DISCOVRE: Mixed Reality Environments for Coral Reef Research

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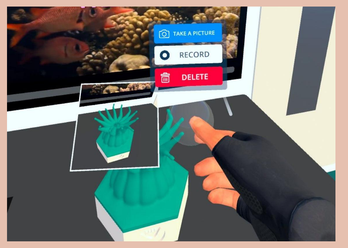
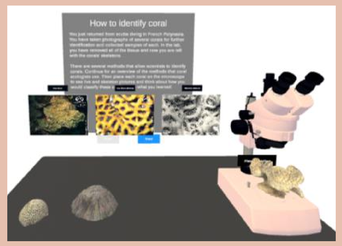
Virtual Reality (VR) Note-Taking Study

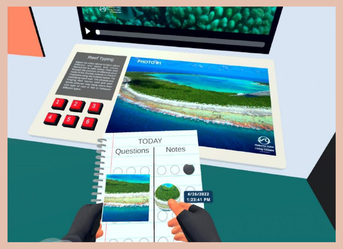
- Embodied Notes is a multi-modal note-taking system for VR designed by PhD Candidate Monsurat Olaosebikan
- User study with 3 HCI conditions: ray-casting, gestures, and buttons
- Observed the interaction of participants learning about coral reefs
- Data collected through video, questionnaire, and interview



Users can take a picture, record an audio note, and delete unwanted notes

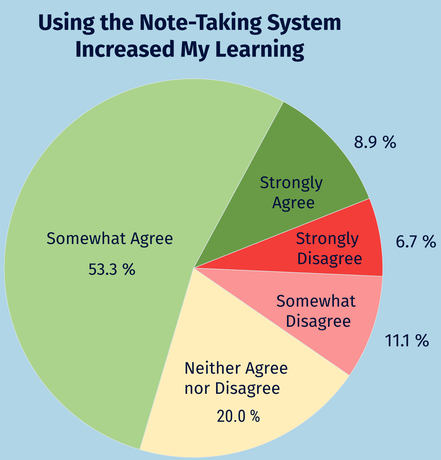


Users navigate through three different stations to learn about coral reefs



Notes can be stored and organized in a virtual notebook for later retrieval

Initial Observations



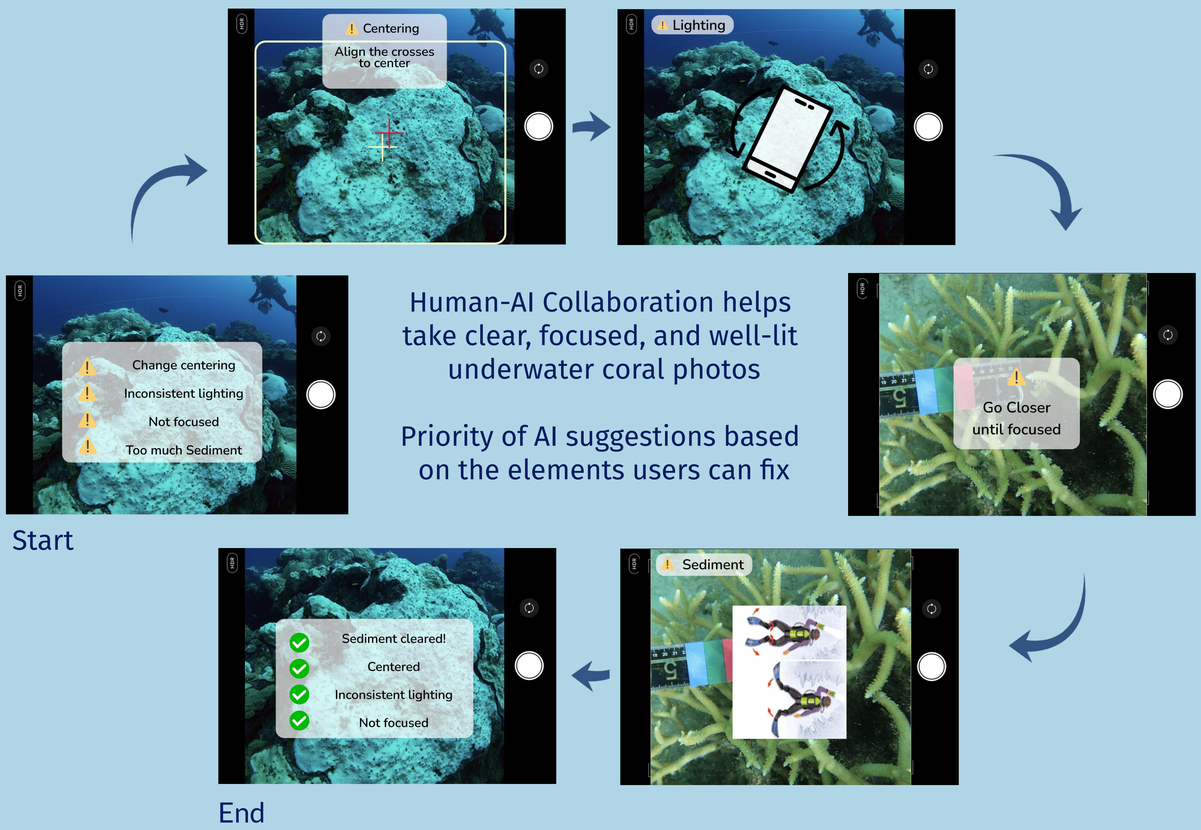
- 64% of participants agree that using the note taking system increased their learning
- Lack of gravity in VR space allowed unique, personalized note organization
- Participants enjoyed simultaneous interactions with multi-modal notes

Future Work

- Explore possible patterns and preferences between the 3 HCI conditions through holistic analysis of participant videos, interviews, and questionnaires

Capture the Coral

- Prototyped app, Capture the Coral, that provides visual and textual photographic feedback
  - AI feedback categories: centering, lighting, focus, and sediment
  - Enables citizen scientists to contribute to coral reef researchers' spatio-temporal database collection



Future Work

- Run a user study testing the understanding of the aforementioned AI-generated feedback

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