Usha Bhalla

usha_bhalla@g.harvard.edu, ushabhalla.github.io

EDUCATION Harvard University 2022 – Present Ph.D. in Computer Science GPA: 4.00

Advised by Prof. Hima Lakkaraju

Brown University 2018 – 2022 Sc.B. in Computer Science, with Honors GPA: 4.00

Magna Cum Laude, highest honor awarded at Brown Advised by Prof. Chen Sun

FELLOWSHIPS & AWARDS

Kempner Institute Graduate Research Fellowship

2023

Full funding for tuition and stipend from second through sixth year of graduate studies

Brown CS Senior Award, Brown

2022

Monetary prize awarded for "academic accomplishments as well as service to the department"

Sigma Xi 2022

International science and engineering honor society member with high academic standing and research potential.

INVITED INFORMS Annual Meeting
TALKS Kempner Institute All-Hands Meeting

10/2024

01/2025

PUBLICATIONS U. Bhalla, S. Srinivas, A. Ghandeharioun, H. Lakkaraju. "Towards Unifying Interpretability and Control: Evaluation via Intervention" *Under review*, *PDF upon request*, 2024

- U. Bhalla*, A. Oesterling*, S. Srinivas, F. P. Calmon; H. Lakkaraju: "Interpreting CLIP with Sparse Linear Concept Embeddings (SpLiCE)" NeurIPS 2024, 2024
- A. Oesterling*, U. Bhalla*, S. Venkatasubramanian, H. Lakkaraju. "Operationalizing the Blueprint for an AI Bill of Rights: Recommendations for Practitioners, Researchers, and Policy Makers" *Preprint*, 2024
- J. So*, **U. Bhalla***, S. Warchol*, H.B. Tedasse, H. Das, K. Gajos. "Patient & Provider Centered Trustworthy ML: An Interview Study on Birth Control Recommendation Systems" *Preprint*, *PDF upon request*, 2024
- U. Bhalla*, S. Srinivas*, H. Lakkaraju. "Discriminable Feature Attributions: A Bridge between Post Hoc Explainability and Inherent Interpretability" NeurIPS, 2023
- C. Badrinath, **U. Bhalla**, A. Oesterling, S. Srinivas, H. Lakkaraju. "All Roads Lead to Rome? Exploring Representational Similarities Between Latent Spaces of Generative Image Models" *ICML 2024 Workshops GRaM*, *SPIGM*, *HiLD*, 2024
- T. Yun, U. Bhalla, E. Pavlick, C. Sun. "Do Vision-Language Pretrained Models Learn Compositional Concepts?" *TMLR*, 2023

 $\bf U.~Bhalla*,~N.~Sehgal*,~I.~Puri*. "Reconsidering the Algorithmic Fairness of Race Adjustment in Pulmonary Function Equations" AAAI AI For Social Good Workshop, 2023$

N. Semmineh*, **U. Bhalla***, L. Bell, A. Stokes, M. Lee, L. Hu, J.L. Boxerman, C. Quarles. "Analysis of Accuracy and Precision of Recommended Protocols for Dynamic Susceptibility Contrast MRI for Brain Metastases." *ISMRM 2020.** denotes equal contribution

RESEARCH
EXPERIENCE

Microsoft Research

Summer 2021

Research Intern

NSF REU - Rosetta Commons

Summer 2020

 $REU\ Fellow$

Barrow Neurological Institute

Summer 2019

Research Intern, Translation Bioimaging Lab

TEACHING

Graduate Teaching Fellow

APCOMP 297R - Computational Science and Engineering Capstone

Fall 2023

Head Undergraduate Teaching Assistant

CS1470 - Deep Learning CS0030 - CS for Social Sciences Fall 2021 Fall 2020

Undergraduate Teaching Assistant

CS0220 - Discrete Math and Probability

Spring 2021

SERVICE

Program Chair / Organizer

& MENTORING NeurIPS Workshop on Regulatable ML

2023, 2024

Reviewer

NeurIPS, ICLR, ICML

2024

Program Committee

ICML Workshop on Mechanistic Interpretability	2024
NeurIPS Workshop on XAI in Action	2023, 2024
NeurIPS Workshop on Attribution at Scale	2023, 2024

Mentoring

Women in STEM Mentor (Harvard)	2022 - Present
Women in Science & Engineering Mentor (Brown)	2020 - 2022
Women in Computer Science Mentor (Brown)	2020 - 2022