

Nina Corvelo Benz

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<https://nинакобе.github.io>

PROFILE SUMMARY

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**.

EDUCATION	Ph.D. in Computer Science Max Planck Institute for Software Systems (MPI-SWS) & ETH Zurich, Zurich, Switzerland <i>Thesis:</i> Human-Centric Machine Learning in Healthcare <i>Advisor:</i> Manuel Gomez-Rodriguez Spending autumn/winter 2024 at MPI of Biochemistry, Munich – hosted by Karsten Borgwardt	06/2021–10/2025
	Master of Science in Computer Science ETH Zurich, Zurich, Switzerland <i>Grade:</i> 5.36/6 <i>Focus:</i> Theoretical Computer Science and Machine Learning <i>Thesis:</i> Using Inhibitory Signals for Error Encodings in Networks with Tuning Curves <i>Advisor:</i> Angelika Steger	09/2018–08/2020
	Bachelor of Science in Computer Science ETH Zurich, Zurich, Switzerland <i>Grade:</i> 5.42/6 <i>Thesis:</i> Call Admission Problems on Trees <i>Advisor:</i> Juraj Hromkovič Spent spring 2017 at POSTECH, Pohang, South Korea – exchange program	09/2014–09/2018
PROFESSIONAL EXPERIENCE	Postdoctoral Researcher Max Planck Institute of Biochemistry, Munich, Germany	12/2025 - Now
	Doctoral Researcher Max Planck Institute for Software Systems, Kaiserslautern, Germany	06/2021 - 11/2025
	Research Intern Oracle Labs Switzerland, Zurich, Switzerland <i>Topics:</i> Graph Structure based Entity Resolution, ML boosted Address Matching	06/2020–11/2020
PUBLICATIONS	Conference Proceedings	
(*): equal contribution (A): alphabetical ordering	Conference publications in computer science are archival and going through highly selective peer review.	
	1. Human-Alignment Influences the Utility of AI-assisted Decision Making <i>Scientific Reports 15.1, 2025.</i> Nina Corvelo Benz and Manuel Gomez-Rodriguez	

2. Counterfactual Token Generation in Large Language Models
4th Conference on Causal Learning and Reasoning (CLeaR 2025)
Ivi Chatzi, **Nina Corvelo Benz**, Eleni Straitouri, Stratis Tsirtsis, Manuel Gomez-Rodriguez
3. Matchings, Predictions and Counterfactual Harm in Refugee Resettlement Processes
4th Conference on Causal Learning and Reasoning (CLeaR 2025)
Seungeon Lee, **Nina Corvelo Benz**, Suhas Thejaswi, Manuel Gomez-Rodriguez
4. Detecting antimicrobial resistance through MALDI-TOF mass spectrometry with statistical guarantees using conformal prediction
29th Conference on Research in Computational Molecular Biology (RECOMB 2025)
Nina Corvelo Benz*, Lucas Miranda*, Dexiong Chen, Karsten Borgwardt, Janko Sattler
5. Human-Aligned Calibration for AI-Assisted Decision Making
37th Conference on Neural Information Processing Systems (NeurIPS 2023)
Nina Corvelo Benz and Manuel Gomez Rodriguez
6. Counterfactual Inference of Second Opinions
38th Conference on Uncertainty in Artificial Intelligence (UAI 2022)
Nina Corvelo Benz and Manuel Gomez Rodriguez
7. 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

Pre-prints

1. Towards Human-AI Complementarity in Matching Tasks
In Arxiv, 2025.
Adrian Arnaiz-Rodriguez, **Nina Corvelo Benz**, Suhas Thejaswi, Nuria Oliver, and Manuel Gomez-Rodriguez
2. Evaluation of Large Language Models via Coupled Token Generation
In Arxiv, 2025.
Nina Corvelo Benz, Stratis Tsirtsis, Eleni Straitouri, Ivi Chatzi, Ander Arrola Velasco, Suhas Thejaswi, Manuel Gomez-Rodriguez

TEACHING

Teaching Assistant	Winter Semester 2023
University of Kaiserslautern-Landau (RPTU), Kaiserslautern, Germany	
Seminar: Human-Centric Machine Learning	
Teaching Assistant	Winter Semester 2018 & 2019
ETH Zurich, Zurich, Switzerland	
Course: Theoretical Computer Science	

SCIENTIFIC COMMUNITY ACTIVITIES

Workshop organizing	
NeurIPS 2025 Workshop Chair Assistant	2025
ICML Workshop on Counterfactuals in Minds and Machines, Hawaii, USA	07/2023

Co-organized with Stratis Tsirtsis, Ricardo Dominguez-Olmedo, Isabel Valera, Manuel Gomez-Rodriguez, Amir-Hossein Karimi, Thorsten Joachims and Sarah Wu

Reviewing

TLMR (2024, 2025), UAI (2023, 2024, 2025), ICML 2024, AISTATS 2023

TECHNICAL SKILLS

Programming Languages: Python, Java, C++, R

Database Systems: MySQL

Libraries: Numpy, Pandas, Keras, PGX, StellarGraph, Elasticsearch

Editing tools: L^AT_EX, Microsoft Excel, MS Word, MS PowerPoint

LANGUAGES

English (fluent), German (fluent), Portuguese (native), Spanish (advanced), Greek (Beginner), Korean (Beginner)