

Speech-enabled intelligent mobile interfaces to support storytelling

Benett Axtell¹, Cosmin Munteanu^{1,2}

¹University of Toronto | TAGlab

²University of Toronto Mississauga | Institute of Communication, Culture, Information and Technology



Research Questions

How can digital tools best increase socialization and communication for seniors?

What are the socio-emotional benefits of digital storytelling?

How does multimodal interaction enhance interfaces for older adults?

How can speech recognition be improved for digital storytelling and reading applications?

How do seniors want to tell and save their family stories?

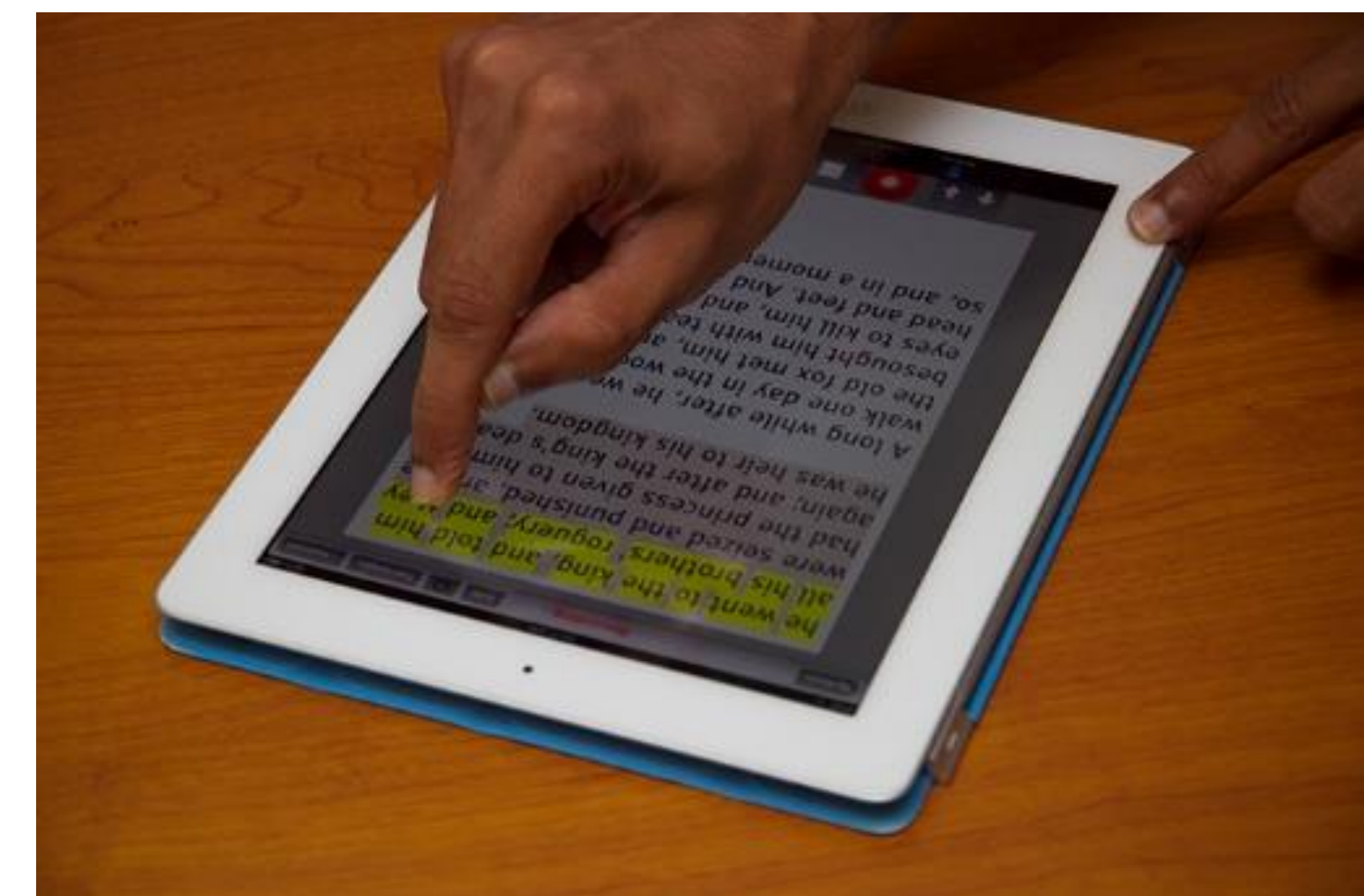
Other Collaborators and Students:

Carrie Demmans Epp,
Keerthika Ravinthiran,
Yomna Aly, Elman
Mansimov, Jaisie Sin

The ALLT Project:

Interactive metaphors to support collocated reading and storytelling

Supporting **collaborative reading** by allowing an older adult to listen and read along to a recording by a loved one



- Significant results found for assistive interaction metaphors at the sentence level
- Further analysis in progress using forced alignment to measure user speech and touch synchronization
- Future ALLT work may include:
 - Real-time forced alignment guidance
 - Combined forced alignment and touch interaction

Future Work

Using **digital storytelling** with family photographs to increase socialization and communication in seniors



- Users-first approach with participatory design
- Digital family photos storytelling space with dynamic photo clustering and filtering based on spoken story
- Motivating storytelling by creating artefacts:
 - Saved multimedia stories to be shared
 - Automatic photo tagging for documentation