, Normalizing Flows, Meta-Learning, and more ([website](#))
- Tutorials became part of the Deep Learning course at UvA and official tutorials for PyTorch Lightning ([link](#))

Summer schools

- Participated in the Oxford Machine Learning Summer School 2021, and the CIFAR Deep Learning and Reinforcement Learning Summer School 2021

EDUCATION

PhD, Artificial Intelligence

University of Amsterdam, QUVA lab

📅 Sep 2020 – Present 📍 Amsterdam, Netherlands

- My research focuses on the intersection of causality and deep learning, in particular in the context of generative models and reinforcement learning ([abstract](#))
- Part of the ELLIS PhD & Postdoc track
- Supervisors: dr. Efstratios Gavves and dr. Taco Cohen

Master of Science, Artificial Intelligence

University of Amsterdam

📅 Sep 2018 – Aug 2020 📍 Amsterdam, Netherlands

- Courses on various aspects of AI, including ML, DL, NLP, IR, CV, and RL
- Thesis on "Categorical Normalizing Flows" ([publication](#))
- Final GPA: 9.5 (Dutch grading system)

Bachelor of Engineering, Computer Science

Baden-Wuerttemberg Cooperative State University

📅 Oct 2015 – Sep 2018 📍 Stuttgart, Germany

- Cooperative study program with the specialization in IT Automotive and autonomous driving, in cooperation with Daimler AG/Mercedes Benz R&D
- Final GPA: 1.0 (German grading system)

Pre-Studies, Mathematics/Computer Science

Ruhr University Bochum

📅 Apr 2012 – Sep 2014 📍 Bochum, Germany

- Completing university courses as high school student, including Introduction to SWE I & II, Linear Optimization, and Programming for Mathematicians

AWARDS

- Awarded SchülerUni Scholarship 2012/13 for taking university courses on Computer Science/Mathematics during high school
- Won price for best application of ML and AI, and best integration of health and Android wear 2.0 device at MBRDNA hackathon 2017
- Best CS undergraduate student at the Baden-Wuerttemberg Cooperative State University 2018
- Won 4th place in the NeurIPS 2020 challenge "Hateful Memes" of Facebook AI ([paper](#))

SKILLS

PyTorch

Tensorflow, JAX, Caffe



Python, Java

MATLAB, C, HTML, SQL



PUBLICATIONS

Conferences

- [Phillip Lippe](#) and Efstratios Gavves: **Categorical Normalizing Flows via Continuous Transformations**. International Conference on Learning Representations (ICLR), 2021 ([link](#)).

Journals

- Douwe Kiela, Hamed Firooz, Aravind Mohan, Vedanuj Goswami, Amanpreet Singh, Casey A. Fitzpatrick, Peter Bull, Greg Lipstein, Tony Nelli, Ron Zhu, Niklas Muennighoff, Rize Velioğlu, Jewgeni Rose, [Phillip Lippe](#), Nithin Holla, Shantanu Chandra, Santhosh Rajamanickam, Georgios Antoniou, Ekaterina Shutova, Helen Yannakoudakis, Vlad Sandulescu, Umut Ozertem, Patrick Pantel, Lucia Specia, Devi Parikh (2021). **The Hateful Memes Challenge: Competition Report**. Proceedings of the NeurIPS 2020 Competition and Demonstration Track, PMLR 133:344-360, 2021 ([link](#)).

Workshops

- Julian Suk, Pim de Haan, [Phillip Lippe](#), Christoph Brune and Jelmer M. Wolterink: **Mesh convolutional neural networks for wall shear stress estimation in 3D artery models**. MICCAI, Workshop on Statistical Atlases and Computational Modelling of the Heart (STACOM), 2021 ([link](#)).
- [Phillip Lippe](#), Taco Cohen, and Efstratios Gavves: **Efficient Neural Causal Discovery without Acyclicity Constraints**. 8th Causal Inference Workshop at UAI, 2021 ([link](#)).
- [Phillip Lippe](#) and Stephan Schulz: **Deep Reasoning - Hardware Accelerated Artificial Intelligence**. Deduktionstreffen 2018, LugLuxAI conference, Luxembourg ([link](#)).

Competitions

- [Phillip Lippe](#), Nithin Holla, Shantanu Chandra, Santhosh Rajamanickam, Georgios Antoniou, Ekaterina Shutova, and Helen Yannakoudakis: **A Multimodal Framework for the Detection of Hateful Memes**. arXiv preprint [arXiv:2012.12871](#), 2020. Presented at the NeurIPS 2020 Competition Track.

Preprints

- Anna Langedijk, Verna Dankers, [Phillip Lippe](#), Sander Bos, Bryan Cardenas Guevara, Helen Yannakoudakis, and Ekaterina Shutova: **Meta-learning for fast cross-lingual adaptation in dependency parsing**. arXiv preprint [arXiv:2104.04736](#), 2021.
- [Phillip Lippe](#), Pengjie Ren, Hinda Haned, Bart Voorn and Maarten de Rijke: **Diversifying Task-oriented Dialogue Response Generation with Prototype Guided Paraphrasing**. arXiv preprint [arXiv:2008.03391](#), 2020.