

# Curriculum Vitae

## Constantin Kühne

Email | GitHub | LinkedIn | Google Scholar



## Education

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### **MSc Data Engineering** (2023 - present)

*Hasso Plattner Institute/ University of Potsdam*

- Exchange semester at Eindhoven University of Technology (2025)
- Relevant Coursework: Generative AI Models, Deep Learning, Machine Learning for Image Analysis, Reinforcement Learning & Algorithm Discovery, Knowledge Engineering, Advanced Machine Learning Seminars

### **BSc Wirtschaftsinformatik/ Business Intelligence** (2019 - 2023)

*Hochschule der Bayerischen Wirtschaft*

## Research Experiences

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### **Icewaffl: A Configurable Data Stream Polluter** (11/2024 - 04/2025)

*Hasso Plattner Institute*

- Research assistant role under Dr. Lisa Ehrlinger at the Information Systems chair of Prof. Dr. Felix Naumann
- Research and software development on a framework for data pollution via Apache Flink [Link]
- Evaluation of the effects of data errors on machine learning models

### **Beyond Balanced: Learning Static Search Trees with Tree-MDPs** (10/2024 - 04/2025)

*Hasso Plattner Institute*

- Research seminar under Alexander Kastius at the chair for Artificial Intelligence and Sustainability of Prof. Dr. Ralf Herbrich
- Designed a reinforcement learning framework (Tree-MDP + A2C) to construct static binary search trees for database indexing
- Achieved up to 40% faster average lookup times on skewed query distributions vs. traditional binary search

### **TrueSkill/MLPs Beyond Gaussians** (10/2024 - 03/2025)

*Hasso Plattner Institute* - Master's project under Prof. Dr. Ralf Herbrich - Research on more accurate factor graph inference via mixture models [Link]

## Industry Experiences

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### **System Engineer** (03/2023 - 08/2023)

*Infineon Technologies AG*

- Implementation and establishment of a Customer Data Platform
- Analysis and value creation out of customer data

### **Dual Studies at the Analytics Department** (09/2019 - 03/2023)

*Infineon Technologies AG*

- Development and operationalization of software solutions in the field of Data Science
- Creation of semantic search for technical documents via Elasticsearch and language models

## Technical Skills

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- Python (Advanced)
- SQL (Advanced)
- Java (Intermediate)
- PyTorch (Intermediate)
- Docker (Intermediate)
- Databricks (Intermediate)
- Elasticsearch (Intermediate)
- Tableau (Intermediate)
- Weights & Biases

## Awards

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- Deutschlandstipendium, 2023-2025

## Publications

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1. Christoph Schinninger et al. **Icewafi: A Configurable Data Stream Polluter**. 2025. <https://doi.org/10.48786/edbt.2025.64>

## Languages

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- German (C2), English (C1), French (A2)