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: X.X ≈ GPA X.X/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 efficient DL architectures (Transformer optimization).
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, Java, SQL, C, JavaScript, Git, GitHub, Linux, LaTeX
Big Data	PySpark (Core, SQL, MLlib), Hadoop, Flink, HBase
Deep Learning	PyTorch, TensorFlow
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