OLAWALE SALAUDEEN

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APPOINTMENTS

Massachusetts Institute of Technology

September 2024 - Present

Postdoctoral Associate, Electrical Engineering & Computer Science

Cambridge, MA

EDUCATION

University of Illinois at Urbana-Champaign

August 2019 - August 2024

Ph.D. Candidate in Computer Science, advised by Sanmi Koyejo

Urbana, IL

Thesis: Towards Externally Valid Machine Learning: A Spurious Correlations Perspective

Stanford University

September 2022 - August 2024

Visiting Ph.D. Student in Computer Science, hosted by Sanmi Koyejo

Stanford, CA

Texas A&M University

August 2015 - May 2019

Bachelor of Science with honors in Mechanical Engineering

College Station, TX

Minors in Computer Science and Mathematics

REPRESENTATIVE PAPERS

* denotes equal contribution

- 3. ImageNot: A Contrast with ImageNet preserves model rankings. <u>Olawale Salaudeen</u>, Moritz Hardt. *Preprint. arXiv 2404.02112.*
- 2. Causally Inspired Regularization Enables Domain General Representations.

 Olawale Salaudeen, Oluwasanmi Koyejo. The International Conference on Artificial Intelligence and Statistics (AISTATS), 2024.
- Adapting to Latent Subgroup Shifts via Concepts and Proxies. *Ibrahim Alabdul-mohsin, *Nicole Chiou, *Alexander D'Amour, *Arthur Gretton, *Sanmi Koyejo, *Matt J. Kusner, *Stephen R. Pfohl, *Olawale Salaudeen, *Jessica Schrouff, *Katherine Tsai. The International Conference on Artificial Intelligence and Statistics (AISTATS), 2023.
 Authors listed in alphabetical order.

REFEREED PUBLICATIONS

- * denotes equal contribution
 - 7. Causally Inspired Regularization Enables Domain General Representations.

 <u>Olawale Salaudeen</u>, Oluwasanmi Koyejo. The International Conference on Artificial Intelligence and Statistics (AISTATS), 2024.
 - Proxy Methods for Domain Adaptation. Katherine Tsai, Stephen Pfohl, <u>Olawale Salaudeen</u>, Nicole Chiou, Matt J. Kustner, Alexander D'Amour, Sanmi Koyejo, Arthur Gretton. The International Conference on Artificial Intelligence and Statistics (AISTATS), 2024.
 - 5. Adapting to Latent Subgroup Shifts via Concepts and Proxies. *Ibrahim Alabdulmohsin, *Nicole Chiou, *Alexander D'Amour, *Arthur Gretton, *Sanmi Koyejo, *Matt J. Kusner, *Stephen R. Pfohl, *Olawale Salaudeen, *Jessica Schrouff, *Katherine Tsai. The International Conference on Artificial Intelligence and Statistics (AISTATS), 2023.

 Authors listed in alphabetical order.

- 4. Addressing Observational Biases in Algorithmic Fairness Assessments. Chirag Nagpal, Olawale Salaudeen, Sanmi Koyejo, Stephen Pfohl. Conference on Neural Information Processing Systems (NeurIPS), 2022. Workshop on Algorithmic Fairness through the Lens of Causality and Privacy (AFCP) (extended abstract).
- 3. Adapting to Shifts in Latent Confounders using Observed Concepts and Proxies. Matt J. Kusner, Ibrahim Alabdulmohsin, Stephen Pfohl, Olawale Salaudeen, Arthur Gretton, Sanmi Koyejo, Jessica Schrouff, Alexander D'Amour.

 International Conference on Machine Learning (ICML), 2022. Workshop on Principles of Distribution Shift (PODS)
- Ultra-fast 3D fMRI to explore cardiac-induced fluctuations in BOLD-based functional imaging. Brad Sutton, Aaron Anderson, Benjamin Zimmerman, Paul Camacho, Riwei Jin, Charles Marchini, <u>Olawale Salaudeen</u>, Natalie Ramsy, Davide Boido, Serge Charpak, Andrew Webb, Luisa Ciobanu. International Society for Magnetic Resonance in Medicine (ISMRM), 2022. (abstract).
- 1. Exploiting Causal Chains for Domain Generalization. <u>Olawale Salaudeen</u>, Sanmi Koyejo. Conference on Neural Information Processing Systems (NeurIPS), 2021. Workshop on Distribution Shifts Connecting Methods and Applications (DistShift).

PREPRINTS

1. ImageNot: A Contrast with ImageNet preserves model rankings. <u>Olawale Salaudeen</u>, Moritz Hardt. *Preprint. arXiv 2404.02112.*

SELECTED INVITED TALKS AND PRESENTATIONS

Research Trainee, NSF Miniature Brain Machinery at UIUC

GEM Associate Fellow, University of Illinois at Urbana-Champaign

Masters Fellowship Program (declined), Sandia National Laboratories

Beckman Institute Graduate Fellow, University of Illinois at Urbana-Champaign

Sloan Scholar, Alfred P. Sloan Foundation's Minority Ph.D. (MPHD) Program

6.	Towards Externally Valid Evaluation of AI Systems	
	$MobiliT.AI\ forum$	2024
	Shah Lab, Stanford University	2024
5.	Learning Domain General Predictors	
	$Simons\ Institute\ -\ Information-Theoretic\ Methods\ for\ Trustworthy\ Machine\ Learning$	2023
1.	Separating Neural Encoding and Decoding Pathways in fMRI by Disentangling Causal and causal Mechanisms	Anti-
	University of Illinois at Urbana-Champaign Minitature Brain Machinery Retreat	2022
3.	Denoising fMRI via probabilistic graphical model augmentation of ICA-AROMA	
	University of Illinois at Urbana-Champaign Beckman Institute Graduate Student Seminar	2022
	University of Illinois at Urbana-Champaign Minitature Brain Machinery Retreat	2021
2.	Automated Incorporation of Machine Learning (AIM)	
	Sandia National Laboratories MARTIANS End of Summer Symposia	2020
1.	Interpretable Recurrent Convolutional Neural Networks for Cyber Alert Triaging	
	Sandia National Laboratories MARTIANS End of Summer Symposia	2019

2021

2021

2020

2019

2019

^{*} denotes equal contribution

Mechanical Engineering Advisory Council Scholarship, Texas A&M University	2018
Foundation Excellence Award, Texas A&M University	2017
Pi Tau Sigma – Sigma Delta, National Mechanical Engineering Honors Society	2016
Craig and Galen Brown Honors College of Engineering, Texas A&M University	2015
Regents Scholar Program, Texas A&M University	2015

TEACHING

Data Visualization, Teaching Assistant – University of Illinois at Urbana-Champaign	2023
Foundations of Engineering – Python, Peer Teacher – Texas A&M University	2018-2019
Foundations of Engineering, Peer Teacher – Texas A&M University	2017-2018
Introduction to Microcontrollers, Co-Instructor – Sandia National Labs HMTech	2018, 2019

PREVIOUS EMPLOYMENT

Research Intern with Dr. Moritz Hardt Max Planck Institute for Intelligent Systems Social Foundations of Computing	09/2023 - 01/2024 Tübingen, Germany
Machine Learning Intern on Autonomous Vehicle Behaviors $Cruise\ LLC$	Summer 2023 San Francisco, CA
Student Researcher with $Dr.$ $Alex$ $D'Amour$ $Google$ $Brain$	05/2022 - $12/2022$ Cambridge, MA
R&D Intern with Dr. Eric Goodman Sandia National Laboratories	05/2017 - $04/2022Albuquerque, NM$

TEACHING AND MENTORSHIP

Uzma Hamid (LINXS @ Stanford University, Summer 2024) Vikram Duvvur (Undergrad @ UIUC, 2021-2022), Next MS in Machine Learning @ CMU Ahmed Elsayed (DREU @ UIUC, Summer 2021), Next Software Engineer at Microsoft

SELECTED SERVICE AND LEADERSHIP

Conference/Workshop Reviewer: NeurIPS 2022-24, ICML 2022-24 (top 10% reviewer award), AISTATS 2022, NeurIPS AFCP Workshop 2022, NeurIPS (BAI) Workshop 2021.

Conference/Workshop Area Chair: ICML TF2M 2024.

Texas A&M University Robotics Team and Leadership, President

Journal Reviewer: JMLR 2023-24.

University of Illinois at Urbana-Champaign

Blacks, Indigenous, and Latinx in Tech (BUILT), Executive Board	2022 - 2024			
Directed Reading Program, Mentor	2022 - 2024			
Graduate Study Committee, 1 of 2 Graduate Student Members	2022			
Broadening Participation in Computing, Engagement Subcommittee Member	2021 - 2022			
Graduates Engineers Diversifying Illinois, Mentor	2020 - 2022			
Distributed Research Experiences for Undergraduates (DREU)	2021			
Institute for Inclusion, Diversity, Equity, and Access (IDEA), Affiliate Member	2020 - 2024			
Texas A&M University				
Craig and Galen Brown Engineering Honors Program, Executive Committee Chair	2018-2019			

2018-2019

$\mathbf{External}$

The Institute for African-American Mentoring in Computing Sciences, Mentor

2023-Present