School of Engineering Seminar

SAN FRANCISCO STATE UNIVERSITY

Speaker:

Alyssa Kubota
Ph.D. Candidate,
Department of Computer Science and Engineering,
University of California San Diego

Date:
Thursday
Mar. 9, 2023
1:00-1:50 PM

Location:
Hensill Hall 803

Robot Behavior Adaptation for Personalized Longitudinal Interaction

Abstract: Robots are rapidly entering everyday environments including homes, hospitals, and schools, where they have shown great promise for supporting people in their daily lives, such as improving access to healthcare and education. Deploying these robots longitudinally and autonomously in these real-world settings requires them to continuously learn and adapt to people. The goal of my research is to address fundamental challenges in robot design, learning, and adaptation in order to enable more safe, effective, and contextualized human-robot interaction for autonomous robots.

In this talk, I will first discuss my work on developing new methods to recognize complex motion reflective of real-world activities in order to enable robots to accurately understand human intention. I will then talk about my work on robot decision-making, including my robotic system which makes control synthesis accessible to novice programmers. This system allows all stakeholders to quickly and easily specify complex robot behaviors through a tangible specification interface. Finally, I will discuss my work on developing an autonomous robot which extends clinical healthcare interventions to the home, and longitudinally supports goal progress and motivation. My work will enable robot systems to learn and adapt to people in real world environments, transforming how technology supports and empowers people in their everyday lives.

***Speaker Bio*:** Alyssa Kubota is a final-year Ph.D. student in Computer Science and Engineering at UC San Diego. Her research interests are at the intersection of robotics, artificial intelligence, and pervasive health. She works on developing embodied AI systems that enable robots to longitudinally and autonomously learn and adapt to people in real world environments. She has been awarded two Best Paper Award Honorable Mentions for her work at the HRI and CSCW conferences, and an exceptional teaching award at UCSD. Prior to the Ph.D., she studied Computer Science as an undergraduate at Harvey Mudd.

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