

# Jonathan Wrede

Email : contact@jonathanwrede.de

Mobile : +49 151 - 29499386



## EDUCATION

### TU Dortmund

- Bachelor Computer Science with Minor Statistics*

Germany, Dortmund

Oct. 2019 – Apr. 2023

### University of Muenster

- Master Computer Science Focus AI / ML / Statistics*

Germany, Muenster

Oct. 2023 – Oct. 2026

## EXPERIENCE

### Vilisto

- Machine Learning Engineer*

Germany, Hamburg

Jan. 2025 – Present

- **Battery health & runtime prediction:** Built a monthly evaluation/data pipeline for predicting battery capacity and runtime for IoT thermostats in buildings; unified production telemetry from multiple sources, produced versioned datasets, orchestrated with **Dagster**, and tracked experiments in **MLflow**.
- **Company data platform (ELT):** Hardened the internal warehouse for analytics/ML: PII-safe ingest, **dbt** models/tests/lineage, scheduled via **Dagster**, staged rollouts with ArgoCD, enabling consistent dashboards and models.
- **Fleet monitoring:** Created **Grafana** dashboards/alerts to detect offline or abnormal thermostats and data-quality issues, reducing time-to-detect field incidents.
- **Platform & tools:** Owned deploy/monitoring of data/ML services on **Kubernetes** (**Helm**, probes, logs/metrics) and shipped a lab **FastAPI+dashboard** app to visualize battery tests and auto-alert when rigs stop reporting.

### Saracus

- Big Data Consultant*

Germany, Muenster

Jan. 2023 – Dec. 2024

- **Cloud data platforms:** Designed and implemented scalable data warehouses on **Snowflake** (AWS), **Google BigQuery**, and **Azure Synapse**; developed automated **Python** ETL pipelines and reporting solutions.
- **Application development:** Built multiple **Streamlit** applications with OAuth SSO, Snowflake integration, and custom visualization layers; deployed via **Azure Container Apps** and **Azure Storage**.
- **Data governance:** Implemented a **Master Data Management** solution using **Ataccama** + **Azure**; automated glossary maintenance with **Azure Functions** and Python scripts.
- **Knowledge sharing:** Conducted technical interviews and authored blog articles on cloud analytics and Streamlit.

### Vilisto

- Working Student — Data Scientist*

Germany, Hamburg

Sep. 2021 – Oct. 2022

- **Machine learning models:** Extended and maintained presence-detection and energy-optimization models using **Python** and **scikit-learn**, improving accuracy and enabling automated heating control across thousands of IoT thermostats.
- **Data engineering and analytics:** Developed and optimized database schemas and pipelines in **PostgreSQL/TimescaleDB**; performed in-depth analyses using **SQL**, **pandas**, and **matplotlib** to improve device performance and data quality.
- **Software development:** Contributed to both backend (**Python**, **REST APIs**, **Docker**) and frontend (**TypeScript**, **Vue.js**) systems for data visualization and operational tooling.
- **Independent projects:** Planned and implemented a **PyQt** labeling tool for time-event detection and led internal programming workshops.

### TU Dortmund

- Teaching Assistant — Data Structures & Algorithms*

Germany, Dortmund

Feb. 2021 – Oct. 2021

- **Instruction:** Authored/graded programming assignments & staffed help hours for algorithms, data structures, and programming.

## PROJECT EXAMPLES

- **Anki Markdown Extension:** Adds Markdown rendering with live preview to Anki. **Tech:** JavaScript, Python, GitHub Actions

## PROGRAMMING SKILLS

- **Languages:** Python, SQL, JavaScript, Java
- **ML & Data Science:** LLMs, Time-series Modeling, scikit-learn, PyTorch, Pandas / Polars, dbt, MLflow, Grafana
- **Data Engineering:** PostgreSQL / TimescaleDB, Snowflake, BigQuery, Azure Synapse, Ataccama, MinIO
- **Infrastructure:** Dagster, Docker, Kubernetes, Helm, Terraform, GitHub Actions, ArgoCD, Prometheus
- **Application Development:** FastAPI, Streamlit, Vue.js, REST APIs
- **Cloud Platforms:** AWS, Azure, GCP