Vishwali Mhasawade

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RESEARCH INTERESTS

I study algorithms, working at the intersection of causal inference, algorithmic fairness, and machine learning. I primarily focus on understanding the drivers of population health inequity and designing fair and equitable machine learning systems for mitigating health disparities.

EDUCATION

New York University   **New York, USA**
Ph.D. in Computer Science. Advisor: Rumi Chunara   Expected 05/2024
Master of Science in Computer Science. Advisor: Rumi Chunara   2017 - 2019

Pune University   **Pune, India**
Bachelor of Engineering in Computer Engineering   2013 - 2017

HONORS AND AWARDS

Google PhD Fellowship	2021 - 2024
University of Michigan: Future Leaders Summit	2023
University of Chicago: Rising Star in Data Science	2022
ACM Grad Cohort for Women	2021
New York University: School of Engineering Fellowship	2019 - 2020
New York University: Graduate Scholarship	2017 - 2019

PUBLICATIONS

1. Vishwali Mhasawade, Salman Rahman, Zoe Haskell-Craig, Rumi Chunara.
   Understanding Disparities in Post Hoc Machine Learning Explanation.
   In Proceedings of the ACM Conference on Fairness, Accountability, and Transparency (FAccT), 2024. [Link]

2. Vishwali Mhasawade, Alexander D'Amour, Stephen Pfohl.
   A Causal Perspective on Label Bias.
   In Proceedings of the ACM Conference on Fairness, Accountability, and Transparency (FAccT), 2024
   Workshop on Algorithmic Fairness through lens of time at NeurIPS, 2023.

3. Vishwali Mhasawade, Rumi Chunara.
   Disparate Effect Of Missing Mediators On Transportability of Causal Effects.
   American Causal Inference Conference, 2024 [Link]

4. Harvineet Singh, Vishwali Mhasawade, Rumi Chunara.
   Generalizability challenges of mortality risk prediction models: A retrospective analysis on a multi-center database.
   In PLOS Digital Health, 2022. [Link]

5. Vishwali Mhasawade, Yuan Zhao, Rumi Chunara
Machine learning and algorithmic fairness in public and population health.
In Nature Machine Intelligence, 2021. [Link]

6. Vishwali Mhasawade, Rumi Chunara.
Causal Multi-level Fairness.
In Proceedings of the AAAI/ACM Conference on Artificial Intelligence, Ethics, and Society (AIES), 2021. [Link]

7. Harvineet Singh, Rina Singh, Vishwali Mhasawade, Rumi Chunara.
Fairness Violations and Mitigation under Distribution Shift.
In Proceedings of the ACM Conference on Fairness, Accountability, and Transparency (FAccT), 2021.
Fair ML for Health workshop at NeurIPS, 2019. **Spotlight presentation**. [Link]

8. Vishwali Mhasawade, Nabeel Abdur Rehman, Rumi Chunara.
Population-aware Hierarchical Bayesian Domain Adaptation via Multi-component Invariant Learning.
In Proceedings of the ACM Conference on Health, Inference and Learning (CHIL), 2020.
Machine Learning for Health (ML4H) Workshop at NeurIPS, 2018. [Link]

9. Vishwali Mhasawade, Anas Elghafari, Dustin Duncan, Rumi Chunara.
Role of the Online and Built Social Environments in the expression of dining on Instagram.
In International Journal of Environmental Research and Public Health, 2020. [Link]

WORKSHOPS, PRE-PRINTS

1. Miao Zhang, Salman Rahman, Vishwali Mhasawade, Rumi Chunara.
Impact on Public Health Decision Making by Utilizing Big Data Without Domain Knowledge
arXiv preprint arXiv:2402.06059, 2024 [Link]

2. Stephen Pfohl, Natalie Harris, Chirag Nagpal, David Madras, Vishwali Mhasawade, Olawale Salaudeen, Katherine Heller, Sanmi Koyejo, Alexander D'Amour.
Understanding subgroup performance differences of fair predictors using causal models.
Workshop on Distribution Shift at NeurIPS, 2023.

3. Vishwali Mhasawade, Praveen Chandar, Ghazal Fazelnia, Benjamin Carterette.
Understanding User Podcast Consumption Using Sequential Treatment Effect Estimation.
Workshop on Causal Inference Challenges in Sequential Decision Making: Bridging Theory and Practice at NeurIPS, 2021.

4. Vishwali Mhasawade, Rumi Chunara.
Multi-Environment Functional Causal Models using Gaussian Processes.
Workshop on Causal Inference for Decision Making, ICLR, 2020.

5. Gregory W. Johnsen, Ling Lin, Lucia Yu, Andrew Dempsey, Vishwali Mhasawade, Daniel Jaroslawicz, Iddo Drori.
Explainable Musical Phrase Completion.
Joint Workshop on Machine Learning for Music at ICML, 2018. [Link]

6. Vishwali Mhasawade, Ildikó Emese Szabó, Melanie Tosik, Sheng-Fu Wang.
**Neural Networks and Quantifier Conservativity : Does Data Distribution affect
learnability?**
arXiv preprint arXiv:1809.05733, 2018. [Link]

WORK EXPERIENCE

Google Research	**San Francisco, USA**
Research Intern	05/2023 - 08/2023
Mentors: Dr. Stephen Pfohl and Dr. Alexander D'Amour	
Fiddler AI	**California, USA**
Applied Research Intern	05/2022 - 08/2022
Mentors: Dr. Hima Lakkaraju and Dr. Krishnaram Kenthapadi	
Spotify	**New York, USA**
Research Scientist Intern	06/2021 - 09/2021
Mentors: Dr. Praveen Chandar and Dr. Ghazal Fazelnia	
FairFrame Inc.	**New York, USA**
Co-Founder and Machine Learning Head	02/2018 - 11/2018
Winner of NYU $300K Entrepreneurs Challenge, 2018.	

POSITIONS OF RESPONSIBILITY

Internship Mentor: ARISE Program	**New York University**
Mentored high school students in a STEM research exposure program.	2019 - 2022
Teaching Assistant	**New York University**
Deep Learning (CS-GY 9223)	2018
Lab instructor	**New York University**
Capstone Undergraduate Course	2021 - 2024

INVITED TALKS

Institute of Artificial Intelligence for Digital Health, Weill Cornell Medicine	2024
Washington University, School of Medicine, St. Louis	2024
Health Policy and Data Science, Stanford University	2023
Machine Learning in Medicine Seminar Series, Cornell University	2023
Doctoral Colloquium, ACM Conference on Health, Inference, and Learning	2023
Doctoral Consortium, ACM Conference on Fairness Accountability and Transparency	2023

Future Leader in Responsible AI, University of Michigan   2023

Rising Stars in Data Science, University of Chicago   2022

Panelist: Data Science Interdisciplinary Research Cluster, University of Toronto   2021
Prediction, Machine Learning and Causal Inference: What does it mean for Population Health and Data Science?

Tutorial at ACM Conference on Health Inference and Learning   2020
Machine Learning in Population and Public Health.

SERVICE

Organizing Committee
Machine Learning for Health (ML4H), 2023.
Association for Women in Mathematics, 2021.
Reviewer
ACM FAccT 2024, 2023; ICLR, 2023, 2022; NeurIPS 2022,2021,2020; ICML, 2024, 2023, 2021; ACM CHIL, 2023, 2021, 2020; Machine Learning for Healthcare, 2023, 2022, 2021.
Machine Learning for Health (ML4H) workshop at NeurIPS, 2019, 2020, 2021.
Student Volunteer
ACM FAccT, 2022; AIES, 2021; WiML, NeurIPS, 2021.
Mentoring
Career Mentor, Machine Learning for Health, 2021.

TECHNICAL SKILLS

Programming Languages: (Proficient) Python; (Familiar) R, C++, Matlab, Javascript.
ML Frameworks: Tensorflow, PyTorch, Keras, Pyro, GPyTorch.
Applications and Tools: LaTex, git, MS Office, Bash Scripting.