Resume – Satadal Santra

Personal Data & Contact

Name	Satadal Santra	**GitHub**	github.com/SatadalS99
Address	44789 Bochum, Germany	**Portfolio**	satadals.dev
LinkedIn	linkedin.com/in/satadals	**Place of Birth**	Kolkata, India
		Nationality	Indian

M.Sc. student in Data Science at TU Dortmund, seeking a working student or internship position in statistical data analysis, statistical modeling, or master data. Eight years of professional experience with SAP/ERP master data and MIS reporting at a state-owned energy utility, complemented by practical project work with data science methods. English C1, German B1 and continuously improving through daily use at work.

Education

2021 – present **M.Sc. Data Science**, TU Dortmund University, Dortmund, Germany
- Expected graduation 2027

2009 – 2012 **Master of Computer Applications (MCA)**, West Bengal University of Technology, Kolkata, India
- Final grade: 2.3

2006 – 2009 **Bachelor of Computer Applications (BCA)**, West Bengal University of Technology, Kolkata, India
- Final grade: 2.2

Projects

04.2026 – 07.2026 **Demand forecasting with DHL data**, team seminar project, Faculty of Statistics, TU Dortmund
- Forecast weekly parcel volumes across 37 customer-product lines for capacity planning; hypothesis tests showed that the two product lines within customers are statistically independent, justifying separate models per line.
- Benchmarking of 14 candidate models per line (Croston, ARIMA, Holt-Winters, ML, robust shrinkage) – 518 model runs – under 7-fold rolling time-based cross-validation.
- Model-specific selection per line reduced the average forecast error by approx. 14 % compared to the best single global rule.

04.2026 – 07.2026 **Customer segmentation with Picnic data**, team seminar project in collaboration with Picnic Germany
- Analysis of churn behavior of new customers on a $5{,}722 \times 23$ weekly trajectory matrix.
- Applied K-means with row-wise min-max normalization, so clusters formed based on the shape of the behavioral curve rather than order volume; K was validated using five internal metrics.
- Identification of three behavioral cohorts, including an 11-% "Peak-and-Fade" group worth 6.5 times more per customer than the segment that absorbs most of the retention budget.

10.2025 – 10.2025 **Analysis of German wholesale and retail trade**, independent data science project
- Designed an end-to-end data pipeline with Python (Pandas, NumPy) to independently clean, resolve structural discrepancies, and normalize 15 years of raw official enterprise data from the Federal Statistical Office of Germany (Destatis).
- Conducted longitudinal statistical analyses to identify macroeconomic trends; determined an average industry profitability benchmark of 28.69 % over the period 2005–2020.
- Comprehensive exploratory data analysis (EDA) to isolate productivity gaps, revealing clear economies of scale: large establishments (20+ employees) achieved more than twice the median labor productivity of micro-enterprises (268 € vs. 116 € per person).

02.2024 – 03.2024 **Access to healthcare in Sudan**, volunteer project, Omdena Sudan Chapter
- Open-source challenge with a distributed international team to build an ML system for forecasting disease outbreaks and mapping the accessibility of healthcare facilities.
- Contributed to data collection and preprocessing of historical and geospatial health datasets, as well as exploratory analysis to identify high-risk disease trends and regional access barriers.

Work Experience

09.2022 – present **Student part-time jobs**, jobvalley / Zenjob / SYNERGIE Personal, various locations, Germany
- Shift-based assignments alongside full-time M.Sc. studies; German-speaking work environment in changing teams, at changing locations, and with changing processes.

01.2013 – 03.2021 **Office Executive**, West Bengal State Electricity Distribution Company Ltd., Kolkata, India
- Maintained extensive enterprise master data in company-wide SAP and ERP systems of a state-owned utility, ensuring data integrity and compliance.
- Extracted, compiled, and analyzed MIS data for recurring performance reports for management.
- Conducted billing and revenue analyses and monitored customer consumption metrics to identify trends, anomalies, and growth opportunities.
- Supported governance initiatives and corporate audits with structured, audit-proof datasets.

12.2010 – 01.2013 **Online Math Tutor**, One To One Tutor India Pvt. Ltd., Kolkata, India
- Provided online math tutoring for students in the USA; adapted lesson plans to individual learning styles.

Skills

Software and Programming
- Python – intermediate knowledge (pandas, NumPy, scikit-learn, statsmodels, SciPy, matplotlib, Streamlit)
- SQL / PostgreSQL – intermediate knowledge
- Git, Jupyter, VS Code, Linux, Claude(code) – intermediate knowledge
- Docker, FASTAPI, ETL, CI/CD – basic knowledge
- SAP / ERP (master data, MIS reporting), stakeholder reporting, primary point of contact – advanced knowledge
- Analytical & Structured Working Style: Independent problem-solving, strong understanding of data quality & validation.
- Team & Communication: Experienced in collaborating in international teams, high adaptability & openness to feedback.

Methods
- Statistical data modeling, statistical data analysis, exploratory data analysis, data visualization
- Machine learning, Big Data, LLM, AI
- Time series forecasting, Monte Carlo simulation, Bayesian application

Further Education (Udemy Certificates)
- AWS Certified Machine Learning Specialty 2025 – Hands On!
- SQL & Database Design A-Z: MS SQL Server + PostgreSQL
- AI Engineer Core Track: LLM Engineering, RAG, QLoRA, Agents

Languages
- German – Intermediate (B1),
- English – Advanced (C1), business fluent in spoken and written

Interests & Volunteering

- Sports: adventure sports
- Volunteering: Omdena – collaborative data projects for social causes; also active as a volunteer outside of data work.

Bochum

Signed electronically
Satadal Santra