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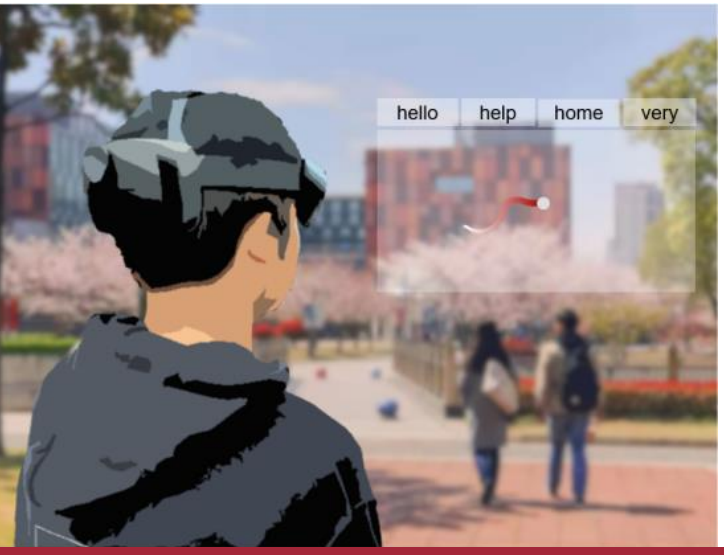

Decoder

Imaginary Text Entry for Virtual and Augmented Reality

Open Bachelor/Master Thesis

Background

Text entry is an essential and frequent task in interactive devices, including augmented reality (AR) and virtual reality (VR) head-mounted displays (HMDs). Still, there are challenges, such as arm fatigue due to mid-air input, visual occlusion of floating keyboards, or tiring eye-based inputs. The usage of a brain-computer interface (e.g., NextMind or OpenBCI) may enable text entry on an imaginary keyboard (inside users' heads) while allowing hands-free usage of AR and VR HMDs. Moreover, brain-computer interfaces may assist existing techniques (e.g., floating keyboard) to increase text entry speed.

Research Goal

The aim of this thesis is to investigate how (consumer) brain-computer interfaces can be used for text entry in AR/VR HMDs. A related work research should be conducted, and a prototype should be designed and implemented. Finally, the defined hypothesis should be evaluated by conducting a study.

Based on bachelor/master level
the scope is adapted.

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