Ilze Amanda Auzina

PhD Candidate | Dynamical Systems | Neural ODEs | Deep Learning | Bayesian Modelling

Young machine learning researcher interested in Bayesian modeling and deep learning, especially with a focus on dynamical systems (ODE, SDE, PDE). Always open to new collaborations and new research ideas.

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Experience

Teacher for MIT ML Course

Riga Business School

Sep 2021 – Aug 2022 remotely, Riga, Latvia

- Teacher for the MIT course *"Machine Learning with Python - From Linear Models to Deep Learning"*

Data Scientist, Artificial Intelligence

IBM, Benelux

Oct 2020 – Sep 2021 Amsterdam, The Netherlands

- MLOps: created end2end 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

Teacher Assistant, Artificial Intelligence

Vrije Universiteit Amsterdam

April 2020 – August 2020 Amsterdam, The Netherlands

- Summer school course *Data Analysis with R*
- BSc AI, course *Embodied Artificial Intelligence*

Research Assistant, Artificial Intelligence

Vrije Universiteit Amsterdam

Sep 2019 – April 2020 Amsterdam, The Netherlands

- Sentiment classification of reviews (SVM, RF, NLP)
- Active learning pipeline to assist data labeling
- Multiple-Instance Based Learning together with Bayesian CNN (project)

Research Assistant, Knowledge Graphs

Vrije Universiteit, Network Institute, Deloitte

Oct 2018 – July 2019 Amsterdam, The Netherlands

- Created a graph store for legal fraud detection

Awards

- NeurIPS reviewer recognition, 2023
- Nominee for best Master Thesis Awards, Vrije Universiteit Ansterdan, on behalf of MSc Artificial Intelligence, 2021
- 2nd place at Medical Data Hackathon, Deloitte, Asmterdam, 2020

Education

PhD, Machine Learning

University of Amsterdam, VIS lab

Oct 2021 – Ongoing Amsterdam, The Netherlands

- Supervisors: dr. Efstratios Gavves and dr. Sara Magliacane
- Ellis co-Supervisor: prof.dr. Matthias Bethge
- Collaborators: dr. Cagatay Yildiz
- Research focus: intersection between deep learning and dynamical systems

Master of Science, Artificial Intelligence

Vrije Universiteit Amsterdam

Sept 2018 – Oct 2020 Amsterdam, The Netherlands

- Courses on AI: ML, DL, NLP, IR and RF (project)
- Thesis on Approximate Bayesian Computation for discrete spaces (ABC-Di), supervised by dr. Jakub M. Tomczak
- Final GPA: 8.7, cum laude (Dutch grading scale)

Honours Bachelor of Science, Neuroscience

University College Roosevelt, Utrecht University

Sept 2015 – June 2018 Middelburg, The Netherlands

- Major in Neuroscience, Life Science
- Minor in Statistics
- Final GPA: 9.6, summa cum laude (Dutch grading scale)

Summer Schools

- Probabilistic Numerics Spring School, University of Tuebingen, 2023
- Gaussian Process Fall School, University of Sheffield, 2022
- The Nordic Probabilistic AI School, University of Helsinki, 2022
- Data Management Program, Vrije Universiteit Amsterdam, 2018

Skills

- **ML frameworks**: PyTorch (2018-present), Tensorflow (2018), Scikit-learn (2018-present), Pyro (2022)
- **Programming languages**: Python (2018-present), HTML (2022-present), R (2017-2021), Java (2018)
- **Additional Skills**: Git (2018-present), Docker (2020-present), Azure DevOps, ML (2020-2021), SQL (2020-2021), Spark (2020-2021), SPARQL (2020-2021)

Publications

Journals

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

Conferences

- Auzina, I. A., Yildiz, C., Magliacane, S., Bethge, M., & Gavves, E. (2023). Modulated neural odes. *Thirty-seventh conference on neural information processing systems*.
- Auzina, I. A., Bardelmeijer, S., & Treur, J. (2019). On sympathy and symphony: Network-oriented modeling of the adaptive dynamics of sympathy states. *International conference on artificial intelligence and soft computing*, 639–651. Springer.

Workshops

- Auzina, I. A., Yıldız, C., & Gavves, E. (2022). Latent gp-odes with informative priors. In *36th conference on neural information processing systems: A causal view on dynamical systems workshop*.
- Auzina, I. A., Kim, J., Vossen, P., Haasdijk, E., & van Harmelen, F. (2019). Automated due diligence: Building knowledge graphs from news. Network Institue.