

JACQUELINE R. M. A. MAASCH

CONTACT	✉ MAASCH@CS.CORNELL.EDU in LINKEDIN G JMAASCH.GITHUB.IO S GOOGLE SCHOLAR	
EDUCATION	2026	Cornell Tech New York, NY Doctor of Philosophy in Computer Science (anticipated)
	2024	MS in Computer Science, conferred on PhD candidacy GPA 4.0 Areas: AI / ML, Scientific Computing, Applied Probability & Statistics <i>NSF Graduate Research Fellow Presidential Life Science Fellow</i>
	2021	University of Pennsylvania Philadelphia, PA Master of Computer & Information Technology GPA 3.97 <i>Interdisciplinary Innovation Fellow Reproducible Research Fellow</i>
	2016	Smith College Northampton, MA BA Anthropology (Biological, Medical), Environmental Science GPA 3.97 <i>Summa Cum Laude – Top 1% of class Phi Beta Kappa Sigma Xi</i>
EXPERIENCE	03.2026 – 06.2026	Resident, Causal Inference <i>Isaac Newton Institute for Mathematical Sciences Cambridge, UK</i> Invited residency for scholars on the theory and methods of causal inference.
	05.2025 – 08.2025	Research Intern <i>YRIKKA New York, NY</i> PI: Dr. Kia Khezeli. Test-time adaptation and world modeling for abstract, causal, and logical reasoning in large language models.
	05.2024 – 08.2024	Research Intern <i>Microsoft Research (MSR), Machine Intelligence Core Cambridge, UK</i> PI: Dr. Aditya Nori, Dr. Javier González. Methods for the evaluation and elicitation of causal and compositional reasoning in language models.
	05.2022 – 08.2022	Clinical Data Science Intern <i>Boehringer Ingelheim, Biostatistics & Data Sciences Ridgefield, CT</i> PI: Dr. Yi Liu. Multimodal deep learning for survival analysis.
	08.2021 – Present	PhD Student Researcher <i>Weill Cornell Medicine, Institute of AI for Digital Health New York, NY</i> PI: Dr. Fei Wang. Causal machine learning for computational biomedicine. <i>Cornell Tech Computer Science New York, NY</i> PI: Dr. Volodymyr Kuleshov. Deep generative and probabilistic modeling. <i>Cornell Tech Operations Research New York, NY</i> PI: Dr. Kyra Gan. Robust and efficient statistical inference, scalable causal discovery, and causal fairness in healthcare.
	05.2020 – 07.2021	Master's Student Researcher <i>University of Pennsylvania Bioengineering Philadelphia, PA</i> PI: Dr. César de la Fuente. New paradigms for ML-based drug discovery.
SKILL AREAS	Probabilistic graphical models; AI reasoning; AI evaluation; causal inference; causal discovery; fairness; graph theory; applied probability; computational biomedicine.	
LANGUAGES	Proficient: Python; R; L ^A T _E X; shell. Prior experience: Stan; Java; C; MATLAB.	
FRAMEWORKS	PyTorch; NumPy; sklearn; tidyverse; Git; AWS; Slurm-based HPC; ARC-AGI .	

SELECT PEER-REVIEWED PUBLICATIONS (GOOGLE SCHOLAR)	2025	ICML Maasch, J ; Hüyük, A; Xu, X; Nori A; González J. <i>Compositional Causal Reasoning Evaluation in Language Models</i> . 42 nd International Conference on Machine Learning. [ARXIV] [SLIDES] [WEBSITE] [POSTER]
	2025	ICLR - ORAL - TOP 1.8% Hüyük, A; Xu, X; Maasch, J ; et al. <i>Reasoning Elicitation in Language Models via Counterfactual Feedback</i> . [ARXIV]
	2025	AAAI Maasch, J ; et al. <i>Local Causal Discovery for Structural Evidence of Direct Discrimination</i> . [ARXIV] [SLIDES] [POSTER]
	2024	NEURIPS Hiremath, S; Maasch, J ; et al. <i>Hybrid Top-Down Global Causal Discovery with Local Search for Linear and Nonlinear Additive Noise Models</i> .
	2024	UAI Maasch, J ; et al. <i>Local Discovery by Partitioning: Polynomial-Time Causal Discovery Around Exposure-Outcome Pairs</i> . 40 th Conference on Uncertainty in Artificial Intelligence. [ARXIV] [SLIDES] [POSTER]
	2023	CELL HOST & MICROBE Maasch, J* ; Torres, M*; et al. <i>Molecular de-extinction of ancient antimicrobial peptides enabled by machine learning</i> . Cell Host & Microbe. 31. 8. 1260-1274. e6. 2023. *Equal contribution. [CELL]
PEER-REVIEWED WORKSHOP PRESENTATIONS	2025	NEURIPS - SPOTLIGHT Maasch, J ; Kalantari, J; Khezeli, K. <i>CausalARC: Abstract Reasoning with Causal World Models</i> . NeurIPS LAW: Bridging Language, Agent, and World Models. [WORKSHOP] [ARXIV] [WEBSITE]
	2023	NEURIPS Maasch, J ; et al. <i>Local Discovery by Partitioning: Polynomial-Time Causal Discovery Around Exposure-Outcome Pairs</i> . NeurIPS Causal Representation Learning Workshop. [WORKSHOP] [ARXIV]
	2023	ICML Maasch, J ; et al. <i>Regularized Data Programming with Automated Bayesian Prior Selection</i> . ICML Workshop on Structured Probabilistic Inference & Generative Modeling. [WORKSHOP] [ARXIV]
UNDER REVIEW	2025	Maasch, J ; Neiswanger, W; Kuleshov, V; Ermon, S. <i>Probabilistic Graphical Models: A Concise Tutorial</i> . Invited submission. [ARXIV] [WEBSITE]
INVITED TALKS	07.25	Microsoft Expo Booth, ICML Vancouver, BC
	04.25	Flatiron Institute , Simons Foundation New York, NY [SLIDES]
	03.25	Cornell INFO5375: Machine Learning for Health New York, NY [SLIDES]
	10.24	INFORMS Annual Meeting Seattle, WA [SLIDES]
	07.24	Microsoft Research Machine Intelligence Core Cambridge, UK
	06.24	University of Cambridge Statistical Laboratory Cambridge, UK
SELECT FELLOWSHIPS & AWARDS	04.24	34th Annual POMS Conference Minneapolis, MN [SLIDES]
	2025	Doctoral Fellowship Cornell Tech Digital Life Initiative
	2023	Outstanding Service and Community Award Cornell Tech
	2021	NSF Graduate Research Fellowship US National Science Foundation
	2021	Presidential Life Science Fellowship Cornell University
	2021	Reproducible Research Fellowship OKFN, Alfred P. Sloan Foundation
PROFESSIONAL ACTIVITIES	2020	Interdisciplinary Innovation Fellowship University of Pennsylvania
	24-25	Co-organizer, NYC Learning on Graphs Workshop
	24-25	Reviewer, Cornell CS PhD Admissions
	23-25	Student leader, Cornell CS PhD Visit Days
	2023	Co-developer, Cornell CS 6006: Succeeding in the Graduate Environment
	2023	Founder / organizer, Cornell Causal Reading Group
PEER REVIEW	AI	ICML; UAI; AISTATS; ACL ARR; ICML SPIGM ; NeurIPS WiML .
	Bio	Communications Biology (Nature Portfolio); Journal of Biomedical Informatics (Elsevier); Bioinformatics (Oxford Academic); ACS Infectious Diseases.
PENDING PATENTS	2024	Hüyük, A; Xu, X; Maasch, J ; Nori A; González J. <i>Fine-Tuning Language Models for Reasoning with Counterfactual Feedback</i> . App no: 63/699,777.