# Alexander Timans

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Current location: Amsterdam, The Netherlands

#### **EDUCATION**

PhD candidate Oct 2022 – ongoing

Amsterdam Machine Learning Lab, University of Amsterdam

Supervision: Eric Nalisnick & Christian A. Naesseth, in co-op. with the Bosch Center for AI.

Topic: Principled Uncertainty Quantification for Structured Objects.

Sep 2020 - Sep 2022M.Sc. Statistics

ETH Zurich

Grade:  $\varnothing$  5.5/6 (6 highest, 1 lowest)

Thesis Topic: Uncertainty Quantification for Image-based Traffic Prediction.

Key courses: Bayesian Statistics, Probabilistic AI, Deep Learning

# B.Sc. Industrial Engineering and Management

Oct 2015 - Mar 2019

Karlsruhe Institute of Technology (KIT) Grade:  $\varnothing$  1.5/5 (1 highest, Top 10%)

Thesis Topic: Forecasting the U.S. Stock Market Illiquidity using Machine Learning Techniques.

Key courses: Statistics, Operations Research, Advanced Programming

## RESEARCH PUBLICATIONS

A. Timans\*, R. Verma\*, E. Nalisnick, C. A. Naesseth.

On Continuous Monitoring of Risk Violations under Unknown Shift [Link].

In Proceedings of the Conference on Uncertainty in Artificial Intelligence (UAI), 2025.

P. A. van der Linden, A. Timans, E. J. Bekkers.

CP<sup>2</sup>: Leveraging Geometry for Conformal Prediction via Canonicalization [Link].

In Proceedings of the Conference on Uncertainty in Artificial Intelligence (UAI), 2025.

P. A. van der Linden, A. Timans, D. Tailor, E. J. Bekkers.

On Equivariant Model Selection through the Lens of Uncertainty [Link].

In the 8th Workshop on Tractable Probabilistic Modeling at UAI, 2025.

A. Timans, C.-N. Straehle, K. Sakmann, C. A. Naesseth, E. Nalisnick.

Max-Rank: Efficient Multiple Testing for Conformal Prediction [Link].

In Proceedings of the Int'l Conference on Artificial Intelligence and Statistics (AISTATS), 2025.

M. Jazbec\*, A. Timans\*, T. H. Veljković, K. Sakmann, D. Zhang, C. A. Naesseth, E. Nalisnick.

Fast yet Safe: Early-Exiting with Risk Control [Link].

In Advances in Neural Information Processing Systems (NeurIPS), 2024.

D. W. E. Prinzhorn, T. Nijdam, P. A. van der Linden, A. Timans.

Conformal time series decomposition with component-wise exchangeability [Link].

In the Symposium on Conformal and Probabilistic Prediction with Applications (PMLR), 2024.

A. Timans, C.-N. Straehle, K. Sakmann, E. Nalisnick.

Adaptive Bounding Box Uncertainties via Two-Step Conformal Prediction [Link].

In Proceedings of the European Conference on Computer Vision (ECCV), 2024. Oral paper (Top 3%).

#### OTHER RESEARCH PROJECTS

A. Timans, N. Wiedemann, N. Kumar, Y. Hong, M. Raubal.

Uncertainty Quantification for Image-based Traffic Prediction across Cities [Link]. *Master Thesis*, 2023.

D. Kamm, N. Muntwyler, A. Timans, M. Vandenhirtz (alphabetical order).

Fake image detectors are worse than you think [Link].

Course Project, 2021.

## **EMPLOYMENT**

Research Intern Jan 2025 – Apr 2025

RIKEN Center for Advanced Intelligence Project, Tokyo

Revisiting sparse Bayesian learning as part of the Approximate Bayesian Inference Team [Link].

## Data Analysis & Media Intern

Jul 2019 - Oct 2019

Applico Inc, New York City

I helped improve the Salesforce database quality and ran communication for a newly launched campaign.

## Project Management Intern

Apr 2019 – Jun 2019

AT Consult, New York City

I supported foreign direct investment clients with market research, lead identification and outreach.

Research Assistant

Jun 2017 - Oct 2018

KIT Chair of Statistics, Karlsruhe

I assisted with developing exercise and lecture materials, research data collection, and student assistance.

Data Science Intern

Sep 2017 - Dec 2017

Global Market Solutions & Commerzbank, Frankfurt am Main

I implemented a python prototype to compute risk measures following new regulations (MiFID II).

## Financial Consulting Trainee

Oct 2016 – Mar 2017

Tecis Financial Services, Karlsruhe

I worked on the side in financial consulting, sales and prospect generation.

## COMMUNITY SERVICES

**Reviewing** Transactions of Machine Learning Research (TMLR) 2025

Int'l Conference on Machine Learning (ICML) 2025

Int'l Conference on Artificial Intelligence and Statistics (AISTATS) 2025

Int'l Conference on Learning Representations (ICLR) 2025

Neural Information Processing Systems (NeurIPS) 2024 (Top Reviewer), 2025

Int'l Conference on Computer Vision (ICCV) 2023

Supervision Master Thesis of Alejandro Monroy Muñoz, 2025

Master Thesis of Dominykas Šeputis, 2025 Master Thesis of Jesse Brouwers, 2025

Bachelor Thesis of Derck Prinzhorn, 2023 (AI Thesis Award)

**Teaching** Project AI, Master course @ University of Amsterdam, 2024

Human-in-the-Loop ML, Master course @ University of Amsterdam, 2023 Introduction to ML, Bachelor course @ University of Amsterdam, 2023 Deep Learning II, Master course @ University of Amsterdam, 2023 Analysis of Variance (ANOVA), Master course @ ETH Zurich, 2021

Econometrics, Bachelor course @ KIT, 2017

#### **OTHER**

Honors: ELLIS PhD Track, 'Deutschlandstipendium' Scholarships 2017 & 2018.

Spoken Languages: English, German, French, Russian.

Coding Languages: Python (incl. PyTorch, Scikit, Numpy, Scipy, Pandas, OpenCV), R, Java, HTML. Past engagements: Model UN, Debating & Finance Societies, Student Council, Social Entrepreneurship.