Collaborative Learning in Remote Settings
Sharing nonverbal cues to support communication.

Background

Communication between students plays a crucial role in collaborative learning. In face-to-face settings, students' nonverbal cues convey emotions, attention, and interest without words. For example, observing where a student's gaze is directed can provide context about what the student is speaking.

However, in remote learning settings where students are communicating through video conferencing systems since they're spatially separated from each other, the interpretation of other students' gaze and gestures can be challenging due to the restricted view offered by webcams, showing only the face and a part of the upper body. Despite the possibility of transmitting these cues using webcam-based eye-tracking and gesture recognition, there remains further exploration on how to effectively implement these cues in remote settings to replicate natural face-to-face communication.

Research Question

This thesis aims to design and implement a tool to share nonverbal cues to improve collaborators' communication in video conferencing systems. You will explore the effects of nonverbal cue sharing for collaborative learning on co-presence and interaction between collaborators.

Based on Bachelor or Master level the thesis will be adapted.

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Focus

User-Centered Design Process
Software Prototype
Eye-Tracking