"ENHANCING HUMAN-AI DECISION-MAKING WITH VISUALIZATION"

PRESENTED BY: Adam Perer, Assistant Professor, Carnegie Mellon University, Human-Computer Interaction Institute

ABSTRACT: Emerging datasets and AI algorithms present an opportunity to augment domain experts when making high-stakes decisions. However, there are many examples, from healthcare to social services, where such technology fails to lead to better decisions. In this talk, I will showcase how effective data visualization can provide an important lens to promote the alignment of decision-makers and algorithms for human-AI decision-making. I will begin by introducing several tools built within my Data Interaction Group to support model developers and data scientists when ensuring models behave as experts expect. Then, I will focus on a particular high-stakes decision-making use case: an AI system to assist with sepsis, a life-threatening condition in which decisional uncertainty is common, treatment practices vary widely, and poor outcomes can occur even with optimal decisions. I will then reflect on future research directions for improving human-AI collaboration in decision-making.

BIO: Adam Perer is an Assistant Professor at Carnegie Mellon University, where he is a member of the Human-Computer Interaction Institute and co-directs the Data Interaction Group. His research integrates data visualization and machine learning techniques to create interactive visual systems that help users make sense of big data. Lately, his research has focused on human-centered data science and extracting insights from clinical data to support data-driven medicine. This work has been published at premier venues in visualization, human-computer interaction, and medical informatics. He holds a Ph.D. in Computer Science from the University of Maryland, College Park.

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