

Keynote: On Fairness and Validity in AI-Assisted Hiring

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In this talk, I will examine the widespread use of AI systems in hiring and employment, highlighting where these tools can be helpful and where they raise concerns around discrimination and validity. I will focus on three lines of work.

First, I will provide an overview of fairness in ranking, offering a perspective that connects formal definitions and algorithmic techniques to the value frameworks that motivate fairness interventions, and to the technical choices that shape the behavior and outcomes of these methods. Second, I will discuss algorithmic recourse, which aims to help individuals reverse negative decisions—such as being screened out by an automated hiring system. I will highlight recent work exploring how resource constraints (i.e., a limited number of favorable outcomes) and competition influence the reliability and fairness of recourse over time. Third, I will present findings from an audit of two commercial systems — Humantic AI and Crystal — which claim to infer job-seeker personality traits from resumes and social media data. I will describe our audit methodology and show that both systems exhibit instability in key measurement facets, rendering them unsuitable as valid instruments for pre-hire assessment.

I will conclude with a discussion of emerging legal and regulatory developments in the U.S. aimed at curbing the unaccountable use of AI in hiring, and reflect on what it would take to ensure these systems are safe, fair, and socially sustainable in this critical domain.

Biography. Julia is an Institute Associate Professor of Computer Science and Engineering at the Tandon School of Engineering, Associate Professor of Data Science at the Center for Data Science, and Director of the Center for Responsible AI. Julia's goal is to make "Responsible AI" synonymous with "AI". She works towards this goal by engaging in academic research, education and technology policy, and by speaking about the benefits and harms of AI to practitioners and members of the public.

Julia's research interests include AI ethics and legal compliance, and data management and AI systems. In addition to academic publications, she has written for the New York Times, the Wall Street Journal, and Le Monde. Julia has been teaching courses on responsible data science and AI to students, practitioners and the general public. She is a co-author of "Data, Responsibly", an award-winning comic book series for data science enthusiasts, and "We are AI", a comic book series for the general audience.

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Julia is engaged in technology policy and regulation in the US and internationally, having served on the New York City Automated Decision Systems Task Force, by mayoral appointment, among other roles.

Julia received her M.S. and Ph.D. degrees in Computer Science from Columbia University, and a B.S. in Computer Science and in Mathematics & Statistics from the University of Massachusetts at Amherst. She is a recipient of the NSF CAREER Award and a Senior Member of the ACM.