

Anna P. Meyer

Ph.D. Candidate, University of Wisconsin - Madison
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Education

2020-2025	Ph.D. , Computer Sciences, University of Wisconsin - Madison <i>Advisors: Aws Albarghouthi and Loris D'Antoni</i> <i>Thesis: Robustness to Multiplicity in the Machine Learning Pipeline</i>
2020-2023	M.S. , Computer Sciences, University of Wisconsin - Madison
2014-2018	B.A. Mathematics, Carleton College, <i>Magna Cum Laude</i>

Publications

† → Equal contribution

- [C1] **Anna P. Meyer**, Aws Albarghouthi, and Loris D'Antoni. "The Dataset Multiplicity Problem: How Unreliable Data Impacts Predictions". In: *Proceedings of the 2023 ACM Conference on Fairness, Accountability, and Transparency*. FAccT '23. Chicago, IL, USA: Association for Computing Machinery, June 2023, pp. 193–204. ISBN: 9798400701924. URL: <https://doi.org/10.1145/3593013.3593988>.
- [C2] **Anna P. Meyer**[†], Dan Ley[†], Suraj Srinivas, and Hima Lakkaraju. "On Minimizing the Impact of Dataset Shifts on Actionable Explanations". In: *Proceedings of the Thirty-Ninth Conference on Uncertainty in Artificial Intelligence*. Vol. 216. Proceedings of Machine Learning Research. PMLR, July 2023, pp. 1434–1444. URL: <https://proceedings.mlr.press/v216/meyer23a.html>.
🏆 Selected for an oral presentation (top 3% of submissions).
- [C3] **Anna P. Meyer**, Aws Albarghouthi, and Loris D'Antoni. "Certifying Robustness to Programmable Data Bias in Decision Trees". In: *Advances in Neural Information Processing Systems*. Vol. 34. Curran Associates, Inc., 2021, pp. 26276–26288. URL: <https://proceedings.neurips.cc/paper/2021/file/dcf531edc9b229acfe0f4b87e1e278dd-Paper.pdf>.

Preprints and Non-Archival Papers

- [P1] **Anna P. Meyer**, Yea-Seul Kim, Aws Albarghouthi, and Loris D'Antoni. *Perceptions of the Fairness Impacts of Multiplicity in Machine Learning*. Under review. 2024. URL: <https://arxiv.org/abs/2409.12332>.
- [P2] **Anna P. Meyer**[†], Yuhao Zhang[†], Aws Albarghouthi, and Loris D'Antoni. *Verified Training for Counterfactual Explanation Robustness under Data Shift*. DMLR (Data-centric Machine Learning Research) workshop at ICLR (International Conference on Machine Learning), Vienna, Austria. 2024. URL: <https://arxiv.org/abs/2403.03773>.

Teaching and Mentoring Experience

University of Wisconsin - Madison

- 2023– Workshop developer, Data Science Hub
Developing a workshop on fair machine learning
Teaching pilot iteration in Dec. 2024
- 2023 Instructor, CS 220: Data Programming I
Sole instructor of record for summer 2023 course offering
Managed a team of one TA and one undergraduate peer mentor
- 2020 Teaching Assistant, CS/Math 240: Introduction to Discrete Mathematics

Carleton College

- 2016-2018 Tutor, Grader, and Teaching Assistant

Undergraduate student mentoring at University of Wisconsin - Madison

- 2023-2024 Nikhil Kruthiventi
2022 Layal Khreis
2022 Praise Osinloye

Research Funding

- 2024-2027 NSF SHF Medium Grant (\$1,200,000)
Title: Reasoning about Multiplicity in the Machine Learning Pipeline
PIs: Aws Albarghouthi and Loris D'Antoni
Led the grant ideation and writing process as a graduate student

Research Experience

- 2020– Graduate Research Assistant, University of Wisconsin - Madison
2022 Research Assistant, Harvard Business School
With Professor Hima Lakkaraju, culminating in UAI publication [C2]
- 2017 Research Assistant, Carleton College
With Professor Jed Yang

Invited Talks

- [T1] *The Dataset Multiplicity Problem: How Unreliable Data Impacts Predictions.* INFORMS Annual Meeting (Seattle, WA). Oct. 2024.
- [T2] *Verified Training for Counterfactual Explanation Robustness under Data Shift (Poster).* Mid-west Machine Learning Symposium (Minneapolis, MN). May 2024.
- [T3] *Certifying Robustness to Programmable Data Bias in Decision Tree Learning.* UW-Madison CS Research Symposium (Madison, WI). Apr. 2022.

Service

Conference Reviewing

2024	AIES
2024	FAccT
2024	SaTML
2023	NeurIPS

Department Service at University of Wisconsin - Madison

2020-2023	Founding Member, Graduate Student Advisory Committee <i>Meet monthly with department chair and admin staff to discuss issues facing graduate students and work towards solutions</i>
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Professional Development

2024	Research Mentor Training (The Delta Program at the University of Wisconsin - Madison)
2023	STEM Public Service Fellowship Program (University of Wisconsin - Madison) <i>Three-semester program that teaches scientists about civil engagement and public service in STEM. Completed a practicum (developing a workshop on fair machine learning) with the Data Science Hub at University of Wisconsin - Madison.</i>

Work Experience

2018-2020	Software Developer, Epic Systems, Verona, WI
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Honors

2024	Poster Award (Midwest Machine Learning Symposium) <i>Awarded to top ~13% of poster presentations</i>
2023	Oral presentation (Conference on Uncertainty in Artificial Intelligence) <i>Top 3% of submissions</i>
2023	STEM Public Service Fellow (University of Wisconsin - Madison)
2018	Phi Beta Kappa (Carleton College)
2015	Dean's List (Carleton College)

Last updated: September 30, 2024