

Augmented Reality for Older Adults: The effect of age on the use of AR systems

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As adults get older, their cognitive, perceptual, physical and motor abilities decline and they might suffer from a wide range of disabilities such as: vision problems, hearing problems, decline in working memory, divided attention and information processing speed.

Some of these disabilities affect and create difficulties for older adults to interact with technology and might lead to feelings like anxiety regarding the use of technology. On the other hand, many studies indicate that technology introduces various opportunities to assist older adults,

Augmented Reality (AR) is a novel technology in which virtual elements are added to the reality, interactively and in real time. We believe that AR poses both an opportunity for older adult as a support tool and a challenge in designing it correctly. The hope is that AR can be used as another tool to maintain older adult's independency and mobility and improving their quality of life.

Objectives: To explore how do older adults use and understand AR as compared to young adults and to define which technological solutions (e.g., screen size, performance feedback) contribute to better design of AR application elevating its usability for older adults.

The general aim of our study is to learn how older adults interact and use augmented reality technology, what are the deficits and constrains to their performance. We will examine this by employing a controlled user study in which we will compare how older adults and younger participants interact with a dedicated AR interface.