

# Johannes Michael Tauscher

Data Scientist and AI/ML Solutions Engineer

Data Scientist and AI/ML Solutions Engineer focused on problem-solution fit, optimization, and reliable systems. Strong in software engineering, machine learning, and data analysis, with end-to-end experience from framing to delivery.

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## PROFESSIONAL EXPERIENCE

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### Co-Founder, Technical Lead (Early Stage)

Nov 2024 – Dec 2025

*Raumdeuter GbR*

Leipzig, Germany

Building a modern communication and engagement platform for members and fans of clubs and associations to enable participation and engagement — a way to voice your opinion. I led the technical development: from conceptualization and architecture to implementation of the product as a customer-deployed MVP with the help of a 4-person development team and coordinated external IT partners.

- Delivered a customer-deployed MVP 0 → 1 in under 12 months on a €30k budget, targeting capital-efficient scale.
- Led product ideation workshops to align vision and product-solution fit roadmap.
- Architected ML/NLP pipelines (RAG, sentiment, topic clustering) as core AI/ML solution capabilities.
- Owned infrastructure and DevOps delivery, cutting release friction and improving onboarding for interns, contractors, and external partners.

**Technologies:** Docker, Docker Compose, Python, Bash, SpaCy, pytest, FastAPI, gRPC, Protocol Buffers, JavaScript, TypeScript, Next.js, React, Qdrant, RAG, MongoDB, MariaDB, SQL, LLMs, NLP/ML, nginx, Linux, CI/CD, GitHub, Docker Hub, git

### Mathematics Teacher (Substitute)

Nov 2022 – Jun 2023

*Rahn Education (Private School)*

Leipzig, Germany

Responsible for the supervision of talented pupils (groups of 4 to 8)

- Prepared customized university-level material to challenge and spark interest in mathematics.
- Initiated a pupil-led lecture series about Artificial Intelligence and its use cases.
- Taught basic principles of the mathematics behind 3D printing and coding.

**Technologies:** MS Teams, PowerPoint, Algebra, gcode

### Student Assistant

May 2019 – Jan 2021

*Child and Adolescent Psychiatry, Philipps University Marburg*

Marburg, Germany

Responsible for the validation and reproduction of earlier results of research as well as for programming Machine Learning algorithms in R to solve classification problems in the field of ASD diagnosis.

- Hyperparameter tuning for decision trees/random forests improved diagnostic performance by 10–15 percentage points; results supported 3 peer-reviewed publications (70 citations).
- Worked in a highly interdisciplinary manner with psychologists and medical doctors to understand the clinical background and implications of the data + explain the statistical methods to non-data scientists.
- Commended for a reliable, way of conveying statistical content; invited to stay on as a scientific researcher.

**Technologies:** R, ggplot2, tidyverse, Markdown, HTML, Machine Learning, Decision Trees, Random Forests, Statistics, Interdisciplinary Collaboration

## Intern, Data Analyst

Aug 2019 – Oct 2019

Westphalia DataLab GmbH

Münster, Germany

As a Data Analyst intern at Westphalia DataLab GmbH, I worked on a medical-diagnostics project combining 3D imaging and clinical data; developed and improved an experiment-tracking R/Shiny frontend and performed clinical-data analysis with Python and R.

- Enhanced experiment-tracking R/Shiny frontend accessing data in MongoDB/PostgreSQL to improve researcher workflow.
- Analyzed 3D imaging + clinical datasets in Python/R to surface diagnostic insights.
- Internship evaluation rated performance as outstanding.

**Technologies:** Python, PyTorch, Convolutional Neural Networks, R, data.table, tidyverse, R Shiny, MongoDB, PostgreSQL, SQL, Git

## EDUCATION

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### M.Sc Data Science, Faculty of Mathematics and Computer Science

Apr 2021 – Oct 2024

Leipzig University

Leipzig, Germany

- Overall Score: 1.7, personal focus on advanced statistics, Machine Learning, data privacy, LLMs
- Master's Thesis (1.1): Neural Machine Translation with Transformers - Leveraging the Pivot Technique for Low-Resource Language Pairs

### B.Sc. Data Science, Faculty of Mathematics and Computer Science

Oct 2017 – Mar 2021

Philipps University Marburg

Marburg, Germany

- Bachelor's Thesis (1.7): Multidimensional Data Exploration and Visualization of Membrane Proteins Attributes
- Curriculum focuses on mathematics, statistics, computer science and programming

### B.A. Marketing and Technical Business Administration

Mar 2012 – Oct 2017

HAW Hamburg

Hamburg, Germany

- Bachelor's Thesis (1.7): Use of Linear Discriminant Analysis as an alternative to tree analysis - methodological evaluation and exemplary implementation using a survey on the success of movies.
- Curriculum focuses on marketing, engineering and business administration

## TECHNICAL SKILLS

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**Programming Languages:** Python, Bash, R, Java, JavaScript, TypeScript, SQL

**Backend & DevOps:** noSQL, Docker, gRPC, MongoDB, MariaDB, PostgreSQL, Qdrant, nginx, CI/CD, FastAPI, Docker Compose

**Analysis, ML & AI:** LLMs, NLP, Machine Learning, R Shiny, SPSS, Statistics, SpaCy, RAG, Algebra, Decision Trees, Random Forests, PyTorch, pandas, NumPy, scikit-learn, SentencePiece, OpenNMT-py, Convolutional Neural Networks, matplotlib, ggplot2, tidyverse, data.table

**Web & Creative:** Next.js, React, Adobe Photoshop, HTML, CSS

**Tools & Systems:** git, Linux, Excel, PowerPoint, MS Office, MS Teams, Miro, Business Model Canvas, Lean Startup, VSCode,  $\LaTeX$ , pytest, Protocol Buffers, GitHub, Docker Hub, gcode, Markdown