

Janek Haberer

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Summary

I am a final-year **PhD student** in Computer Science at Kiel University, Germany, specializing in the **design of efficient deep learning methods** in resource-constrained environments. My research areas include Edge AI, dynamic vision transformers, federated learning, and progressive image compression. I have **5 years of experience with 10 published papers** in peer-reviewed conferences and journals: **NeurIPS Main Conference, CVPR Main Conference, IJCV MobiSys, ICML Workshop, IEEE Access, CoNEXT Workshop, and EWSN Workshop**. Now seeking an industry research or Applied ML Engineer role where I can turn research about efficient ML systems into production systems that ship at scale.

Education

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|------------|---|-----------------------------------|
| PhD | Kiel University , Computer Science | Kiel, Germany |
| | <ul style="list-style-type: none">• Topics: Edge AI, Dynamic Vision Transformers, Federated Learning• Supervisor: Prof. Dr. Olaf Landsiedel (Hamburg University of Technology, Germany & Kiel University, Germany) | Nov 2021 – Fall 2026
(planned) |
| MSc | Kiel University , Computer Science, Overall Grade: 1.5 | Kiel, Germany |
| | <ul style="list-style-type: none">• Thesis: "Extending the Expressiveness of Meta-Structures In Heterogeneous Information Networks"• Supervisors: Prof. Dr. Matthias Renz & Christian Beth | Oct 2019 – Oct 2021 |
| BSc | Kiel University , Computer Science, Overall Grade: 1.8 | Kiel, Germany |
| | <ul style="list-style-type: none">• Thesis: "Clustering and Reprojection for Detecting Pylons in the Context of Autonomous Driving"• Supervisors: Prof. Dr.-Ing. Reinhard Koch & Lars Schmarje | Oct 2016 – Sept 2019 |

Experience

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| Graduate Researcher & Teaching Assistant , Kiel University | Kiel, Germany |
| <ul style="list-style-type: none">• Research as part of the project marispace-x with a focus on efficient deployment of deep learning in distributed resource-constrained environments• Research in the field of dynamic and efficient vision transformers• Published 10 papers in peer-reviewed conferences and journals: NeurIPS, CVPR, IJCV, MobiSys, ICML Workshop, IEEE Access, and others• Building models and pipelines as well as conducting experiments in PyTorch on a SLURM-based HPC cluster• Teaching labs in the courses 'TinyML (Edge AI)', 'Distributed Systems' and 'Computer Networks'• Supervised 10+ Bachelor and Master theses, with two leading to publications• Supervising an M.Sc. project on 'Networked and Distributed Systems' | Nov 2021 – present |
| Software Engineer , Fischer & Consultants | Kiel, Germany |
| <ul style="list-style-type: none">• Maintained and extended the company's custom ERP system• Involved in design and development of production-ready software with direct customer interaction• Created and maintained CI/CD pipelines in Azure DevOps | Mar 2020 – Sept 2021 |

Student Teaching Assistant, Kiel University

- Taught labs and graded homework in the courses ‘Algorithms and Data Structures’, ‘Operating Systems and Computer Networks’, ‘Computer Systems’, ‘Computer Science for Non-Majors’

Kiel, Germany
Oct 2017 – Aug 2019

Selected Publications

Ultra-Lightweight Adaptive Bitrate Deep Video Compression [↗](#)

A. Hojjat, **J. Haberer**, O. Landsiedel

IJCV: International Journal of Computer Vision, Volume 134, 2026

Slimmable ConvNeXt: Width-Adaptive Inference for Efficient Multi-Device Deployment [↗](#)

J. Haberer, J.E. Wilhelm, O. Landsiedel

Mobile AI workshop and associated challenges, 6th edition at *CVPR’26*

ThinkingViT: Matryoshka Thinking Vision Transformer for Elastic Inference [↗](#)

A. Hojjat, **J. Haberer**, S. Pirk, O. Landsiedel

CVPR’26: Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition & ES-FoMo III: 3rd Workshop on Efficient Systems for Foundation Models at *ICML’25*

HydraViT: Stacking Heads for a Scalable ViT [↗](#)

J. Haberer, A. Hojjat, O. Landsiedel

NeurIPS’24: Advances in Neural Information Processing Systems 37

MatchCurv: Communication-Efficient Decentralized Federated Learning in Heterogeneous Environments [↗](#) (Best Presentation Award)

H.P. Dussa, **J. Haberer**, O. Landsiedel

Workshop on Enabling Machine Learning Operations for next-Gen Embedded Wireless Networked Devices at *EWSN’24*

LimitNet: Progressive, Content-Aware Image Offloading for Extremely Weak Devices & Networks [↗](#)

A. Hojjat, **J. Haberer**, T. Zainab, O. Landsiedel

MobiSys’24: Proceedings of the 22nd Annual International Conference on Mobile Systems, Applications and Services

Machine Learning with Computer Networks: Techniques, Datasets and Models [↗](#)

A. Haitham, S. Pochaba, A. Boltres, D. Laniewski, **J. Haberer**, P. Leonard, R. Poorzare, D. Stolpmann, N. Wehner, A. Redder, E. Samikwa, M. Seufert

IEEE Access 2024

Awards & Scholarships

NeurIPS 2025 Top Reviewer [↗](#)

Oct 2025

Recognized for outstanding contributions to the peer review process

Best Presentation Award

Dec 2024

Awarded at the EMERGE workshop at *EWSN* 2024

Deutschlandstipendium

2018 – 2019 & 2020 – 2021

Scholarship for high-achieving and committed students

Skills

Programming: Python, C#, Java

Machine Learning & Data: PyTorch, TensorFlow, scikit-learn, OpenCV, NumPy, Pandas

Tools & Platforms: SLURM, Linux, Docker, Git, Azure Pipelines (CI/CD), MSSQL, Proxmox

Languages: German (native), English (fluent)