

Curriculum Vitae - Satadal Santra

Personal Details & Contact

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Marital status	single	Portfolio	satadals99.github.io/portfolio
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M.Sc. Data Science student at TU Dortmund seeking a **Werkstudent or internship position in Statistical Data Analysis, Statistical Modeling or in Master data**. Eight years' professional experience with SAP/ERP master data and MIS reporting at a state power utility, now paired with hands-on project work in data science methods. English C1, German B1 and improving through daily working use.

Studies

2021 - till now	M.Sc. Data Science , TU Dortmund University, Dortmund, Germany Expected completion 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 testing established that the two product lines are statistically independent within customers, justifying separate models per line. - Benchmarked 14 candidate models per line (Croston, ARIMA, Holt-Winters, ML, robust shrinkage) - 518 model runs - under 7-fold rolling time-based cross-validation. - Per-line model selection reduced average forecast error by approx. 14 % versus the best single global rule.
04.2026 - 07.2026	Customer Segmentation with Picnic Data , team seminar project in cooperation with Picnic Germany - Analysed new-customer drop-off behaviour on a 5.722 x 23 weekly-trajectory matrix. - Applied K-Means with row-wise min-max normalisation so that clusters formed by the <i>shape</i> of the behavioural curve rather than by order volume; K validated against five internal metrics. - Identified three behavioural cohorts, including an 11 % "peak-and-fade" group worth 6,5x more per customer than the segment absorbing most of the retention budget.
10.2025	German Wholesale & Retail Trade Analysis , independent data science project - Architected an end-to-end data pipeline using Python (Pandas, NumPy) to independently clean, resolve structural discrepancies, and normalize 15 years of unprocessed official Destatis enterprise records. - Conducted longitudinal statistical evaluations to identify macroeconomic trends, establishing an overall average industry profitability benchmark of 28.69% across the 2005–2020 timeframe. - Executed comprehensive EDA isolating productivity gaps, revealing clear economies of scale where large operations (20+ employees) achieved more than double the median labor productivity of micro-operations (€268 vs. €116 per person).

- 02.2024 - 03.2024 **Healthcare Accessibility in Sudan, volunteer project**, Omdena Sudan Chapter
- Open-source challenge with a distributed international team building an ML system for disease outbreak forecasting and healthcare facility accessibility mapping.
 - Contributed data collection and preprocessing of historical and geospatial health datasets, plus the exploratory analysis identifying high-risk disease trends and regional access barriers.

Professional Experience

- 09.2022 - present **Part-time student jobs**, jobvalley / Zenjob / SYNERGIE Personal, various sites, Germany
- Shift-based assignments alongside full-time M.Sc. studies; German-language working environment across changing teams, sites and processes.
- 01.2013 - 03.2021 **Office Executive**, West Bengal State Electricity Distribution Company Ltd., Kolkata, India
- Maintained large-scale enterprise master data in corporate SAP and ERP systems for a state utility, safeguarding data integrity and compliance.
 - Extracted, compiled and analysed MIS data into recurring performance reports for senior stakeholders.
 - Ran billing and revenue analysis, monitoring customer usage metrics to identify trends, anomalies and growth opportunities.
 - Supported governance initiatives and corporate audits with structured, auditable data records.
- 12.2010 - 01.2013 **Online Mathematics Tutor**, One To One Tutor India Pvt. Ltd., Kolkata, India
- Delivered online mathematics tutoring to U.S. students, adapting lesson plans to individual learning styles.

Skills

SOFTWARE AND PROGRAMMING

- Python - intermediate proficiency (pandas, NumPy, scikit-learn, statsmodels, SciPy, matplotlib, Streamlit)
- SQL / PostgreSQL - intermediate proficiency
- Git, Jupyter notebook, Google colab, VS Code, Linux - good proficiency
- Docker, FASTAPI, ETL, CI/CD - basic proficiency
- SAP / ERP (master data, MIS reporting), stakeholder reporting, primary contact - advanced proficiency
- Soft skills- Teamwork skills, receptiveness to feedback, adaptability, time management, problem-solving skills, analytical thinking, ability to work independently, structured approach, motivation

METHODS

- Statistical data modeling, Statistical data analysis, Exploratory data analysis, Data Visualisation
- Machine learning, Big Data, LLM, AI
- Time series forecasting, Monte Carlo simulation, Bayes application

FURTHER TRAINING (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

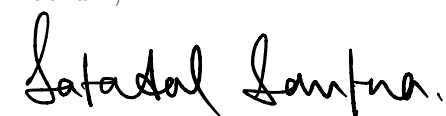
LANGUAGES

- German - Intermediate (B1) , Intermediate in written and spoken
- English - Advanced (C1) , Business fluent in written and spoken

Interests & Volunteering

- Sports: Adventure sports
- Volunteering: Omdena open-source AI challenges - collaborative data projects for social causes; also active as a volunteer outside of data work.

Bochum,



Satadal Santra