

# JACQUELINE R. M. A. MAASCH

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

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