

# MORITZ WILKSCH

## DATA SCIENTIST

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>\_ <https://github.com/moritzwilksch>

## EDUCATION

**University of Potsdam** *M.Sc. Business Informatics and Digital Transformation* 10/2019 - 09/2022

- Specializing in data science and machine learning (current grade: 1.1, GPA: 4.0)
- Relevant coursework: Data Science, Machine Learning I & II, Deep Learning, Experiment Design, Big Data Systems, Computational Statistics, Advanced Research Methods, Social Media & Business Analytics Research Project
- Thesis: developed and published a financial market sentiment analysis model by training logistic models, SVMs, RNNs, CNNs, Transformers, and BERT-based models on a custom dataset

**Duke University** *Master in Interdisciplinary Data Science* 07/2021 - 11/2021

- Visiting graduate student, semester GPA: 4.0
- Relevant coursework: Statistical Modeling, Data Engineering, Natural Language Processing

**University of Potsdam** *B.Sc. Business Informatics* 10/2016 - 10/2019

- Final grade: 1.4, GPA: 3.96

## PROFESSIONAL EXPERIENCE

**Open Source Development** 02/2022 - Present

- Contributed to *scikit-learn* and *polars*, a fast data frame library for Rust and Python
- Creator and maintainer of *pyFin-sentiment*, an NLP library for financial market sentiment analysis in Python

**Freelance Work** 10/2019 - Present

- Data-driven consulting project at a small local bistro
- Reduced cost and improved efficiency by restructuring menu, staffing schedule, and kitchen layout based on transactions data collected from the cash register

**Internship** *Consilio GmbH in Munich (SAP-Consultant)* 09/2018

- Organized user stories and modeled business processes for a project with a DAX30 customer

**Teaching Assistant** *University of Potsdam Institute for Computational Science* 10/2017 - 07/2021

- Taught groups of 40-70 students in “Fundamentals of Programming” and “Practical Programming”

**Private Tutor** *GiRA tutoring service* 05/2016 - 07/2021

- Tutored groups of 3-5 students in the subjects math, computer science, and economics

## SKILLS AND LANGUAGES

### Technical Skills

- 3+ years of experience in using the Python stack for **data processing** (Pandas, NumPy, Polars, SpaCy), **machine learning** (Scikit-Learn, Keras, PyTorch, XGBoost, LightGBM, HuggingFace), **statistics** (SciPy, PyMC3), **data visualization** (Matplotlib, Seaborn, GeoPandas), **orchestration & distributed computing** (Prefect, Ray, Dask), **web scraping**, development of **microservices** (FastAPI, Flask), and **experiment tracking** (MLFlow)
- Proficient in using SQL, Apache Spark, MongoDB, DynamoDB, and R
- Experience with Git, Docker, CI/CD best practices, and using IaaS and PaaS services on AWS and GCP
- Basic knowledge of Neo4j, Elasticsearch, Java, and C

### Languages

- Fluent in German (native speaker) and English (Level C1, TOEFL: 117), basic knowledge of French

## ACHIEVEMENTS

**Publication** *The Predictive Power of Social Media Sentiment for Short-Term Stock Movements* 02/2022

- Conference contribution published at “Internationale Tagung Wirtschaftsinformatik” (WI22)
- Built and compared social sentiment machine learning models to forecast day-ahead stock returns

**AWS Certified Machine Learning Specialist** 12/2021

- Demonstrated proficiency in building and deploying end-to-end machine learning projects on the AWS cloud

**“Deutschlandstipendium” Scholarship** 2018 - 2022

- Scholarship for high-achieving and socially committed students, sponsored by Volkswagen AG