Markus Köfler

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Experience

BAWAG Group — Vienna, Austria
Marketing Data Scientist & Automation Engineer · Contract · Part-time — *Sep 2024 - present*
- Performed unsupervised topic modeling on 100k+ internal emails to identify automation opportunities.
- Led a cross-functional automation project, designing and deploying a custom front- and backend solution.
- Built an app notification dashboard used for monitoring engagement KPIs and marketing initiatives across 1M+ app users.

Python · SQL · Git · Airflow · PowerBI · Jenkins

Medical University Vienna — Vienna, Austria
Research Assistant Medical Data Science · Volunteering · Part-time — *2024 - present*
- Co-authored 2 peer-reviewed journal papers on medical AI applications.
- Developed a secure web app which enabled external institutions to batch-predict outcomes for 10k+ patients without model access.
- Released a PyPI package for deep-learning-based marker extraction from SPECT/CT scans, supporting reproducible research.

Python · Git · CUDA · Docker

BAWAG Group — Vienna, Austria
Data Science Intern · Contract · Part-time — *Nov 2023 - Aug 2024*
- Designed, implemented and validated several marketing mix models for budget optimization.
- Performed keyword extraction on unstructured customer survey responses using traditional NLP techniques.
- Implemented and monitored data pipelines in Airflow across all online marketing channels, ensuring reliable daily reporting.

Python · SQL · Git · Airflow · PowerBI · Azure

University of Klagenfurt — Klagenfurt, Austria
Tutor in Econometrics and R Programming · Contract · Part-time — *May 2024 - present*
- Conducted weekly tutorials for 42 students, demonstrating practical examples with R notebooks complementing the lecture.
- Contributed towards improvements in grade average (4.1 to 3.21) and pass rate (78% to 90%) compared to previous year.

R · LaTeX

Education

Vienna University of Technology — Vienna, Austria
M.Sc. Data Science — *Oct 2023 - Jul 2026 (expected)*
- Major: Machine Learning, Minor: NLP and Knowledge Graphs
- Current GPA: 1.35/5

University of Klagenfurt — Klagenfurt, Austria
B.Sc. International Business & Economics — *Oct 2020 - Jul 2023*
- GPA: 1.19/5 (graduated with distinction)
- Academic Excellence Scholarship (2×750€, 1×1 250€)
- Joint Study Scholarship (worth $22 700)

University of Illinois at Urbana-Champaign — Illinois, USA
Exchange Program — *Jan 2022 - Jun 2022*
- GPA: 3.87/4

Publications

1. Clemens P. Spielvogel, **Markus Koefler**, David Haberl, Marcus Hacker, Raffaella Calabretta, Rene Rettl. Impact of disease-modifying therapy on ^{99m}Tc-DPD SPECT/CT markers in transthyretin cardiac amyloidosis enabled by artificial intelligence. *Journal of Nuclear Medicine*, vol. 66, supplement 1, pp. 251305–251305, 2025.

2. Clemens P. Spielvogel, David Haberl, Josef Yu, Juliane Hennenberg, Kilian Kluge, Jing Ning, Katarina Kumpf, **Markus Koefler**, Tatjana Traub-Weidinger, Christian Hengstenberg, Marcus Hacker, Raffaella Calabretta, Christian Nitsche. A multi-modal machine learning approach for identifying at-risk populations for cardiac amyloidosis. *Journal of Nuclear Medicine*, vol. 66, supplement 1, pp. 251274–251274, 2025.

Selected Projects

Latent Causal Dynamics for Model-Based Reinforcement Learning | Python · PyTorch — Sep 2025
- Implemented code for the publication Latent Causal Dynamics Model for MBRL from scratch.
- Reproduced benchmarks comparing the proposed algorithm to model-free alternatives.

Skin Cancer Classification | Python · TensorFlow · Keras · OpenCV · Scikit-Learn — Jun 2023
- Benchmarked VGG16-inspired CNNs with and without soft-attention mechanism on classification of dermatoscopy images.
- Achieved on average a 1.5% improvement in F1-scores by incorporating soft-attention module.

Certificates

Coursera: IBM Databases (SQL and Python) · Google Professional Data Analytics · The Nuts and Bolts of Machine Learning
DataCamp: Building Pipelines with Docker · Intermediate SQL · Introduction to R