

ABOUT

With a decade in the tech industry, I blend data science expertise with software engineering to build intelligent systems and streamline data processes. My approach leverages deep experience in machine learning and systems design, ensuring robust and scalable solutions. A background in psychology informs my approach to crafting user-centric solutions that resonate with business needs.

EXPERIENCE

- **Co-Founder and Software Engineer** Oct 2017 – Present
Johannsen + Krüger GbR Kiel, Germany
 - **Object Detection with Radar:** Executed a remote sensing project utilizing mmWave radar technology and deep learning, achieving detection over distances greater than 100 meters with high accuracy. Technologies used: Python (SciPy, NumPy, Matplotlib, TensorFlow) and C++.
 - **Full-Stack and Mobile App Development:** Developed a suite of apps that enabled efficient remote matrix display management, focusing on reliability and process efficiency. Technologies used: TypeScript (NestJS, Angular), PostgreSQL, IoT Cloud and Flutter/Dart in Android Studio.
- **Senior Data Scientist** Sep 2023 – Feb 2024
dc Services GmbH Kiel, Germany
 - **Solution Architecture for a Real-Time IoT Monitoring SaaS:** Architecture and proof of concept, including KNX integration, MQTT broker, Kafka streaming, multi-database setup (graph, relational, time series), analytics backend, and frontend components. Documentation using arc42 in Microsoft Loop. Technologies used: Python, C#, MQTT, Kafka, Neo4j, PostgreSQL, InfluxDB, and Svelte/TypeScript.
 - **Digital Twin Creation:** Built a digital twin prototype with data-driven room visualization: Extracted and transformed building metadata into graph-based schemas using ontologies like Brick and RealEstateCore, and combined this with time-series sensor data. Technologies used: Python (xml, rdflib, networkx), IFC, RDF/OWL/SHACL, SPARQL/Cypher, JavaScript/TypeScript, InfluxDB/Flux.
 - **Development of AI-Driven Apps:** Leveraged LLMs for product database creation and OpenAI API for free-text knowledge graph querying. Prototyped anomaly detection using SOTA models like Anomaly Transformer and TimesNet. Technologies used: Python (PyTorch, OpenAI), Svelte.
- **Backend Engineer** Dec 2021 – Dec 2022
lawpilots GmbH Berlin, Germany
 - **Infrastructure and Software Architecture:** Played a major role in the design and deployment of a resilient infrastructure, alongside significant contributions to software development. This led to a strong improvement in system reliability, operational monitoring, and performance. Technologies used: Python (FastAPI), AWS/OTC, Terraform, GitHub Actions, Datadog, and Sentry.
 - **Technical Product Ownership:** Gathered requirements and created architectural decision records, managed the product backlog and authored technical user stories, resulting in robust system architecture that aligns with stakeholder needs and industry standards. Technologies used: Jira, Confluence, arc42
- **Product Manager and Lead Data Scientist** Jul 2015 – Sep 2021
meteolytix GmbH Kiel, Germany
 - **Product Strategy and Management:** Worked on vision/strategy and backlog as Product Manager and Technical Lead. Coordinated with a team of 6 data experts.
 - **Data Science and System Architecture Development:** Developed a scalable forecasting system for large bakeries, integrating optimization algorithms, and establishing robust system/software architecture. Technologies used: R, C++, C#, SQL Server, XML, JSON.

EDUCATION

- **Research Master** 2013 – 2015
M.Sc. Social and Organizational Psychology, summa cum laude University of Groningen
- **Honours College** 2014 – 2015
"Leadership: Make the Difference!" University of Groningen