

Apr 5, 2024

Exploring and Exploiting Fairness in AI/ML: Algorithms and Applications

ABSTRACT

AI/ML algorithms have made significant advancements and are extensively used in critical applications such as employment, personalized medicine, and more. Despite the success, ensuring fairness in AI/ML remains a significant challenge. These algorithms may inadvertently perpetuate or even magnify biases in the data, resulting in discriminatory outcomes against specific groups or individuals. This issue hinders the widespread adoption of AI/ML in high-stakes applications. This talk will explore the concept of fairness in AI/ML from a computational perspective, encompassing the measurement, detection, and mitigation of unfairness to address diverse challenges throughout the AI/ML life cycle. The speaker will first introduce real-world examples, fundamental concepts and the existing work. The speaker will also focus on the current progress of her research, specifically addressing fairness at three key stages in AI/ML: enhancing data quality, refining algorithmic design, and optimizing model deployment. The talk will be concluded by the future research plan.



Na Zou

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Seminar Details

Friday, Apr 5, 2024
2:30pm – 4:00pm

UH Science Building
Room S105

Online via Teams

<https://www.cive.uh.edu/research/beyer-distinguished-lecture>

BIOGRAPHY

Dr. Na Zou is an Assistant Professor in Industrial Engineering at University of Houston. Her research is to develop effective, efficient and fair AI/ML algorithms for tackling data challenges raised by large-scale, dynamic and networked data from various real-world information systems. Specifically, Dr. Zou's research focuses on fairness in machine learning, interpretable machine learning, transfer learning, and network modeling and inference. The research projects have resulted in publications at prestigious venues such as Technometrics, IISE Transactions and ACM Transactions, including one Best Paper Finalist and one Best Student Paper Finalist at INFORMS QSR section, two featured articles at ISE Magazine and one student innovation award at AMIA annual symposium. She was the recipient of IEEE Irv Kaufman Award, Texas A&M Institute of Data Science Career Initiation Fellow and NSF CAREER Award.