DAVID WEI ZHANG

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RESEARCH INTERESTS

deep learning, generative models, diffusion models, machine learning for optimization

EDUCATION

University of Amsterdam	April 2019 – *August 2023*
PhD in Machine Learning	Amsterdam, Netherlands
Technical University of Munich	October 2015 – October 2017
MSc Computer Science	Munich, Germany
Technical University of Munich	October 2012 – October 2015
BSc Computer Science	Munich, Germany

PROFESSIONAL EXPERIENCE

Research Intern	May 2022 – September 2022
Qualcomm AI Research	Amsterdam, Netherlands

- Investigated machine learning approaches for scheduling computation graphs
- Filed a patent and submitted a research paper

Consultant	January 2018 – March 2019
KPMG	Munich, Germany

- Implemented and trained deep learning models for recognizing handwritten documents
- Build pipeline for aggregating and visualizing millions of documents

PUBLICATIONS

Joint first-authorship denoted by *

Self-Guided Diffusion Models
VT. Hu*, DW. Zhang*, YM. Asano, GJ. Burghouts, CGM. Snoek
In submission to CVPR 2023
Short version to appear in NeurIPS 2022 Workshop on Score-Based Methods and
NeurIPS 2022 Workshop Self-Supervised Learning Theory and Practice

Robust Scheduling with GFlowNets
DW. Zhang, C. Rainone, M. Peschl, R. Bondesan
In submission to ICLR 2023
Short version to appear in NeurIPS 2022 Workshop on ML for Systems

Unlocking Slot Attention by Changing Optimal Transport Costs
Y. Zhang*, DW. Zhang*, S. Lacoste-Julien, GJ. Burghouts, CGM. Snoek
To appear in NeurIPS 2022 Workshop on All Things Attention and
*NeurIPS 2022 Workshop Neuro Causal and Symbolic AI (**Oral**)*

Multiset-Equivariant Set Prediction with Approximate Implicit Differentiation
Y. Zhang*, DW. Zhang*, S. Lacoste-Julien, GJ. Burghouts, CGM. Snoek
International Conference on Learning Representations (ICLR), 2022.

Pruning Edges and Gradients to Learn Hypergraphs from Larger Sets
DW. Zhang, GJ. Burghouts, CGM. Snoek
In submission to LoG 2022

Set Prediction without Imposing Structure as Conditional Density Estimation
DW. Zhang, GJ. Burghouts, CGM. Snoek
International Conference on Learning Representations (ICLR), 2021.

Reviewing

2023 Conference on Computer Vision and Pattern Recognition (CVPR)
2022 International Conference on Learning Representations (ICLR)
2021 IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)
2020 Conference on Computer Vision and Pattern Recognition (CVPR)
2019 ACM Transactions on Multimedia Computing, Communications, and Applications (TOMM)

Teaching

Teaching assistant
2021 Computer Vision 1
2020 Applied Machine Learning
2019 Machine Learning 1, Applied Machine Learning

Other

Programming: Python, PyTorch, NumPy
Languages: English (fluent), German (native), Chinese (native)
Nationality: German