

Theo Karl Wladislav Osterhaus

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Cologne, Germany

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Profil

M.Sc. Economics student at the University of Cologne (WiSo) specialising in **Market Design & Behaviour**, with a strong methodological foundation in econometrics, causal inference and machine learning. Experienced in reproducible empirical analysis using R and Python and in scientific writing with L^AT_EX. Strong communication skills developed through teaching, leadership roles, and public engagement.

Education

- 2025–present **University of Cologne (WiSo)**
Master in Economics
Specialization: Market Design & Behavioural Economics
- 2020–2025 **University of Bonn**
B.Sc. Economics
Main study focus: Quantitative Economics, Economic Policy, Markets & Strategies, Companies and Financing.
Bachelor's Thesis: *Comparison of Discriminant Analysis and Random Forests in Classification*
Methods: LDA/QDA, Random Forests, stratified k-fold cross-validation, ROC/AUC and F1.
- Relevant coursework: Applied Data Analytics, Computational Statistics, Econometrics, Using Data to Address Societal Challenges, Behavioural Finance, Advanced Corporate Finance, Financial Markets and Institutions, Mathematical Methods of Economics.

Work Experience & Internships

- 2023–present **Christoph Osterhaus Heizung Sanitär**
Office Manager, part-time
- 2024 **Skischule Kitzbühel — element3**
Ski instructor
Taught and supervised groups across age and skill levels, delivered safety and technique training.
- 2020–2023 **Christoph Osterhaus Heizung Sanitär**
Office Manager - full-time
Spearheaded PDS CRM/ERP system rollout and user training, designed standardised reporting templates and financial dashboards, maintained financial records and prepared monthly/quarterly reports, prepared liquidity overviews and budget controls. Directly contributed to a 120% EBT increase (2021–2022) through optimized workflows and enhanced financial controls

Certificates

2025 **International English Language Testing System (IELTS)**
C1 (7.0 points) - British Council Germany

2023 **Ski Instructor Certification**
Tyrolean Ski Instructors Association

Technical Skills

- **Programming & Analysis:** R (tidyverse, caret, randomForest), Python (pandas, scikit-learn)
- **Methods & Modelling:** Econometrics (Regression, Panel Methods, Instrumental Variables), Machine Learning (Random Forests, Hyperparameter Tuning), Model Evaluation (ROC/AUC, F1-score, Precision/Recall)
- **Data Visualization:** ggplot2, Power BI, R Markdown
- **Reporting & Academic Writing:** LaTeX, R Markdown, MS Word
- **Databases:** SQL (Basic)
- **Software:** Microsoft Office 365 (Excel, PowerPoint, Outlook), CRM/ERP Systems (PDS)

Languages

- **English (C1):** Fluent in speaking, writing, and reading (IELTS 7.0)
- **German (Native)**

Memberships & Extracurricular Services

2025–present **Bonn Econ Alumni Association e.V.**
Member and built and maintained the association's website
<https://bonn-econ-alumni.de>

2020–present **Volunteer Fire Department, Königswinter NRW**
– Active Firefighter to respond to emergencies, providing critical support in high-pressure situations.
Volume: 143 deployments in 2024, mainly technical assistance in traffic accidents.
– Youth Leader, Trainer and Organiser: Responsible for lesson planning, group exercises, youth education, safety training, and public relations.
– Serves as Treasurer of the youth fire brigade.

2022–2025 **Student Engagement**
Student Representative (FSV)
Advocated for student interests and concerns within university committees, organised student events and initiatives to enhance campus life.