Dr. rer. nat.

Christian Staudt

data scientist · machine learning engineer

Hamburg, Germany ☑ mail@clstaudt.me http://clstaudt.me



data mining · machine learning · artificial intelligence · big data

I am a data scientist with 8 years of experience as a freelancer in diverse industries. My mission is enabling my clients and the teams I work with to implement data-driven innovation, making the connection between use cases, algorithms, and the appropriate tech stack. I am mainly focused on machine learning from prototype to deployment, but my work also regularly involves optimization and data mining.

Focus

Data-driven Innovation – end-to-end

To make data-driven innovation succeed, I work with my clients in all phases of a data science project – including business case discovery, structuring of requirements, selecting appropriate methods, algorithms and tech stacks, and finally deployment and evaluation in production.

Full Stack Data Science

Full stack refers to the software engineer who is familiar with both the user-facing side and the backend infrastructure of software. Similarly, the full stack data scientist understands the analytics methods as well as user interaction and infrastructure needed to put it all into practice – a fitting description of my typical role in data science projects. I am especially interested in establishing software engineering best practices in the field of data science.

Pragmatic AI

Artificial Intelligence is currently both overhyped and underrated. We have seen some remarkable progress in AI capabilities, yet many companies struggle to put intelligent systems to work on everyday use cases. Work with me to go beyond the hype and connect business cases to technology – because many valuable, pragmatic cases for self-learning systems are within reach for your enterprise.

Education

- 2012-2016 **Karlsruhe Institute of Technology (KIT)**, PhD candidate at the Institute of Theoretical Informatics/Parallel Computing Group
 - Doktor der Naturwissenschaften (≈ PhD) magna cum laude in Computer Science, awarded in June 2016 for the algorithm engineering-focused dissertation Algorithms and Software for the Analysis of Large Complex Networks
- 2005-2012 Karlsruhe Institute of Technology (KIT), computer science studies
 - subjects: algorithm engineering, software engineering, compiler construction, parallel programming, advanced object-oriented programming, physics, sociology
 - **Diplom** (≈ Master's degree)

Career

2016 - Freelance Data Scientist

- contract roles in Data Science see section Projects & Roles
- 2015 Visiting Researcher, University of Illinois, Chicago / Clemson University
 - 2 month research visit funded by a grant from the Karlsruhe House of Young Scientists
- 2012 2016 **Researcher**, at the Institute of Theoretical Informatics/Parallel Computing Group (Prof. Henning Meyerhenke), KIT
 - research focus: algorithm engineering for the analysis of large complex networks
- 2007 2010 **Student Research Assistant**, at the Institute of Theoretical Informatics, research group Algorithmics I (Prof. Dorothea Wagner), KIT
 - assistance in algorithmics research and scientific software development

Freelance Projects & Roles

Aug 2023 - Data Scientist: Research & Development, Beiersdorf

Jan 2025



Consulting and development on multiple machine learning and AI projects utilizing...

- cognitive search
- generative AI for document-based workflows
- computer vision & predictive analytics on laboratory data

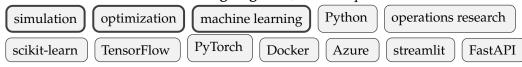
Jan 2023 - Artificial Intelligence Advisor, Limebit

machine learning deep learning artificial intelligence

– project development for AI applications: medical data mining & AI, AI for renewable energy control

Jun 2021 - Jul Data Scientist / Machine Learning Engineer, Flaschenpost

2022



- the planning and steering data science team improved the operations and supply chains, through simulation, forecasting and optimization
- project lead for innovative solutions based on machine learning and optimization

Oct 2020 - Jul Data Scientist / Data Engineer, Henkel



- machine learning for sustainability reporting & product life cycle assessment
- model and data pipeline engineering
- Jun 2020 **Innovation Consultant / Technical Writer**, Andre Peters & Robin Peters Technovationen

artificial intelligence machine learning software engineering

- securing funding of innovative technology projects (software & AI) for small and medium-sized enterprises

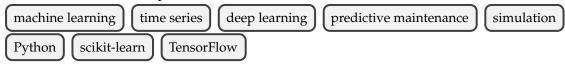
Apr - Oct AI Consultant/Architect, Chami Consulting / SysDICE GmbH

2020

artificial intelligence NLP conversational AI graph databases

TensorFlow Rasa SpaCy neo4j

- enabling the adoption of model-based systems engineering with artificial intelligence
- consulting, solution design and software architecture for the MBSE tool SysDICE
- Sep 2017 Data Scientist, Point 8 (point-8.de)



- research and development on machine learning in industrial applications, e.g. time series analytics, time series forecasting and anomaly detection
- for **Deutsche Bahn**: analysis of graph-, geo- and time series- data from rail traffic; applying simulation to predictive analytics
- for **client in mechanical engineering sector**: data mining and predictive maintenance on sensor data from IoT applications
- Nov 2018 **Data Scientist**, denkbares GmbH (denkbares.com) for Fahrzeugwerk KRONE Jun 2019 (www.krone-trailer.com), analytics application

Python big data dashboards analytics application DevOps plot.ly Dash

 design, development and deployment of a data analytics application for insight into customer demand and production process

Feb 2018 - Data Scientist, PTV Group (ptvgroup.com), machine learning on traffic data

May 2018

Python

Spark

big data

geodata

time series

machine learning

- applying machine learning to time series and geodate from road traffic analysis
- from classification model engineering to a deployment strategy in a cloud environment.

Oct 2017 - Data Scientist, Deutsche Telekom, multiple data science projects Apr 2018 Python machine learning predictive analytics process mining big data Spark supporting Deutsche Telekom's think tank dedicated to improving customer service through advanced analytics data mining, reporting and data visualization - machine learning for predictive analytics and root cause analysis - process mining Mar 2017 - Data Scientist, Boehringer Ingelheim, data-driven measurement of marketing efforts Jun 2017 Python big data - developing a prototype for data-driven measurement of global marketing campaign performance across channels Training & Teaching Apr 2018 -Data Science Instructor, Point 8 for clients including Heise iX, ExperTeach, Innogy, Sasol, Bayerischer Rundfunk, Amprion Python big data statistics machine learning deep learning - concept and development of a modular data science curriculum for industry trainings - taught over 25 courses from beginner to advanced level Oct 2022 - Artificial Intelligence Instructor, ExperTeach machine learning deep learning artificial intelligence TensorFlow PyTorch custom trainings on artificial intelligence and their industry use cases Feb - Apr Artificial Intelligence Instructor, Wild Code School 2021 machine learning deep learning reinforcement learning TensorFlow Python authorship, teaching & coaching for the artificial intelligence curriculum - computer vision, anomaly detection, sequence models, time series forecasting, reinforcement learning Workshops 2025 Time Series Forecasting: Machine Learning for Prediction and Decision Making, Point 8 2025 Computer Vision with Deep Learning, Point 8 2025 Conversational AI: Developing Intelligent Chatbots and Virtual Assistants, Point 8 2025 Computing for Engineers with Julia, Point 8 2024 The AI Dojo: Generative AI & Large Language Models 2024 Data Analysis & Machine Learning with Python, Point 8 2024 Computing for Engineers with Julia, Point 8 / Amprion, x4 2023 The AI Dojo, https://www.ai-dojo.dev 2022 Latest Developments in Artificial Intelligence, ExperTeach / T-Systems 2021 Big Data Analysis - End to End, Point 8 / ExperTeach 2020 **Deep Learning with TensorFlow / PyTorch**, Point 8 / ExperTeach, x3

- 2020 Big Data Analysis with PySpark, Point 8 / Heise iX Trainings
- 2020 **Software Engineering**, Hochschule Fresenius
- 2018 2020 Big Data Analysis with Python and PySpark, Point 8 / ExperTeach, x9
 - 2020 Big Data Analysis with PySpark, at data2day conference
 - 2020 Machine Learning for Time Series Forecasting, at ML Essentials Heidelberg
 - 2019 Data Analysis and Machine Learning with Python, Point 8 / ExperTeach, x6
 - 2019 Advanced Machine Learning, Point 8 / ExperTeach, at Telekom Technical Security Summit, x3
 - 2018 Machine Learning with PySpark, Point 8 / ExperTeach, x2

Open Source

2017 - 2023 Author / Instructor, Data Science Learning Paths, Point 8



- Practical data science courses from basic to intermediate
- 2021 2022 Lead Developer / Open Source Maintainer, Tuttle, Prototype Fund



- The Prototype Fund supports prototyping innovative open source projects.
- Tuttle, an free software project, is building an application for the time, finance and paperwork management needs of freelancers
- 2012 2016 **Principal Researcher / Developer & Maintainer**, *NetworKit*, Karlsruhe Institute of Technology



- *NetworKit* is an open-source toolkit for large-scale network analysis.

Speaking

- 2024 AI on a Microbudget: Methods of Machine Learning Miniaturization, at PyCon Italia, Florence
- 2019 **Machine Learning for Time Series Forecasting**, at data2day conference Ludwigshafen
- 2019 **Scaling Data Analysis and Machine Learning with PySpark**, at buildingIoT conference, Cologne
- 2017 PyCon.DE Karlsruhe, The Python Ecosystem for Data Science: A Guided Tour
- 2017 PyData Warsaw, The Python Ecosystem for Data Science: A Guided Tour

Volunteering

- 2021 **Program Committee Member**, *PyData Global*, pydata.org, The conference provides a forum for the international community of users and developers of open source data analysis tools
- 2020 2021 **Co-Organizer**, *PyData Hamburg*, pydata.org, Bi-monthly meetups with talks on innovation with open source data tools

2020 -	Podcast Producer / Editor , <i>Scientists for Future Podcast</i> , s4f-podcast.de, conversations with researchers about a sustainable future

Bibliography academic publications <u>DBLP</u>

Languages

German first language
English bilingual proficiency
Italian limited working proficiency
Spanish limited working proficiency