Sven Ligensa

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Education

12/2025 – Present	**Deep Learning, PhD**	University of Münster
	Advisor: Prof. Dr. Fabian Gieseke [profile] [contact]	
04/2023 – 11/2025	**Information Systems, MSc**	University of Münster (Grade: 1.0 ≈ GPA 4.0/4.0)
	Specialization in Data Science (ML, DL, Big Data, Data Management) and Computer Science	
09/2024 – 01/2025	**Semester Abroad, Erasmus+**	Universidad Politécnica de Madrid
10/2019 – 12/2022	**Information Systems, BSc**	University of Münster (Grade: 1.1 ≈ GPA 3.8/4.0)

Work Experience

12/2025 – Present — **Research Associate**, *University of Münster*, Machine Learning and Data Engineering group
Conducting research on *Explainable AI*.

03/2025 – 11/2025 &
10/2022 – 08/2024 — **Student Research Assistant**, *University of Münster*, MLDE group.
Co-authored and proofread papers, implemented models, created teaching materials.

04/2025 – 06/2025 — **Data Scientist Intern**, *CLAAS E-Systems GmbH*
Developed a pipeline to combine geospatial data with internal machine data and visualized results.
Trained various regression models on machine data using PySpark to reduce cost of sensors.
Contributed a classification model and dataset to internal AI toolkit and supported its adoption.

04 – 09/2024 &
04 – 09/2022 &
04 – 09/2021 — **Student Assistant**, *University of Münster*, Department of Information Systems
Tutor for 25 to 50 students in Data Structures and Algorithms.
Graded exercises and conducted weekly tutorials.

Selected Projects & Software

Master Thesis — Efficient Vision Attention Mechanisms for Dense Prediction [pdf] [code]

Seminar Theses — Understanding Building-Change Detection [pdf] [code], TinyML Research [pdf],
Understanding Grounding DINO and its Application to Aerial Imagery [pdf] [code]

Bachelor Thesis — Combining Deep Feature Extraction with Locality-Sensitive Hashing for
Reverse Image Search [pdf] [code]

Projects — Tree height estimation with various ML models [code], Flight delay prediction with Spark [code],
Responsive Dashboard written with Next.js [code], Visual Analytics application [code],
Vision Transformer from Scratch [code], Backpropagation from Scratch [code],
Handouts for Effective Studying course [code]

Scholarships & Awards

10/2021 – 09/2025	**Scholarship** *Deutschlandstipendium*, University of Münster [more information]
11/2023	**Award** for best thesis in applied computer science in 2023 [more information]
06/2023	**Award** for best Bachelor's Degree in winter term 2022/23 [more information]

Skills & Interests

Technical	Python (PyTorch, PySpark), Java, SQL, C, JavaScript, Git, GitHub, Linux, LaTeX
Languages	German (Native language), English (DAAD, C1)
Engagement	Arrangement and realization of course offering on Effective Studying ▶
	Participation in *Tutorenschulung Informatik* to enhance my teaching skills
Personal Interests	Reading (Philosophy, Psychology, Personal Growth), Teaching, Calisthenics