

Felix Wagner

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SUMMARY

Final-year PhD student at the University of Oxford, specializing in advancing algorithms for computer vision and image analysis. I have extensively worked on federated learning, test-time adaptation, multi-modal models, generative models, 3D segmentation, parameter-efficient fine-tuning, and out-of-distribution detection. I am excited about translating novel research into solutions for complex, real-world challenges.

EDUCATION

University of Oxford

Oxford, UK

PhD in Computer Vision, Department of Engineering; Supervisor: Prof. Konstantinos Kamnitsas Oct 2021 – Oct 2025

PhD Thesis: Advancing Federated Learning for Computer Vision in Medical Imaging

Vienna University of Technology

Vienna, Austria

Master of Science, Data Science; Final Grade: Pass with Distinction; GPA: 1.0 (highest poss. score)

Nov 2021

Master's Thesis: Recursive Rule Injection in Knowledge Graphs: Exploiting Logical Knowledge in Machine Learning

Bachelor of Science, Software & Information Engineering

Apr 2019

Bachelor's Thesis: Empirical Investigation of Meta-Interpretive Learning

University of Illinois at Urbana-Champaign

Illinois, USA

Education Abroad, Joint Study Scholarship

Aug 2018 – Dec 2018

TECHNICAL SKILLS

Programming Languages: Python, Java, C#, R, Prolog

Technologies & Tools: PyTorch, Microsoft Azure, LaTeX, Oracle/PostgreSQL Database, Git, SQL, Hadoop, Spark, Linux

SELECTED PUBLICATIONS

- [1] Felix Wagner, Wentian Xu, Primit Saha, Ziyun Liang, Daniel Whitehouse, David Menon, Virginia Newcombe, Natalie Voets, J. Alison Noble, Konstantinos Kamnitsas; “*Feasibility of Federated Learning from Client Databases with Different Brain Diseases and MRI Modalities*”, accepted for an **oral** presentation at **WACV 2025** [[Paper](#)] [[Code](#)]
- [3] Felix Wagner, Primit Saha, Harry Anthony, J Alison Noble, Konstantinos Kamnitsas; “*DisoN: Decentralized Isolation Networks for Out-of-Distribution Detection in Medical Imaging*”, 2025, **under review** [[Paper](#)]
- [2] Felix Wagner, Zeju Li, Primit Saha, Konstantinos Kamnitsas; “*Post-Deployment Adaptation with Access to Source Data via Federated Learning and Source-Target Remote Gradient Alignment*”, accepted for an **oral** presentation at the **MLMI** workshop at **MICCAI 2023** [[Paper](#)] [[Code](#)]
- [4] Primit Saha, Felix Wagner, Divyanshu Mishra, Can Peng, Anshul Thakur, David Clifton, Konstantinos Kamnitsas, J Alison Noble; “*F³OCUS - Federated Finetuning of Vision-Language Foundation Models with Optimal Client Layer Updating Strategy via Multi-objective Meta-Heuristics*”, accepted at **CVPR 2025 (Highlights)** [[Paper](#)]
- [5] Primit Saha, Divyanshu Mishra, Felix Wagner, Konstantinos Kamnitsas, J. Alison Noble; “*Examining Modality Incongruity in Multimodal Federated Learning for Medical Vision and Language-based Disease Detection*”, accepted at **AAAI 2025** [[Paper](#)]
- [6] Primit Saha, Divyanshu Mishra, Felix Wagner, Konstantinos Kamnitsas, J. Alison Noble; “*FedPIA--Permuting and Integrating Adapters leveraging Wasserstein Barycenters for Finetuning Foundation Models in Multi-Modal Federated Learning*”, accepted at **AAAI 2025** [[Paper](#)]

Master's Thesis

- Conducted in-depth research on the combination of symbolic AI and statistical machine learning methods for Knowledge Graphs in cooperation with the University of Oxford
- Developed an algorithm to inject recursive logical rules into Knowledge Graph Embeddings in **PyTorch**
- Investigated advantages of using non-Euclidean geometry for my proposed Embedding approach

WORK EXPERIENCE

Association for Protection of Creditors, Vienna, Austria

June 2020 – July 2021

Freelance Software Engineer

- Developed a software in **Python** to convert different input file formats into one unified format
- Reduced the time to process loan default data from 1 hour to 10 minutes

Medical University of Vienna, Vienna, Austria

Nov 2020 – Apr 2021

Interdisciplinary Research Project

- Performed in-depth statistical analysis and visualization of sleeping disorder data from a representative Austrian adult population, to understand key distributions and characteristics
- Applied **machine learning** models to identify significant predictors of chronic insomnia, extracting valuable insights to inform the interdisciplinary research project

Knorr-Bremse, Mödling, Austria

July 2019 – Aug 2019

Software Engineer Intern

- Implemented software features in **C#** for a public transportation system, which are used by public transportation companies throughout Austria
- Increased maintainability of the software by reducing the time of changing complex build configuration files from hours to minutes by creating CI/CD-Pipelines in Azure DevOps
- Implemented software patterns to maintain clean software design

Erste Bank, Vienna, Austria

July 2017; Oct 2017 – Dec 2017

Project Manager Assistant

- Collaborated with 10 team members in the Process Management Department on a large project for integrating a new software solution for the Erste Group throughout Austria
- Conducted Data Analysis of the software development progress over a 1-year period

SERVICE & TEACHING

- **Reviewer** for **TMI, MICCAI 2024**; recognized with an honourable mention as an **outstanding reviewer**
- **Teaching Assistant**, Optimization, 2023, University of Oxford
- **Teaching Assistant**, Databases, 2022, University of Oxford
- **Teaching Assistant**, Advanced Databases, Distributed Systems, 2019 & 2020, Vienna University of Technology

AWARDS & HONORS

Fully funded PhD via:

- **Angela-Krosik scholarship**, Anglo-Austrian Society
- **Oxford-Reuben scholarship**, Reuben Foundation, University of Oxford
- **Health Data Science CDT scholarship**, EPSRC UK

Joint-Study Scholarship, Vienna University of Technology: Selected among top-performing students university-wide for an exchange programme at the University of Illinois at Urbana-Champaign, based on academic success

VOLUNTEERING & SKILLS

Languages: German (native speaker), English (fluent)

Interests & Engagements: Elected president of the Oxford Austrian Society. Passionate guitar and bass guitar player in a band (Penguins In Suits), enthusiastic about composing new songs, passion for snowboarding