

Nina Corvelo Benz

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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**.

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 (exp. conclusion)
	Master of Science in Computer Science ETH Zurich, Zurich, Switzerland <i>Grade: 5.36/6</i> <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: 5.42/6</i> <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	Doctoral Researcher Max Planck Institute for Software Systems, Kaiserslautern, Germany	06/2021 - Now
	Research Intern Oracle Labs Switzerland, Zurich, Switzerland <i>Topics:</i> Graph Structure based Entity Resolution, ML boosted Address Matching	06/2020–11/2020
PUBLICATIONS	<u>Conference Proceedings</u> (*): equal contribution (A): alphabetical ordering	 Conference publications in computer science are archival and going through highly selective peer review. 1. Counterfactual Token Generation in Large Language Models <i>4th Conference on Causal Learning and Reasoning (CLeaR 2025)</i> Ivi Chatzi, Nina Corvelo Benz , Eleni Straitouri, Stratis Tsirtsis, Manuel Gomez-Rodriguez

2. **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
3. **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
4. **Human-Aligned Calibration for AI-Assisted Decision Making**
37th Conference on Neural Information Processing Systems (NeurIPS 2023)
Nina Corvelo Benz and Manuel Gomez Rodriguez
5. **Counterfactual Inference of Second Opinions**
38th Conference on Uncertainty in Artificial Intelligence (UAI 2022)
Nina Corvelo Benz and Manuel Gomez Rodriguez
6. **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. **Evaluation of Large Language Models via Coupled Token Generation**
In Arxiv, 2025.
Nina Corvelo Benz, Stratis Tsirtsis, Eleni Straitouri, Ivi Chatzi, Ander Artola Velasco, Suhas Thejaswi, Manuel Gomez-Rodriguez
2. **Human-Alignment Influences the Utility of AI-assisted Decision Making**
In Arxiv, 2025.
Nina Corvelo Benz and Manuel Gomez Rodriguez

TEACHING

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

SCIENTIFIC COMMUNITY ACTIVITIES

Workshop organizing	ICML Workshop on Counterfactuals in Minds and Machines, 07/2023 Hawaii, USA Co-organized with Stratis Tsirtsis, Ricardo Dominguez-Olmedo, Isabel Valera, Manuel Gomez-Rodriguez, Amir-Hossein Karimi, Thorsten Joachims and Sarah Wu
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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 ^A T _E X, Microsoft Excel, MS Word, MS PowerPoint
LANGUAGES	English (fluent), German (fluent), Portuguese (native), Spanish (advanced), Greek (Beginner), Korean (Beginner)