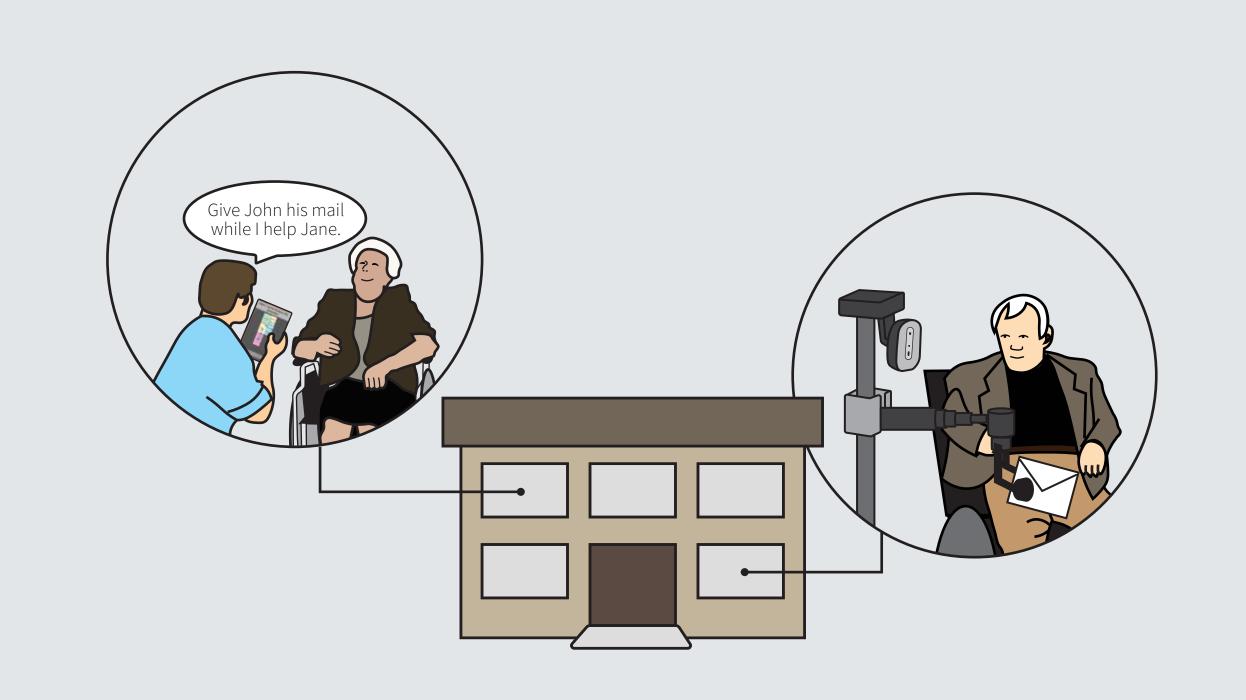
End-User Development for Personalized Care Robots



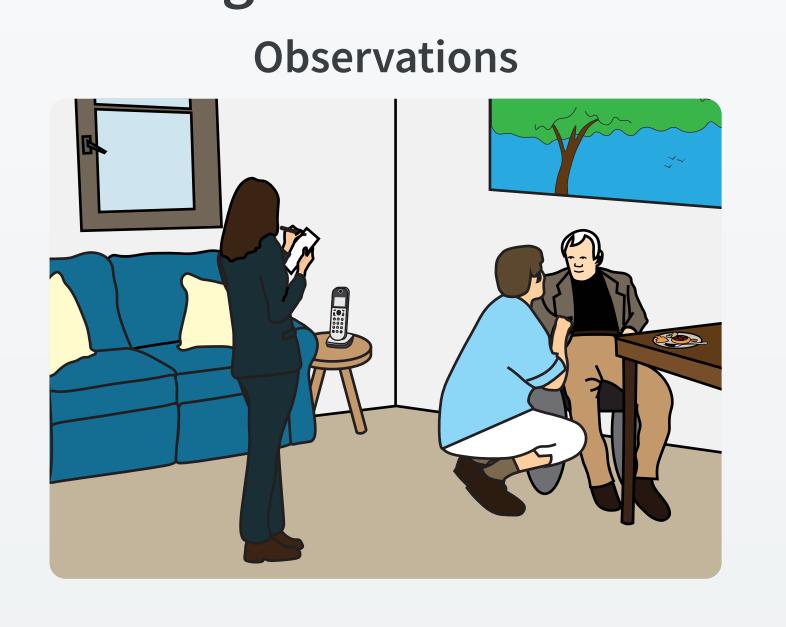
Laura Stegner University of Wisconsin-Madison

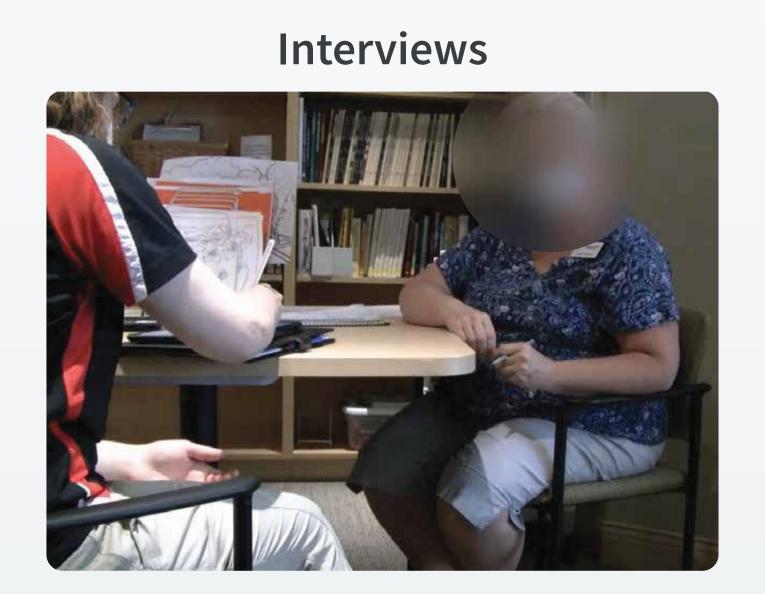


My goal is to design, develop, and evaluate end-user development (EUD) solutions that support personalized robots in the care ecosystem.

Understanding the Care Ecosystem

Working directly with older adults and caregivers of a local assisted living facility, we conducted a series of design studies to understand each stakeholders' needs and envision what systems are necessary to successfully integrate a robot into existing workflows and habits.

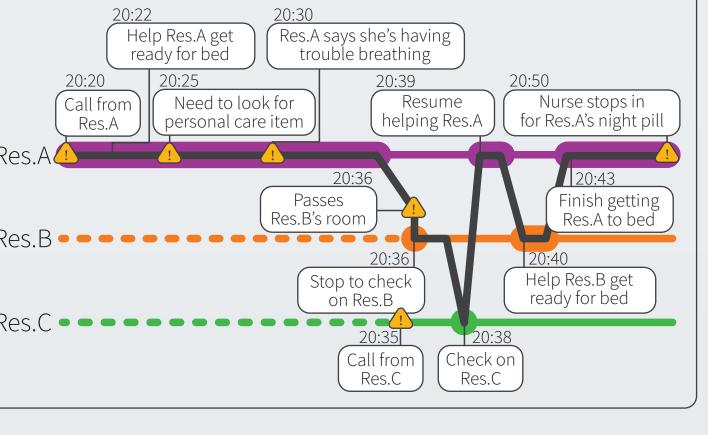


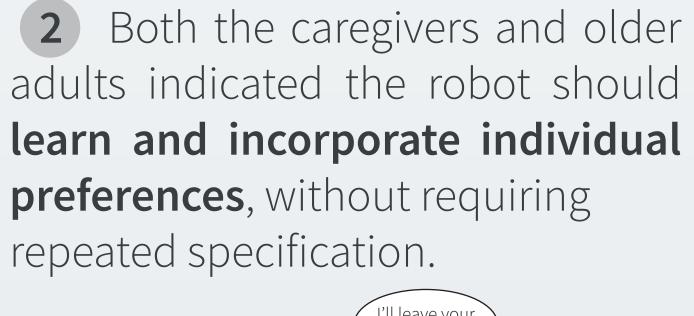




Key Findings:

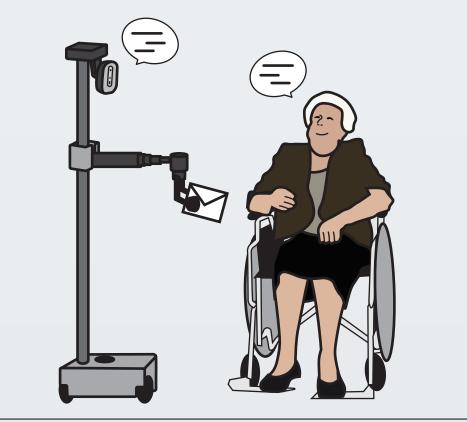
Based on existing caregiver workflows, the system needs to support quick, on-the-fly inputs, and it must also guarantee safe and appropriate robot actions.



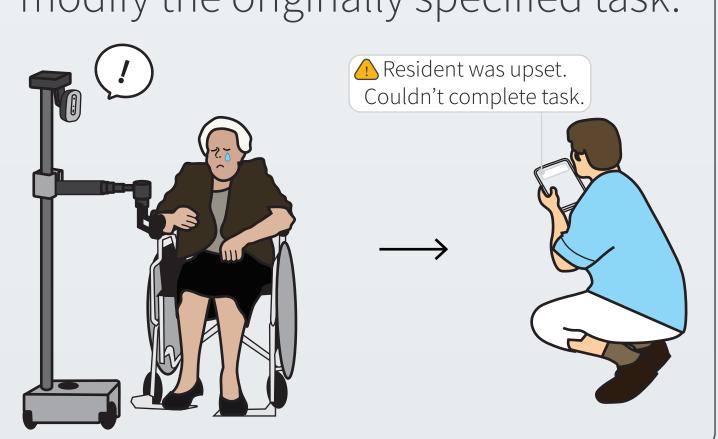




3 To accommodate a variety of physical and cognative abilities of older adults, daily interactions with the robot should support simple, natural inputs.

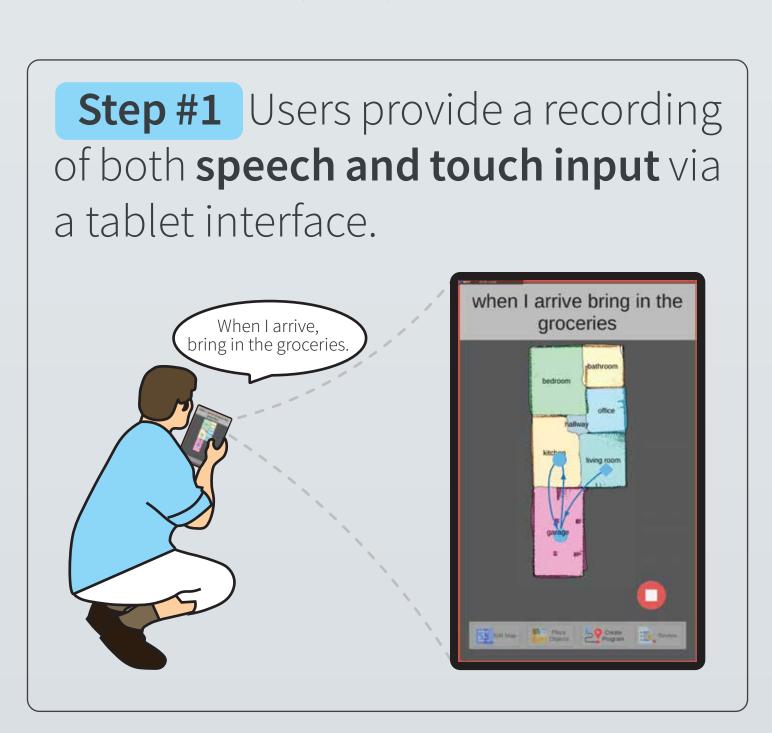


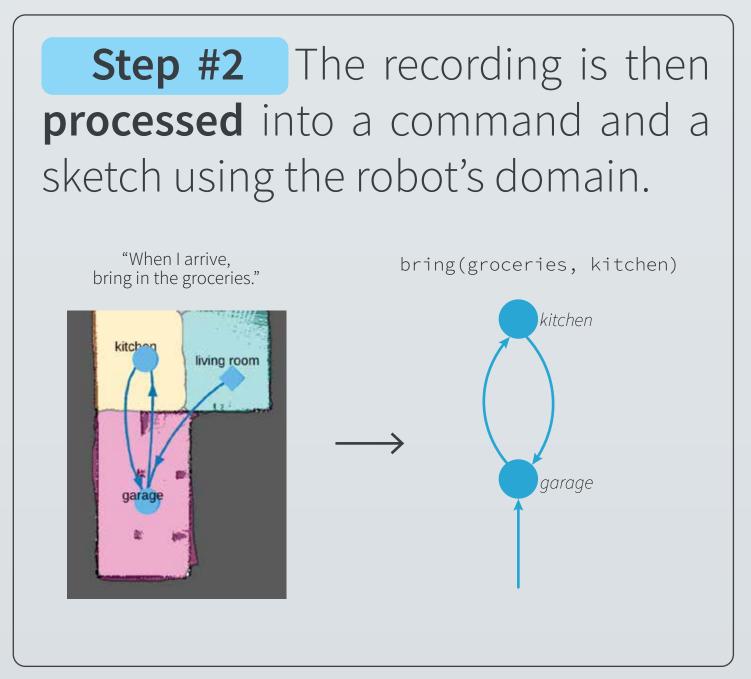
Because care enviornments can change rapidly, the robot must exhibit context awareness to act appropriately, even if it must modify the originally specified task.

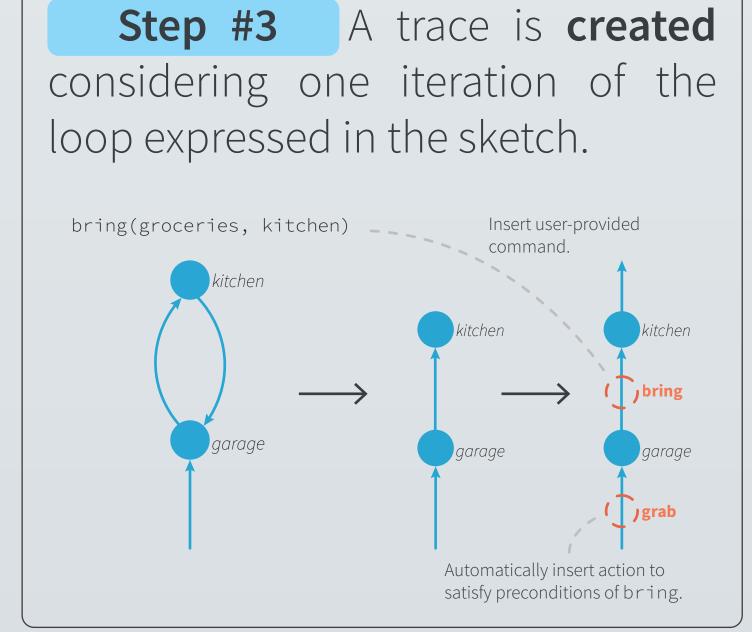


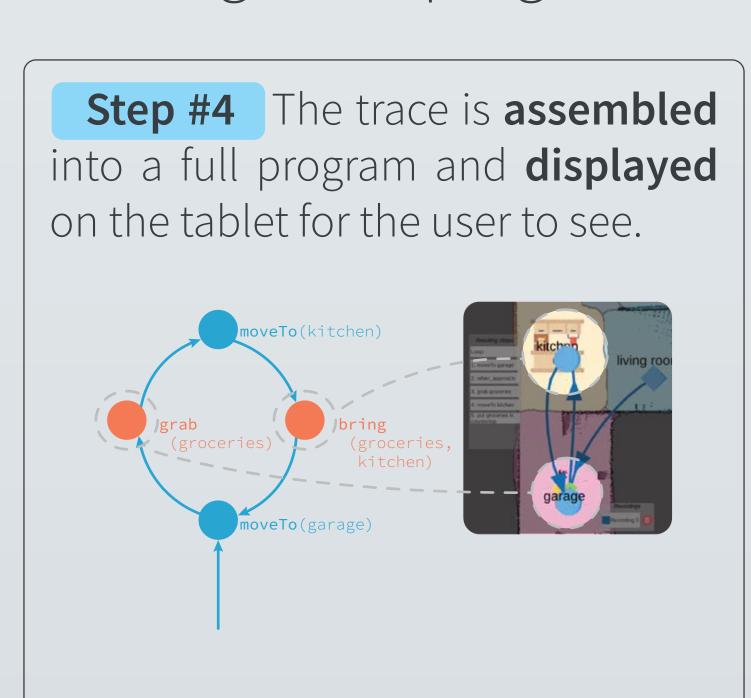
Future Work: Building & Evaluating Solutions

Based on my foundational work, I propose that end-user development (EUD) could be a tool to give stakeholders the necessary control to personalize a care robot's behaviors and actions. These tools will use a combination of interfaces, AI, and formal methods. This work will build on our previous research on sketching robot programs:















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