Nina **Corvelo Benz**

Profile Summary

Fourth year *Ph.D. Student* in Computer Science at MPI-SWS and ETH Zurich under the ELLIS PhD Program.

My **research interests** lie in the design of **collaborative decision-support systems** to improve human-decision making, leveraging tools from **machine learning**, **causality** and **uncertainty estimation**.

Contact details

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Kaiserslautern,
Germany 67655

🌐 https://ninacobe.github.io

Personal information

Citizenship: **German/Brazilian**

Languages: **English**, **German**, **Portuguese**, **Spanish**, (learning: **Greek**, **Korean**)

Skills

- Python, Java, C++, R
- Pandas, Numpy, Keras
- MySQL, Elasticsearch, PGX, StellarGraph

Other

Workshop Organizer ICML Workshop on Counterfactuals in Minds and Machines, Hawaii, USA, 07/2023 – Co-organized with Stratis Tsirtsis, Ricardo Dominguez-Olmedo, Manuel Gomez-Rodriguez, Amir-Hossein Karimi, Thorsten Joachims, Isabel Valera and Sarah Wu

Professional Experience

Doctoral Researcher 06/2021–Now
Max Planck Institute for Software Systems (MPI-SWS), Kaiserslautern, Germany

Research Intern 06/2020–11/2020
Oracle Labs Switzerland, Zurich, Switzerland
Topics: Graph Structure based Entity Resolution, ML boosted Address Matching

Education

Ph.D. in Computer Science 06/2021–Now
Max Planck Institute for Software Systems (MPI-SWS) & ETH Zurich
Focus: Human-Centric Machine Learning in Healthcare
Advisor: Manuel Gomez-Rodriguez
◇ Spending autumn/winter 2024 at MPI of Biochemistry, Munich – hosted by Karsten Borgwardt

M. Sc. in Computer Science 09/2018–08/2020
ETH Zurich Grade: 5.36/6
Focus: Theoretical Computer Science and Machine Learning
Thesis: Using Inhibitory Signals for Error Encodings in Networks with Tuning Curves
Advisor: Angelika Steger

B. Sc. in Computer Science 09/2014–09/2018
ETH Zurich Grade: 5.42/6
Thesis: Call Admission Problems on Trees
Advisor: Juraj Hromkovič
◇ Spent spring 2017 at POSTECH, Pohang, South Korea – exchange program

Publications (*): equal contribution

Antimicrobial drug recommendation from MALDI-TOF mass spectrometry with statistical guarantees using conformal prediction.
29th Conference on Research in Computational Molecular Biology (RECOMB 2025) (Accepted)
Corvelo Benz, N.*, Miranda, L.*, Chen, D., Borgwardt, K., Sattler, J.

Counterfactual Token Generation in Large Language Models
4th Conference on Causal Learning and Reasoning (CLeaR 2025) (Accepted)
Chatzi, I.*, Corvelo Benz, N.*, Straitouri, E.*, Tsirtsis, S.*, Gomez-Rodriguez, M.

Matchings, Predictions and Counterfactual Harm in Refugee Resettlement Processes
4th Conference on Causal Learning and Reasoning (CLeaR 2025) (Accepted)
Lee, S., Corvelo Benz, N., Thejaswi, S., Gomez-Rodriguez, M.

Human-Aligned Calibration for AI-Assisted Decision Making
37th Conference on Neural Information Processing Systems (NeurIPS 2023)
Nina Corvelo Benz and Manuel Gomez Rodriguez

Counterfactual Inference of Second Opinions
38th Conference on Uncertainty in Artificial Intelligence (UAI 2022)
Nina Corvelo Benz and Manuel Gomez Rodriguez

Call Admission Problems on Trees with Advice
30th International Workshop on Combinatorial Algorithms (IWOCA 2019)
(A) Hans-Joachim Bröckenhauer, Nina Corvelo Benz and Dennis Komm