

Ilze A. Auzina

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EDUCATION

UNIVERSITY OF TUEBINGEN, ELLIS PHD

Supervisor: Prof. Dr. Matthias Bethge | Bethgelab

PHD MACHINE LEARNING

Jan 2025 - Present | University of Tuebingen, Germany

Oct 2021 - Jan 2025 | University of Amsterdam, Netherlands

EXPERIENCE

IBM, BENELUX | DATA SCIENTIST

Oct 2020 - Sep 2021 | Amsterdam, The Netherlands

- MLOps: created end-to-end machine learning pipelines using AzureDevOps and Azure Machine Learning.
- Custom NLP for named entity recognition and relation extraction (spacy, transformers) for ASML.
- Graph based machine learning for fraud detection based on post-transaction data in collaboration with IBM Research.
- Web-based user interfaces for AI explainability.

UNIVERSITY OF AMSTERDAM | RESEARCH & TEACHING ASSISTANT

Oct 2018 - Aug 2020 | Amsterdam, The Netherlands

- Research experience across ML and NLP: sentiment classification (SVM, RF), active learning for data labeling, and Bayesian CNN-based multiple-instance learning, end-to-end project development.
- Applied AI and data engineering in both academic and industry settings: developed a knowledge-graph system for legal fraud detection and thought data analysis (R) and embodied AI (robotics).

PUBLICATIONS

Conferences

- Goel, S., Struber, J., **Auzina, I. A.**, Chandra, K. K., Kumaraguru, P., Kiela, D., Prabhu, A. P., Bethge, M. & Geiping, J. (2025). Great models think alike and this undermines ai oversight. ICML **Spotlight**.
- **Auzina, I. A.**, Yildiz, C., Magliacane, S., Bethge, M., & Gavves, E. (2023). Modulated neural ODEs. NeurIPS.

Journals

- **Auzina, I. A.**, & Tomczak, J. M. (2021). Approximate Bayesian Computation for discrete spaces. Entropy, 23(3), 312.

Workshops

- Struber, J., **Auzina, I. A.**, Goel, S., Keller, S., Prabhu, A. P., & Bethge, M. (2025). Measuring Belief Updates in Curious Agents. ICML Workshop on Assessing World Models **Spotlight & Oral**.
- **Auzina, I. A.**, Yildiz, C., & Gavves, E. (2022). Latent GP-ODEs with informative priors. NeurIPS Workshop on A Causal View on Dynamical Systems.
- **Auzina, I. A.**, Kim, J., Vossen, P., Haasdijk, E., & van Harmelen, F. (2019). Automated due diligence: Building knowledge graphs from news. Network Institute.

ACTIVE PROJECTS

- Online RL post-training for multi-step, open-ended environments — focusing on step-level incentive reward modeling (LoRA, RLVR).
- Post-training robustness and stability via model merging approaches for large language models.

RESEARCH INTERESTS

- **Reinforcement learning post-training** in (i) open-ended domains, (ii) multi-step environments, and (iii) pass@k tasks.
- Dense reward modeling and guided exploration using **intrinsic incentives**.
- Understanding when RL induces novel reasoning vs. when it simply sharpens SFT-style behavior.

SKILLS

Machine Learning

Verl • Ray • vLLM • FlashAttention • PyTorch • PEFT • TRL • Transformers • scikit-learn • NumPy • Pandas

Programming

Python • R • \LaTeX

Build & Infrastructure

Git • Slurm • Linux • Docker

AWARDS

2025 ICML Spotlight

2023 NeurIPS reviewer recognition

2021 Nominee for best Master Thesis Awards, Vrije Universiteit Amsterdam

INVITED TALKS

2024 NeurIPS workshop on D3S3:

Data-driven and Differentiable Simulations, Surrogates, and Solvers

2023 ICIAM 2023: Randomization for simplified machine learning

2023 Boston University Science Hour

2023 SIAM Conference of Computational Science and Engineering: Operator Learning in the Physical and Data Sciences

ACTIVITIES

German Alpine Club