Nataša Tagasovska

Machine Learning Scientist · Prescient Design, Genentech

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Education

Faculty of Business and Economics, University of Lausanne — *Lausanne, Switzerland*

PhD in Information Systems (Data Analytics track) — *Apr 2015 – Mar 2020*

- Thesis title: An Information-theoretic perspective on trustworthy machine learning

Faculty of Electrical Engineering and Information Technologies

Ss Cyril and Methodius — *Skopje, North Macedonia*

MSc in Embedded Computer Systems — *Sep 2013 – Oct 2014*

- GPA: 10/10
- Thesis Title:"FPGA-based cache tier for distributed database performance optimization"

Faculty of Electrical Engineering and Information Technologies,

Ss Cyril and Methodius — *Skopje, North Macedonia*

BSc in Computer Science and Engineering — *Sep 2009 – Jul 2013*

- GPA: 9.23/10
- Thesis Title: "Performances of LEON3 IP core in WiGig environment on receiver side"

Professional Experience

Jan 2022 - present	**Machine Learning Scientist**, Prescient Design, Genentech
Aug 2022 - Jan 2023	**External Lecturer**, HEC, University of Lausanne
Mar 2020 - Dec 2021	**Senior Data Scientist**, Swiss Data Science Center at EPFL and ETHZ - Academic team
Jan 2019 – May 2019	**Research Intern**, Facebook (Meta) AI Research, Paris, France
Oct 2014 - Apr 2015	**Intern**, North Atlantic Treaty Organisation, NATO - HQ, Brussels, Belgium
Apr 2015 - Mar 2020	**Doctoral Assistant (TA**, HEC, University of Lausanne and EPFL

Publications

In Review

Tagasovska N.*, Park JW.*, Maser M., Ra S., Cho K. *BOtied: Multi-objective Bayesian optimization with tied multivariate ranks.*

Tagasovska N.*, Park JW.*, Kirchmeyer M, Watkins A., Frey N., Ismail A, Bryson T., Lee E., Ra S., Cho K.*Antibody DomainBed: Out-of-Distribution Generalization in Therapeutic Protein Design.*

Maser M.*, **Tagasovska N.***, Lee JH., Watkins A. AI for Science at NeurIPS 2023. *MoleCLUEs: Optimizing Molecular Conformers by Minimization of Differentiable Uncertainty.*

Published

Tagasovska N., Ozdemir F., Brando A. Proceedings of the 26th International Conference on Artificial Intelligence and Statistics (AISTATS) 2023. *Retrospective Uncertainties for Deep Models using Vine Copulas.*

Tagasovska N., Frey N, Loukas A., Hötzel I., Lafrance-Vanasse J., Kelly RL, Wu Y., Rajpal A., Bonneau R. Cho K., Ra S., Gligorijević V., AI for Science Workshop at NeurIPS 2022. *A Pareto-optimal compositional energy-based model for sampling*

and optimization of protein sequences.

Lopez* R., **Tagasovska N*.** A, Ra S., Cho K., Pritchard J., Regev A. 2nd Conference on Causal Learning and Reasoning (CLeaR) 2022. *Learning Causal Representations of Single Cells via Sparse Mechanism Shift Modeling.*

Xin Y., **Tagasovska N.**, Perez-Cruz F., Raubal M. ACM SIGSPATIAL 2022. *Vision Paper: Causal Inference for Interpretable and Robust Machine Learning in Mobility Analysis.*

Ackerer D., **Tagasovska N.**, Vatter T. Proceedings of 34th Conference on Neural Information Processing Systems (NeurIPS) 2020. *Deep Smoothing of the Implied Volatility Surface.*

Tagasovska N., Chavez-Demoulin V., Vatter T. Proceedings of the 37th International Conference on Machine Learning, (ICML) 2020. *Distinguishing Cause from Effect Using Quantiles: Bivariate Quantile Causal Discovery.*

Tagasovska N., Lopez-Paz D. Proceedings of 34th Conference on Neural Information Processing Systems (NeurIPS) 2019. *Single-model uncertainties for deep learning.*

Tagasovska N., Ackerer D., Vatter T. Proceedings of 34th Conference on Neural Information Processing Systems (NeurIPS) 2019. *Copulas as High-Dimensional Generative Models: Vine Copula Autoencoders.*

Awards, Fellowships, & Grants

2021	**Responsible AI Grant** , Hasler Stiftung Foundation
2020	**Doctoral Thesis Excellence Award**, La Fondation Helene et Nicolas Porphyrogenis
2019	**HEC Research Fund**, HEC Lausanne
2014	**Full scholarship for master studies**, Hi Tech - a PCB manifacture company
2010-2013	**Deans' honours Undergraduate Excellence Award**, FEEIT, Ss Cyril and Methodius

Teaching Experience

Fall 2022	**Data Science for Business Analytics**, Lecturer	*HEC, UNIL*
Spring 2020	**Deep Learning**, Teaching Assistant	*EPFL*
Spring 2019	**Algorithms and Computational Thinking**, Teaching Assistant	*HEC, UNIL*
Fall 2018	**Data Science for Business Analytics**, Head Teaching Assistant	*HEC, UNIL*
Fall 2017	**Web-Scale Analytics**, Head Teaching Assistant	*HEC, UNIL*

Service & Outreach

2023	**Women in Machine Learning Workshop at NeurIPS 2023**, General Chair
2023	**New Frontiers of AI for Drug Discovery and Development at NeurIPS 2023**, Program Chair
2023	**International Conference of Machine Learning 2023**, Associate Chair
2020 - 2024	**ICML, ICLR, AISTATS, NeurIPS, JMLR, TLMR, Nature Communications**, Reviewer
2019	**United Nations ITU - Girls in ICT**, Mentor