

Pilot Study 'Assistive Technologies and Visual Impairment'

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Funder: Bayes Centre

Results in relation to the aims of the pilot study:

1. *Use interaction analysis to understand how AI-based technologies are being adopted by VI people, and where the societal challenges of such adoption lie.*

Part A

- Searched for and collected secondary data from Youtube. Two genres: blogs documenting everyday life which involved ATs and VI reviewers testing ATs for other users.
- Raised questions on AI organisation of assistance: AI apps on-device (e.g. Seeing AI) or human assistance utilising AI (e.g. AIRA)
- Studies based on testing throwing up common yet interesting practices: IDing groceries at home & in shops, reading distant street signs
- Studies based on blogs providing insights into overlooked yet common situations: summoning and getting into a taxi, decorating the home, shopping for clothes

Part B

- Recruited participants for demo-sessions. Walking & wayfinding in familiar environments, and using AT at home.
2. *Employ a participatory approach to undertake the pilot study and establish links with stakeholders for the future project.*
 - As expected VI are over-researched and cautious about entering into new research relationships.
 - Yet, involvement with planning of project at application stage welcomed. Avoiding volunteer relationship with project and suggestion of remunerating VI participants for their time.
 - Finding shared projects - Visibility Scotland undertaking studies of changing urban street infrastructure in relation to recent pedestrianisation and cycling
 3. *Conduct a multi-stakeholder workshop to develop the research methods and knowledge exchange for the future project.*

Workshop was held in December 2021. Hybrid attendance – which in itself raised interesting issues for VI involvement. Aim is produce brief and extended format podcast from audio recordings.

Multiple lessons learnt.

Running the workshop: whiteboard based group workshop tools like MIRO are best avoided, object based activities might have some value; pairing sighted with VI is helpful. Develop workshops structures that are centred around audio yet allow for 'post-it notes' etc.

On Assistive Technologies & AI:

- On navigating the environment - problems of transitions, moving environments
- Interface changes – how to help VI users deal with rearrangements to interfaces
- Having VI helpers for learning and assisting with ATs.

What next

Data sessions to look at video data and trigger networking with other EMCA researchers. Bayes are exploring potential UoE technology partners for us. Bayes suggested developing proposal from early stages with one UKRI council, most likely EPSRC.

Workshop with Alex Taylor at City University and Sarah Bell at Exeter University to make decisions around funder and roles in project writing.

Paper given at panel at Atypical Interaction Conference, Newcastle, 2022