

Markus SAUERBERG



PROFIL

Analytical-thinking data scientist with extensive experience in quantitative research and statistical methods. Proficient in R, Python, and basic knowledge in SQL, with a proven track record in developing machine learning models for predictive analytics and NLP-based text classification. Strong skills in data visualization, dashboard development, and effectively presenting complex insights.

CONTACT

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PERSONAL INFORMATION

Citizenship: **German**
Marital Status: **Single**
Languages: **German** (native), **English** (fluent)

SKILLS

- R, Shiny, Plotly, Markdown
- Python, scikit-learn, pandas, numpy
- SQL Oracle (basic knowledge)
- MS Word, Excel, PowerPoint
- Linux (Ubuntu)
- Github/Gitlab and Git
- VScode, PyCharm, RStudio, Emacs

PROFESSIONAL EXPERIENCE

DATA SCIENTIST at Hamburg Cancer Registry (HKR), City of Hamburg, Hamburg **2024–present**

- ◇ Permanent position at HKR since 2025
- ◇ Within the project AI-CARE I collaborated with the Institute for Applied Medical Informatics at UKE to develop an machine learning model based on the HistGradientBoostingClassifier algorithm for detecting cancer recurrences using cancer registry data
- ◇ Additionally, I developed a script to extract substances from free-text fields, which is now used nationwide by the Center for Cancer Registry Data, Link: github.com. We plan to publish the functions as a Python package on PyPI. Also, the product is already available as an app using FastAPI (github.com)
- ◇ In collaboration with the German Research Center for AI (DFKI), we developed a data pipeline to integrate and harmonize state-specific cancer registry data across Germany

POSTDOCTORAL RESEARCHER at the Federal Institute for Population Research (BiB), Wiesbaden, Germany. **2022–2024**

- ◇ Applying and developing statistical and mathematical methods, such as forecasting mortality rates, Link: nature.com or decomposing mathematically a popular population health indicator, Link: read.dukepress.edu

PHD RESEARCHER at the Vienna Institute of Demography (VID), Austrian Academy of Sciences, Vienna, Austria. **2017–2021**

- ◇ Scientific work in an international environment

EDUCATION

PHD IN SOCIAL AND ECONOMIC SCIENCES Vienna University of Economics and Business (WU). **2018–2021**

- ◇ Thesis: *Assessing population health in Europe: methodological issues and empirical findings* (passed with highest honors)

EUROPEAN DOCTORAL SCHOOL OF DEMOGRAPHY (EDSD) Sapienza University, Rome. **2016–2017**

- ◇ Statistical and mathematical models; parametric models, survival analysis, matrix methods, and microsimulation

MSC IN DEMOGRAPHY University of Rostock. **2014–2016**

- ◇ Focus on quantitative data analysis using regression models and hypothesis testing

BA IN SOCIAL SCIENCES University of Rostock. **2011–2014**

- ◇ Tutor for the course *Introduction to SPSS*

ADDITIONAL ACHIEVEMENTS

MACHINE LEARNING IN PRODUCTION

- ◇ Certificate provided by DeepLearningAI (online)

MULISTATE MODELS: LIFE COURSE ANALYSIS FROM EVENT HISTORIES AND PANEL DATA

- ◇ Certificate provided by Max Planck Institute for Demographic Research, Rostock, Germany

TALKS AT (INTER)NATIONAL CONFERENCES

- ◇ For instance, talk at DVMD spring symposium on artificial intelligence: why? in Duesseldorf, see program at: dvmd.de

MEDIA

- ◇ Interview on gender difference in mortality in 'Zeit Online', available at: zeit.de