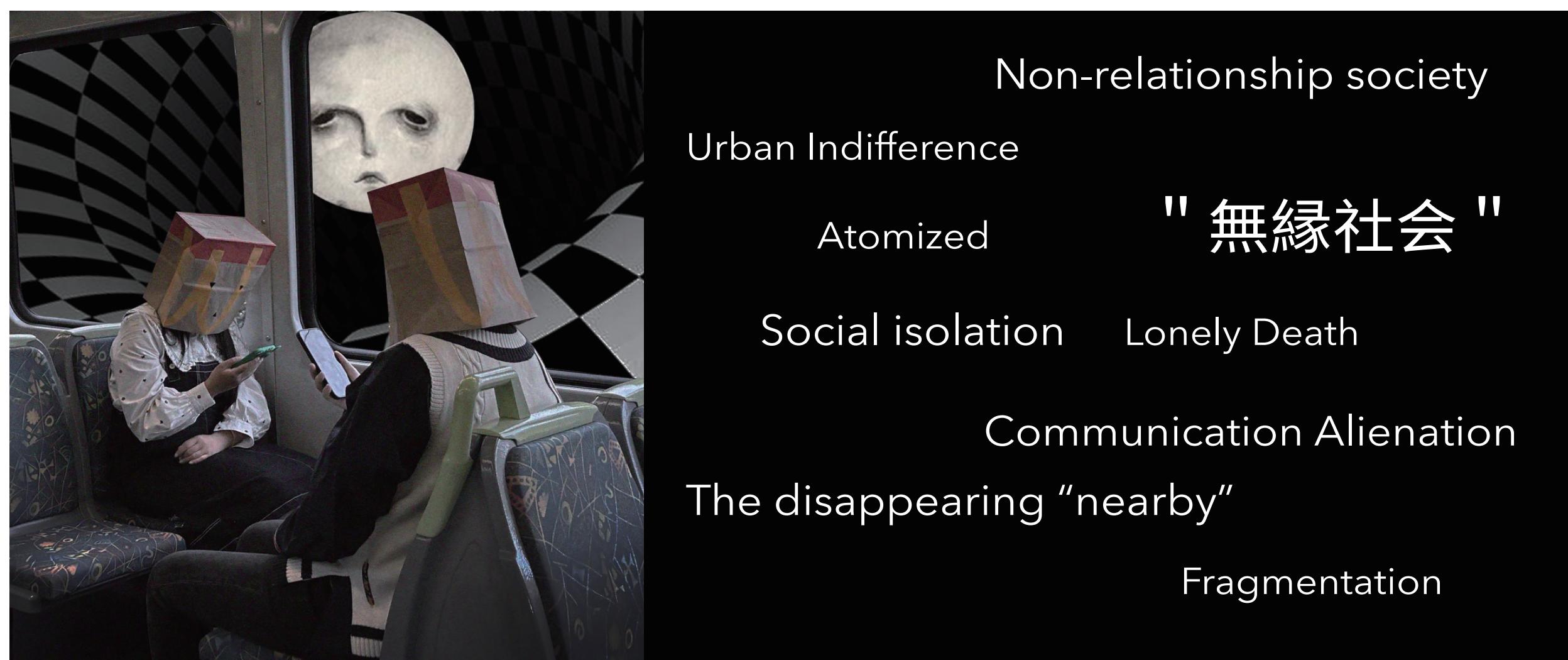


From Isolation to Connection: Community Service Robots for Social Cohesion and Sustainability

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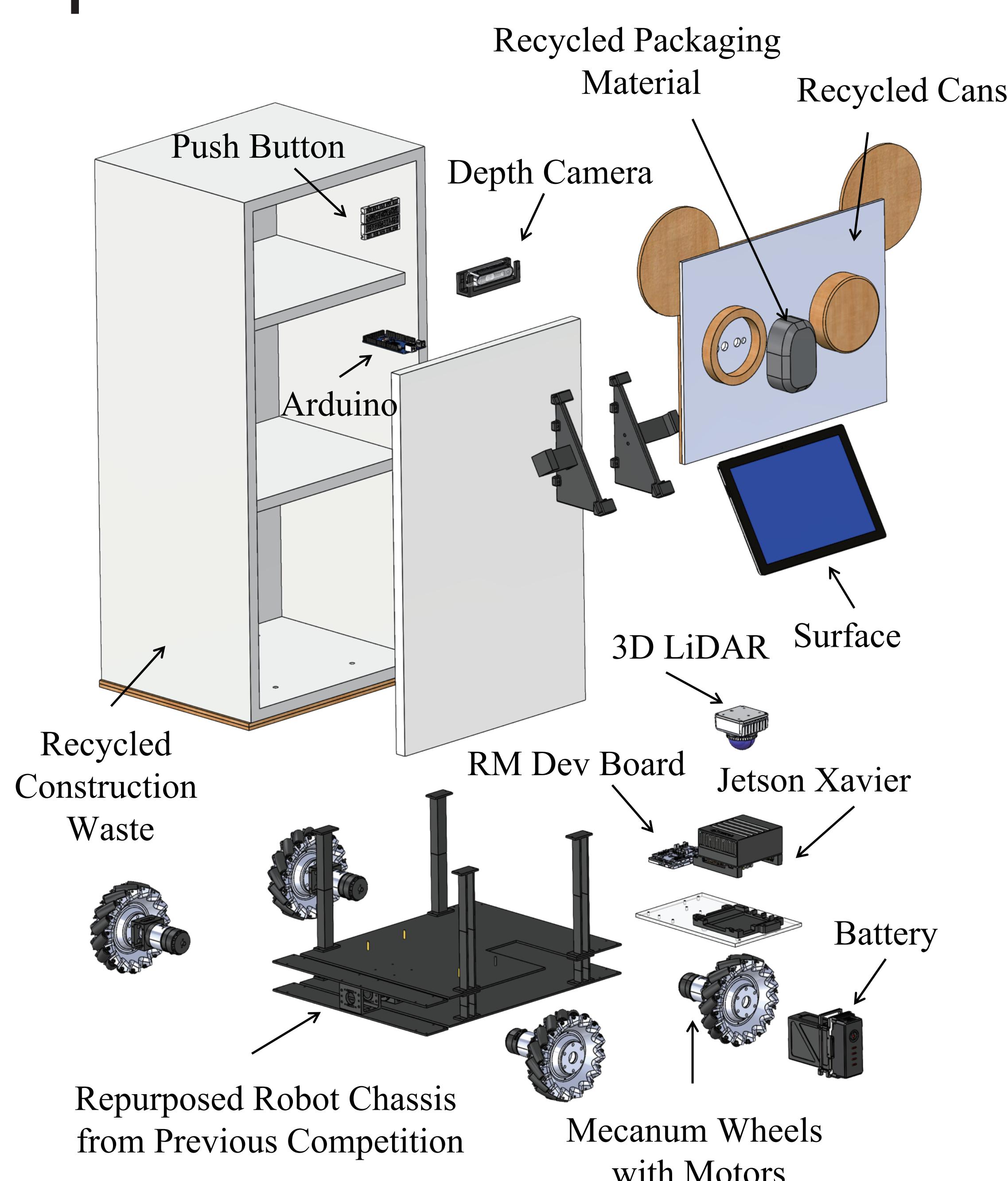
Robots for a Sustainable World

Motivation



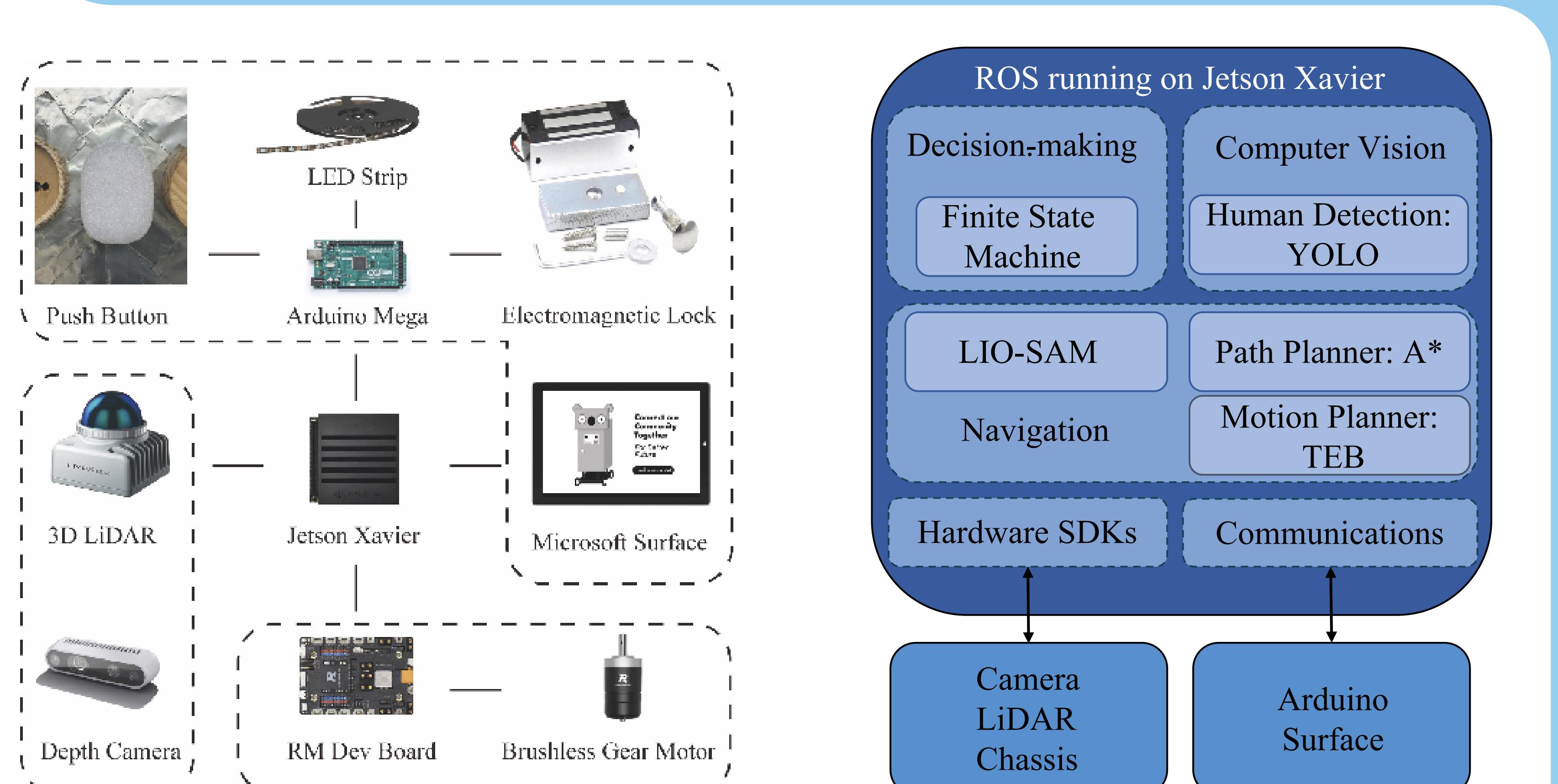
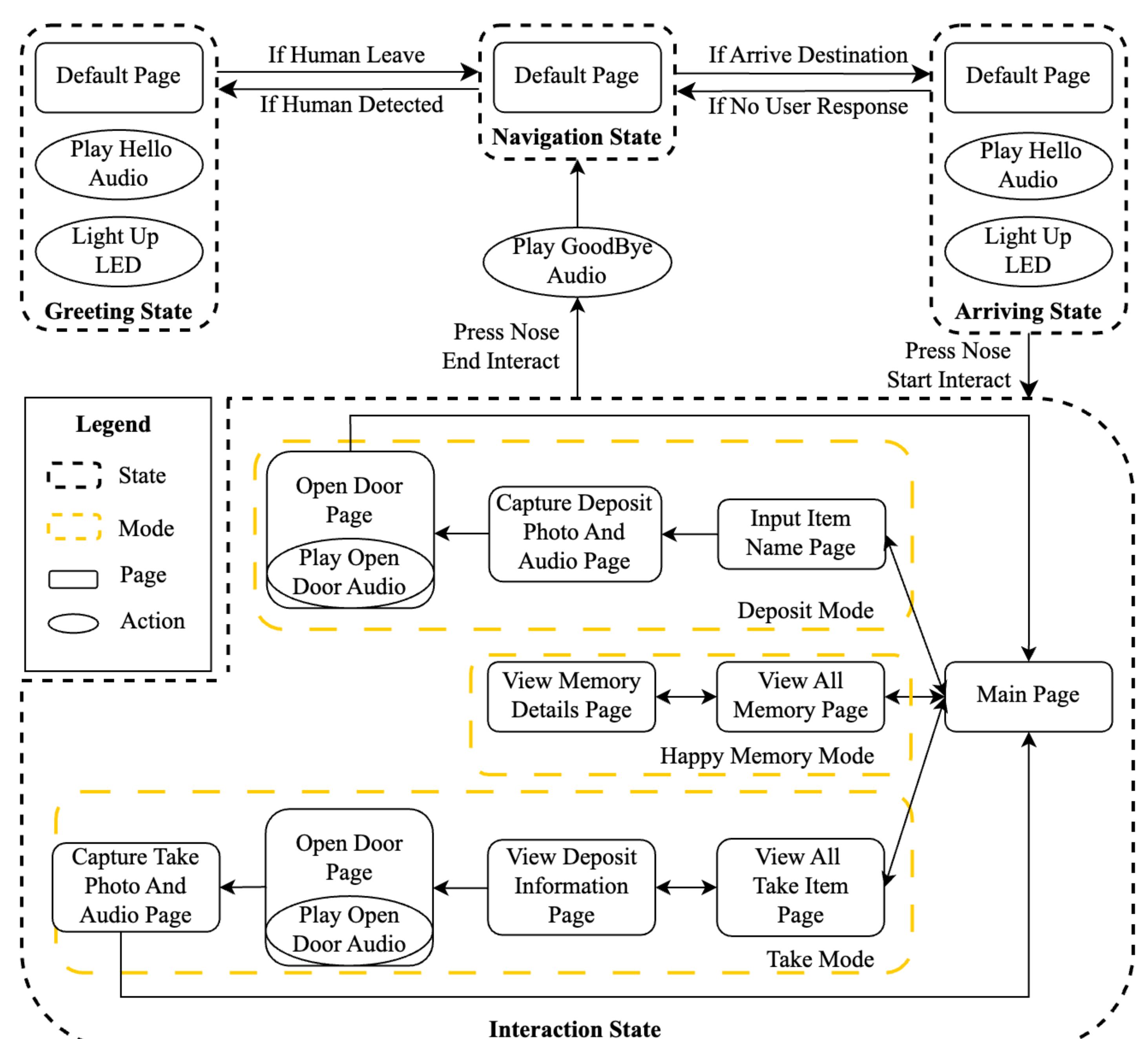
- Social alienation has become a defining feature of urban life over a century.
- The increased mobility nowadays has led to greater uncertainty and instability in modern communities, resulting in more fragmented and atomized interpersonal relationships.
- Promoting positive social connections is vital, as they strongly correlate with increased collective happiness.
- Although concerns exist that digital trends and service robots reduce in-person contact, these technologies can be repurposed to foster community engagement and shared memories.
- In this work, we introduce the concept of community-sharing service robots to encourage residents to share items they no longer need with their neighbors, fostering participation and social interaction.

Implementation



Design and Interaction

- Kindness and sharing are universal traits that transcend the language and cultural differences. The project leverages the concept of the "gift" to mobilize surplus assets, share the memories, and build community bonds and nurture neighborhood care. Unclaimed items are redirected to charity shops, extending their life cycle and reducing waste.
- An autonomous robot, named Neighbor Koala, is designed as a mobile storage unit with a touchscreen interface and a nose button for initiating interactions.
- It can autonomously navigate predefined community routes, greeting nearby residents and notifying them upon arrival. In its interaction state, users can deposit or pick up items and share messages or photos, creating a record of "Happy Memories" while the robot continues its service.



Conclusion and future work

- The concept proposes using robotics to foster community connections and a sense of belonging in modern urban life by creating collective memory and shared public narratives.
- By donating unclaimed items to second-hand stores, the robot supports an eco-friendly cycle of production, consumption, and social well-being.
- Although the current prototype demonstrates feasibility, future work will enhance interactions, mobility, and participatory design while assessing social impact.

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