Translational AI Center (TrAC) Seminar Spring 2025

Jundi Liu

April 1st at 1:00 PM (US Central Time)

Location and zoom link: https://trac-ai.iastate.edu/event/trac-seminar-series-jundi-liu/

Towards Human-centered and Trust-aware Autonomous Systems

Abstract

Over the past decade, autonomous systems have transformed how people work and live. Yet, despite their growing market penetration, user acceptance and effective interaction remain challenging. Trust is a critical factor influencing acceptance, and designing systems that can predict and optimize trust dynamics is essential to unlocking their full potential. Traditional human-in-the-loop learning frameworks often treat users as data generators, limiting our understanding of human cognitive processes and predictive capabilities. In this talk, I will present our recent work on trust-aware autonomous systems. By conducting human subject studies, we model human cognition and behaviors, and leverage these insights to optimize system performance through a human-in-the-loop approach. Our proposed frameworks pave the way for developing future human-centered, trust-aware systems that dynamically sense and respond to users' states.

Short Bio

Dr. Jundi Liu is an Assistant Professor in the Department of Industrial and Manufacturing Systems Engineering at Iowa State University. Before joining ISU, he was a Postdoctoral Research Fellow in the Department of Industrial and Operations Engineering at the University of Michigan. He received his Ph.D. and M.S. degrees from the University of Washington in Industrial and Systems Engineering and his B.S. in Computer Science and Engineering from Shanghai Jiao Tong University. Jundi's research focuses on designing and integrating human models into learning frameworks with applications to customized vehicle automation, and human-robot interaction.

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