

Marco Pichler

PhD Candidate in Artificial Intelligence · Time Series

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RESEARCH INTERESTS

Time series foundation models · synthetic data generation · zero-shot probabilistic forecasting · multivariate forecasting with covariates · recurrent architectures · constant-cost streaming inference

EDUCATION

- Oct 2025 – now **PhD in Artificial Intelligence**
Johannes Kepler University Linz · Institute for Machine Learning
Advisor: Univ.-Prof. Dr. Sepp Hochreiter. Topic: Time Series.
- Mar 2023 – Aug 2025 **MSc Artificial Intelligence**
Johannes Kepler University Linz
Thesis: *Parameter-Efficient & Memory-Efficient Fine-Tuning of Convolutional Neural Networks for Image Classification*, advisor Univ.-Prof. Dr. Günter Klambauer. Theoretical and empirical analysis of LoRA, VeRA, GaLore and normalization-based fine-tuning.
- Mar 2023 – now **MSc Legal and Business Aspects in Technics**
Johannes Kepler University Linz
- Oct 2020 – Mar 2023 **BSc Technical Physics**
Johannes Kepler University Linz
Completed in 5 semesters (standard duration: 6). Thesis: *Tuning of Purcell enhancement of GaAs quantum dots in circular Bragg gratings by wet chemical etching*, advisor Univ.-Prof. Dr. Armando Rastelli. Optics lab measurements of entangled photons from GaAs quantum dots.
- Feb 2017 – Sep 2019 **Apprenticeship with university entrance qualification (Matura)**
HTL Leonding, BFI OÖ, Volkshochschule Linz

PUBLICATIONS

- 2026 **TiRex-2: Generalizing TiRex to Multivariate Data and Streaming** NeurIPS 2026 Oral
Patrick Podest*, Marco Pichler*, Elias Bürger, Levente Zólyomi, Bernhard Voggenberger, Wilhelm Berghammer, Daniel Klotz, Sebastian Böck, Günter Klambauer, Sepp Hochreiter.
arXiv:2607.01204
* equal contribution

RESEARCH EXPERIENCE

- Jul 2026 – now **PhD Research Scientist Intern**
NXAI GmbH · Linz, Austria
Seven-month internship.
- Oct 2025 – now **Research Associate (third-party funded)**
Institute for Machine Learning, Johannes Kepler University · Linz, Austria
On leave since Jul 2026 for the NXAI internship. Joint first author of TiRex-2, a recurrent xLSTM-based multivariate time series foundation model with past and future covariates.
- Bidirectional time mixer and asymmetric grouped-attention variate mixer: future-known covariates are read in both directions while targets stay strictly causal
 - Synthetic coupling pipeline that composes diverse multivariate training samples on the fly from univariate corpora

- Constant-cost streaming inference, stable far beyond the training context; zero-shot evaluation on GIFT-Eval and fev-bench

INDUSTRY EXPERIENCE

Aug 2021	Intern, Infrastructure & Service LIWEST Kabelmedien GmbH · Linz, Austria Fault analysis and network integration for HFC, FTTH and 5G FWA customer connections.
Jul 2020 – Sep 2020	Electronics Technician, Handover Automation KEBA Group AG · Linz, Austria Assembly, soldering and cabling of automation components for logistics systems.
Oct 2019 – Jun 2020	Civil Service Kindergarten & senior citizens' home · Upper Austria
Sep 2015 – Sep 2019	Apprenticeship as Electronics Technician KEBA Group AG · Linz, Austria Applied electronics (main module) and network engineering (special module). Final apprenticeship examination passed with honors.

AWARDS & GRANTS

2026	Oral presentation, NeurIPS 2026 · TiRex-2 One of 112 orals among 30,709 main-track submissions (top 0.4%).
since Sep 2020	Study grant for self-supporting students · Austrian Study Grant Authority

SERVICE

Sep 2024 – Aug 2025	Curricula Examination Committee, student member Student Union, Johannes Kepler University Linz Reviewed curricula for legal compliance, academic feasibility and structural consistency.
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SKILLS

Programming	Python (PyTorch, NumPy, Matplotlib), MATLAB, R
Tooling	SLURM and GPU clusters, Git, Linux, Docker, LaTeX, Mathematica
Languages	German (native), English (fluent, working language in research)

Last updated: September 2026