

# Enhancing Privacy Awareness and Digital Skills in Smart Home Device Users with Privacy Assistant: A Conversational Interface for Older Adults

## Background and aims:

With the increasing popularity of smart speakers, it is a concern that many users lack an understanding of how their data are collected and used, and how to configure their privacy settings. We have found evidence of cognitive dissonance around privacy settings – despite concern about privacy being high, people report not trying to change their settings. This is particularly true for users who are more likely to have lower digital skills, such as older people. We developed Privacy Assistant, a novel conversational interface designed to empower people to understand and configure their privacy settings on voice assistants.

## Methods:

In our study we explored peoples' perceptions and understanding of privacy on smart speaker devices, and used this to develop an Amazon Skill that guides users through the privacy settings, focusing on key features like voice recordings, location, and voice purchasing. Taking a user-centered design approach, we iteratively developed the prototype through two successive rounds of feedback with end-users (older adults who own smart speakers).

## Findings:

Our results indicated that awareness of current privacy settings was low and most people had not attempted to change their settings from default. We found that participants preferred the Privacy Assistant to standard configuration procedures (i.e., through an app or webpage). The Privacy Assistant effectively increased participants' knowledge and awareness of privacy settings and data management on voice assistants.

## Conclusion and implications:

Privacy Assistant demonstrates the potential to improve privacy awareness and digital skills in older adults using smart home devices. By offering a more accessible and engaging alternative to traditional configuration methods, Privacy Assistant can help bridge the gap in understanding and empower users to make informed decisions about their privacy settings. Future research can explore the effectiveness of the Privacy Assistant across other demographics and smart home devices.