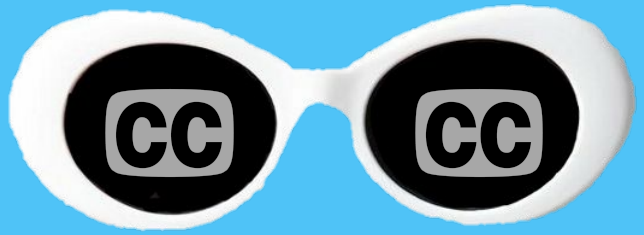
Audio Reality

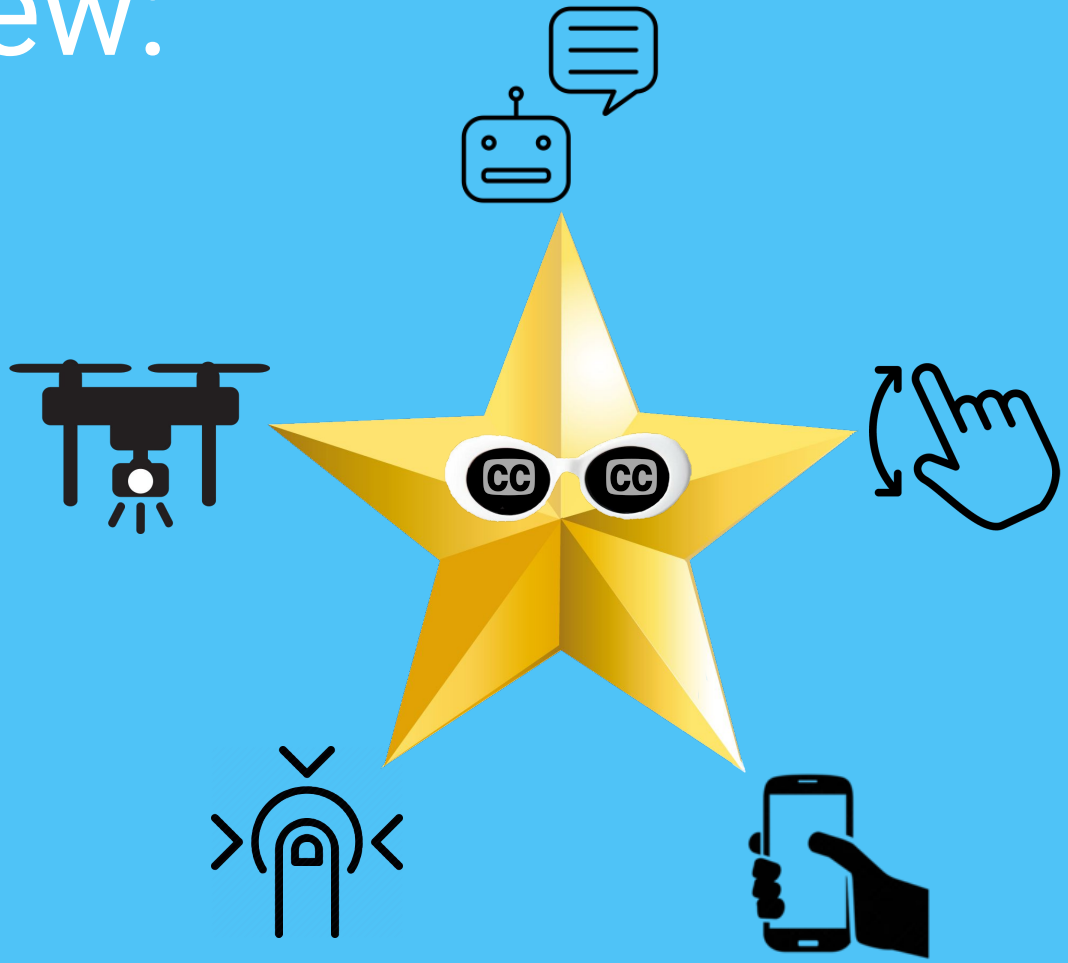
Lo-Fi Prototyping & Results

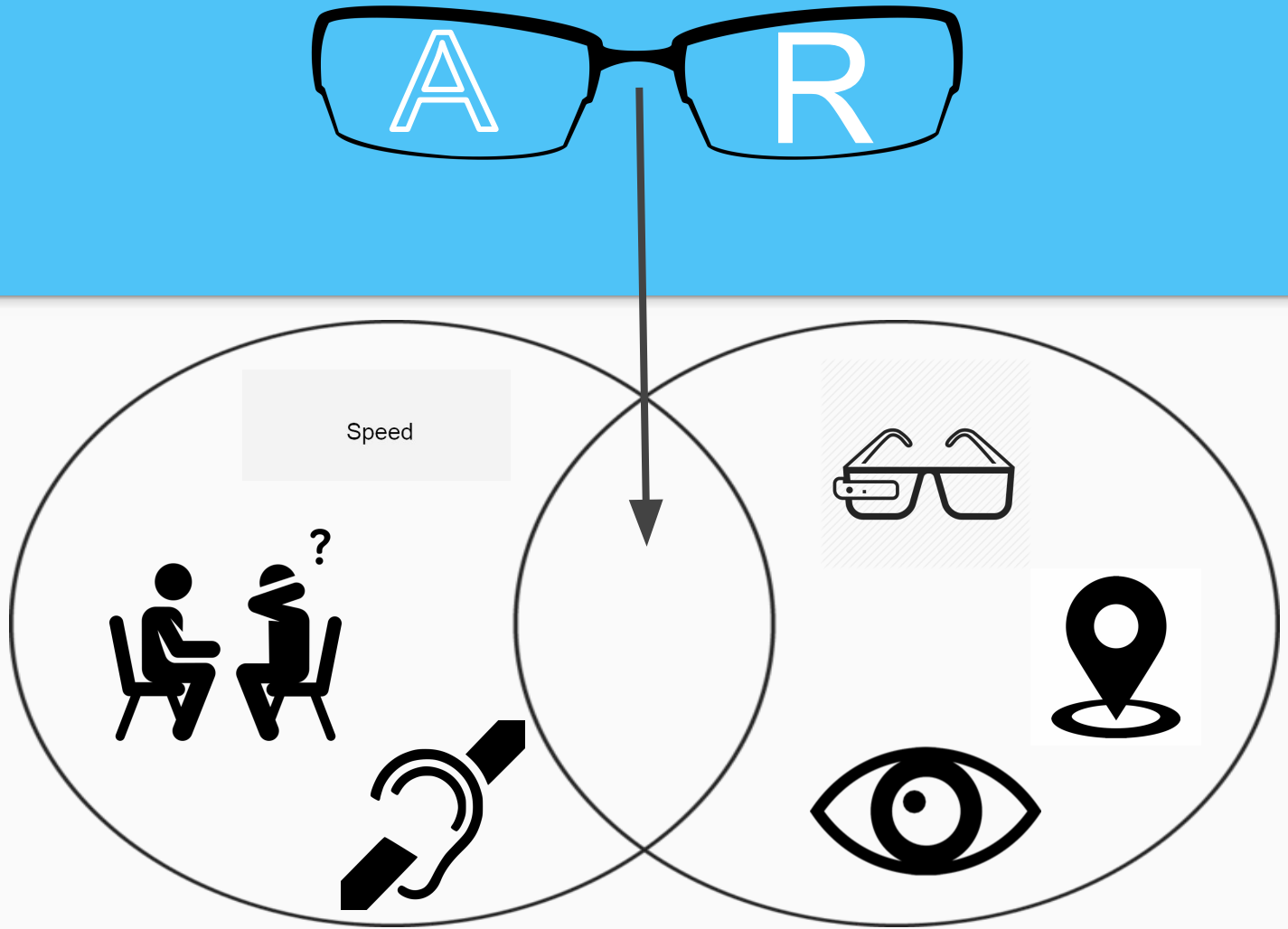
Overview :

Overview :

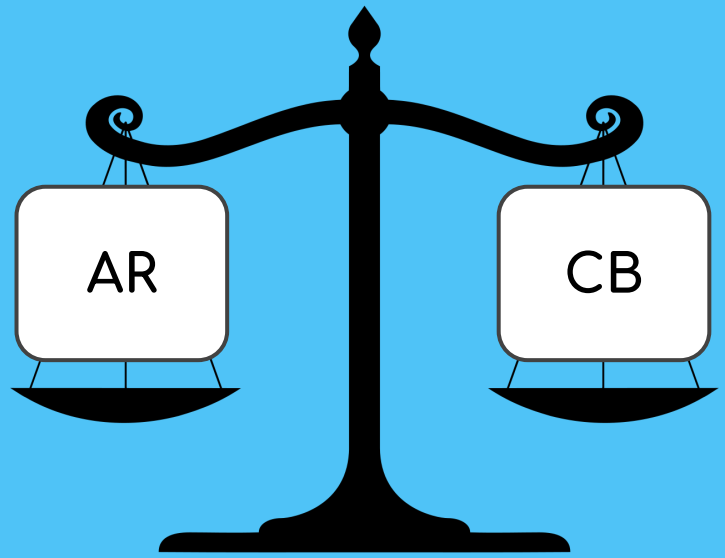


Overview:




A
R
Speed
?

we're interfaced with a tough decision.



Selected Interface

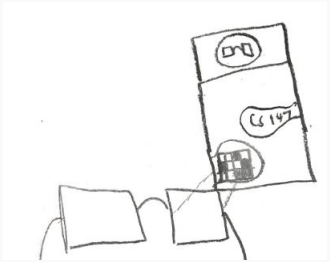
Wearable glasses provide augmented reality capabilities.

Through these glasses, the audio barrier in class is broken. Plus more personal than a bot.

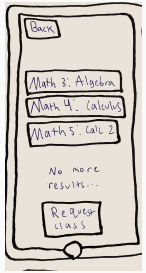
Lo-Fi Prototype Structure

Show where you are in the process and what's left to tackle

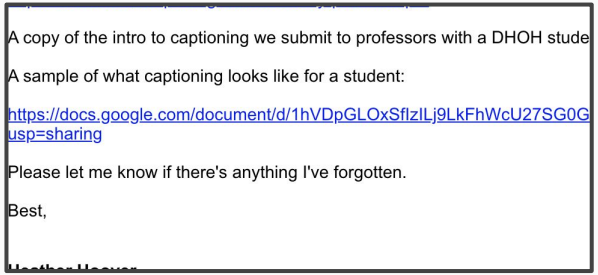
Introduction



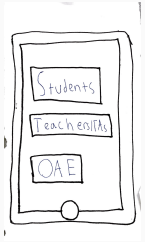
Roleplay



Feedback



Presentation



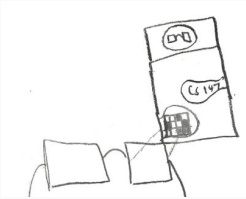
AR Interface Demo

Lo-Fi Prototype Structure

Show where you are in the process and what's left to tackle

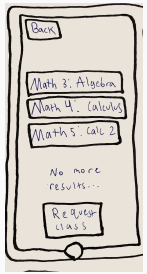
Introduce Audio Reality

- Explain what Audio Reality is.



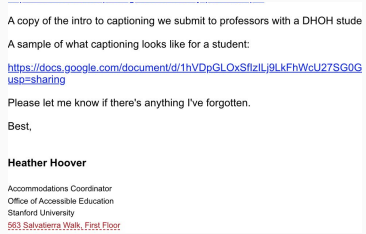
Complete Role-Specific Tasks

- Simulate the type of user that will be using Audio Reality and complete tasks.



Feedback

- User share their experience using the app.



A copy of the intro to captioning we submit to professors with a DHOH stude

A sample of what captioning looks like for a student:

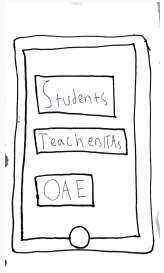
https://docs.google.com/document/d/1hVDpGLOxSfIzILj9LkFhWcU27SG0Gusp=sharing

Please let me know if there's anything I've forgotten.

Best,

Heather Hoover

Accommodations Coordinator
Office of Accessible Education
Stanford University
563 Salvatierra Walk, First Floor



Present App

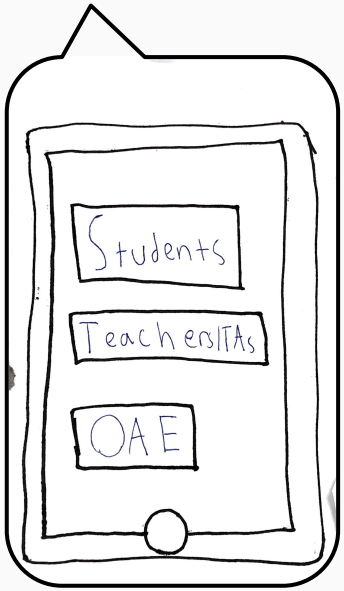
- Welcome user to home screen.

AR Interface Demo

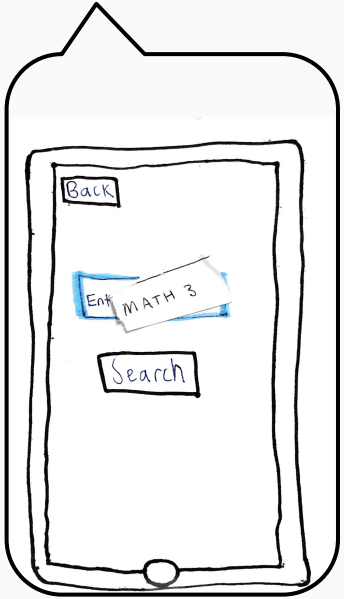
- User will demo how captioning system will be presented in lenses.

Task 1: Class Management (Complex)

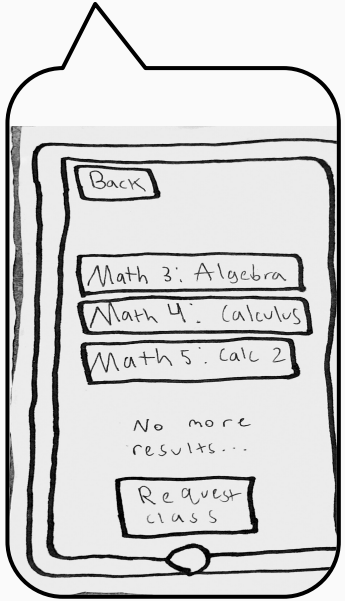
1. ID



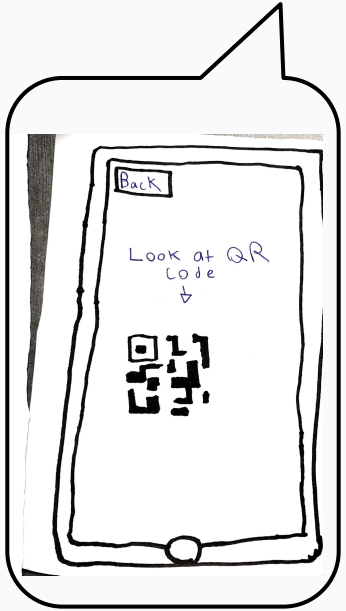
2. Search

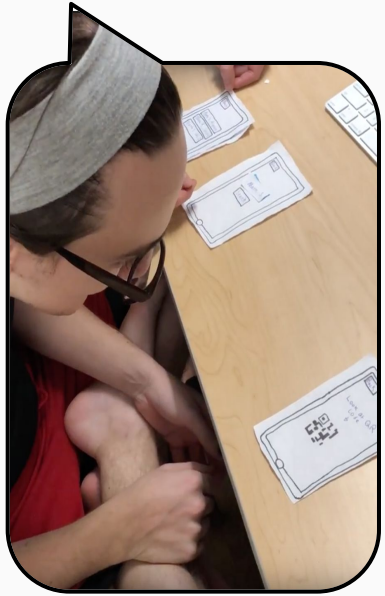


3. Select



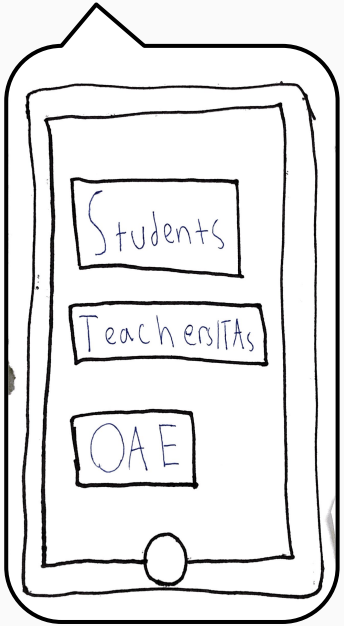
4. Sync



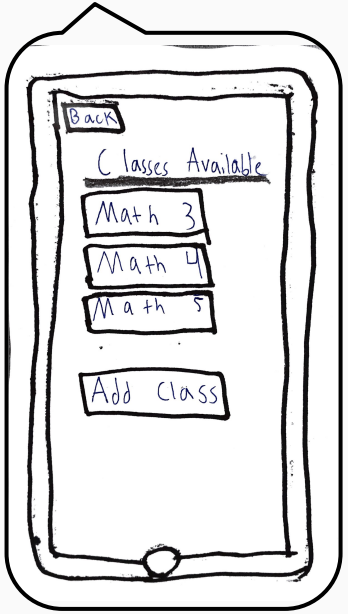


Task 1.5: Class Administration (Complex)

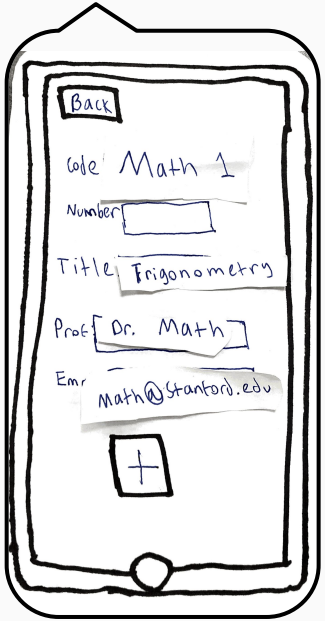
1. ID



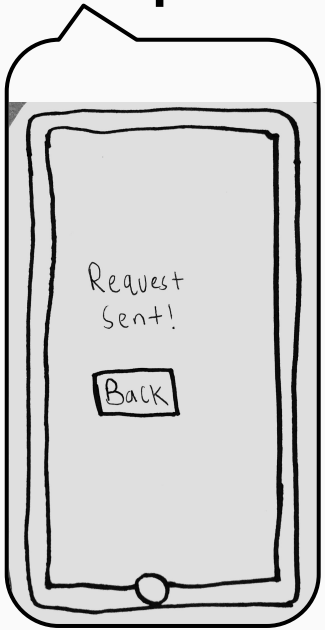
2. Select



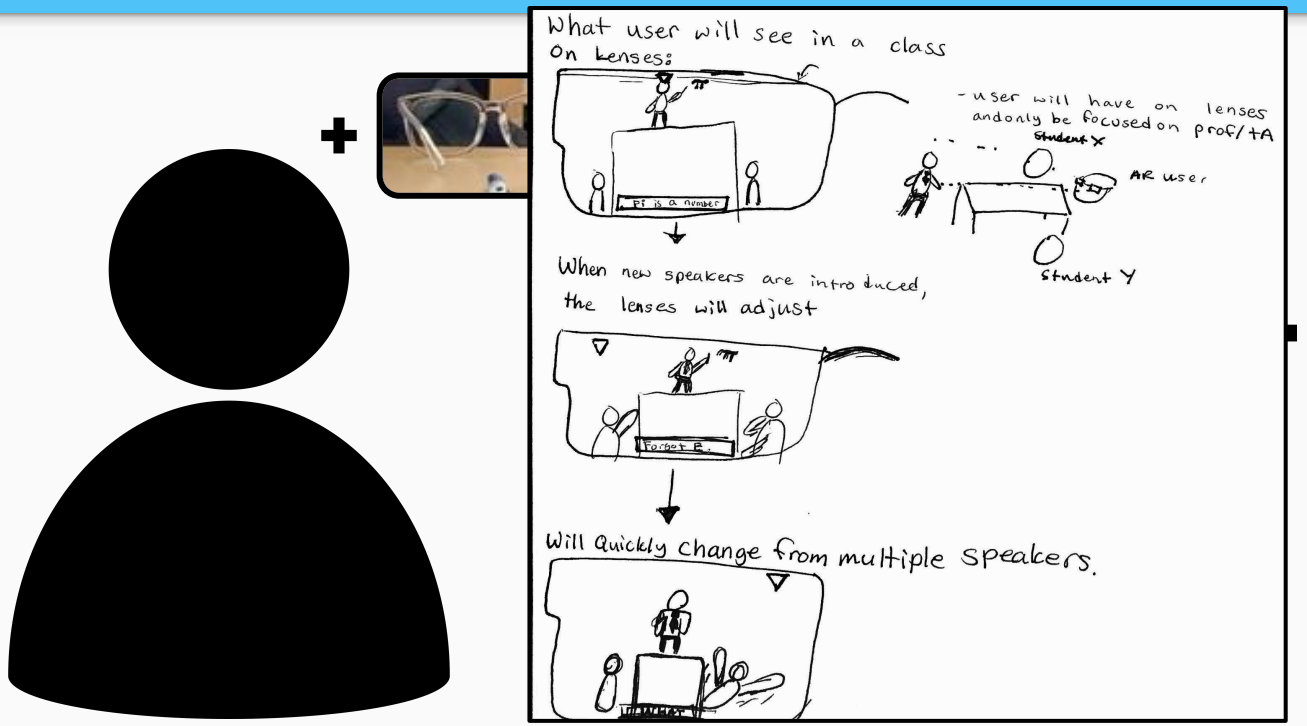
3. Enter



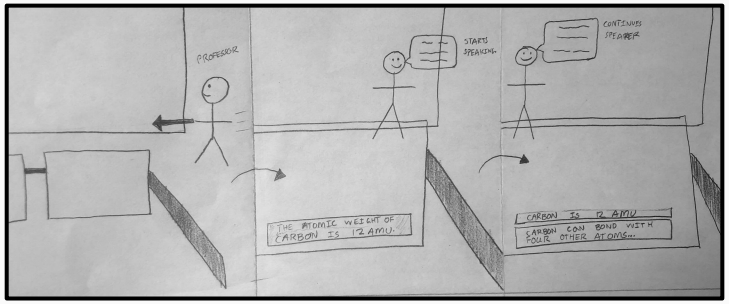
4. Request

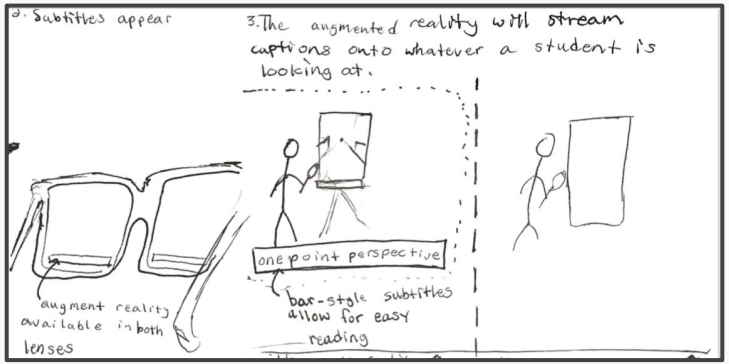


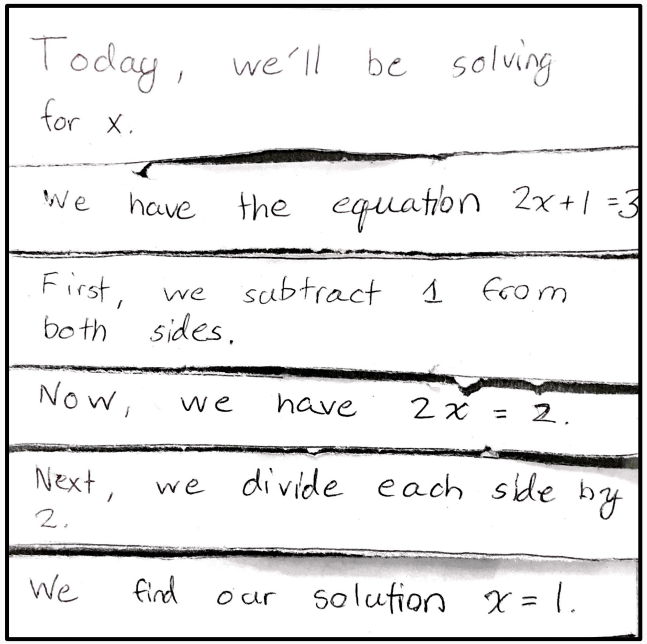
Task 2 : Find the Speaker (medium)



Task 3 : Understand what's said in lecture (simple)





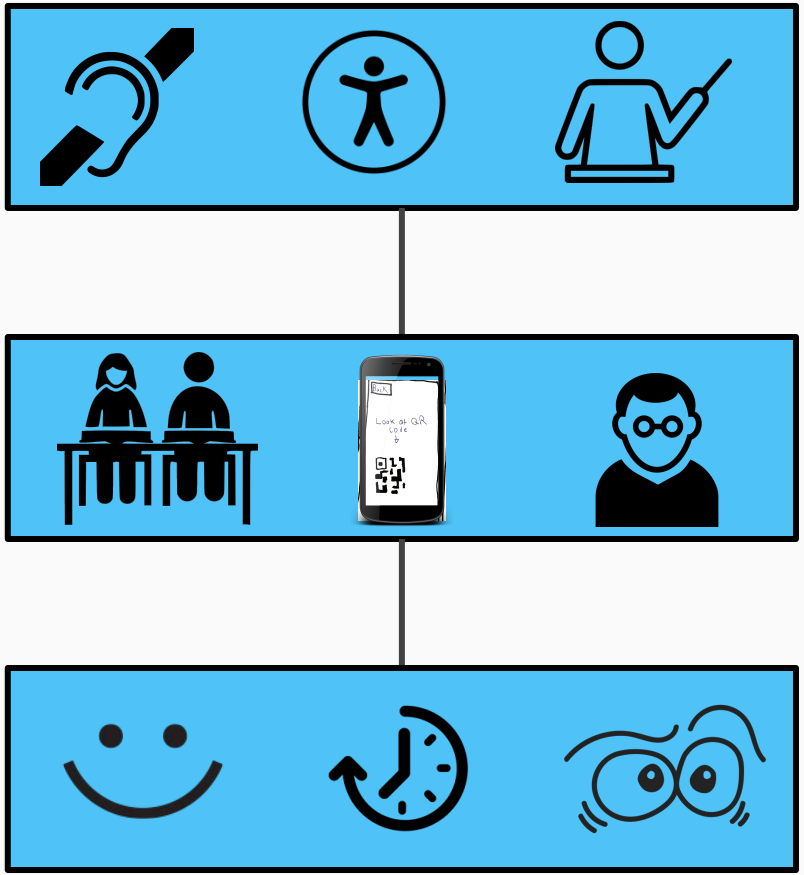


Methods

who?

what?

why/how?



Lo-Fi Experimental Results

“Who worked through our Audio Reality tasks?”

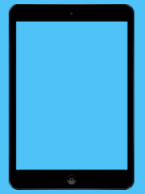
Participant 1

Accommodations Coordinator

Task 1:

Task 2:

Task 3:



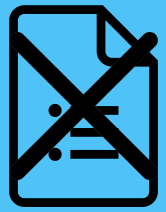
Lo-Fi Experimental Results

“Who worked through our Audio Reality tasks?”

Participant 2

Severe Hearing Loss

Task 1:



Task 2:

Task 3:

Lo-Fi Experimental Results

“Who worked through our Audio Reality tasks?”

Participant 3

Course Assistant

Task 1:

Task 2:

Task 3:

Suggested UI Changes

- ★ Save Data

- ★ Simpler User Interface
- ★ Device connectivity

Summary

Appendix

Show the audience you anticipated their questions.

Leave room for Q&A, but use the Appendix as a way to show that you both thought about those questions and have solid answers with supporting information. Let the audience test their understanding of the problem and the solution you've outlined - questions give them a chance to talk themselves into your approach, and give you a chance to show mastery of the subject.

Mission Statement

Equal access to education is achieved through augmented reality

Value Proposition

Value Proposition

Harnessing augmented reality to create equal educational spaces.

Mission Statement

Improve the accessibility of speech-based education for students with hearing impairments.

Problem/Solution Overview

Students who are deaf experience difficulties in lecture. Due to how captions are set up, they must focus on understanding each word being said in lecture instead of learning the material like their peers. Having multiple speakers can further confuse a student. Our solution provides much-needed captioning in students' line-of-sight and provides guidance for understanding who is speaking in lecture. We provide captioning and directional visual cues through Augmented Reality in a head-worn display.

Lo-Fi Experimental Results

"Who worked through our Audio Reality tasks?"

Heather Hoover

Accommodations Coordinator

Oversees technological services and exam accommodations for Deaf and Hard of Hearing students.

Pauline Gielow

Menlo Park Resident w/ Severe Hearing Loss

Senior citizen, who believes augmented reality can be a breakthrough. However she is scared of

P.

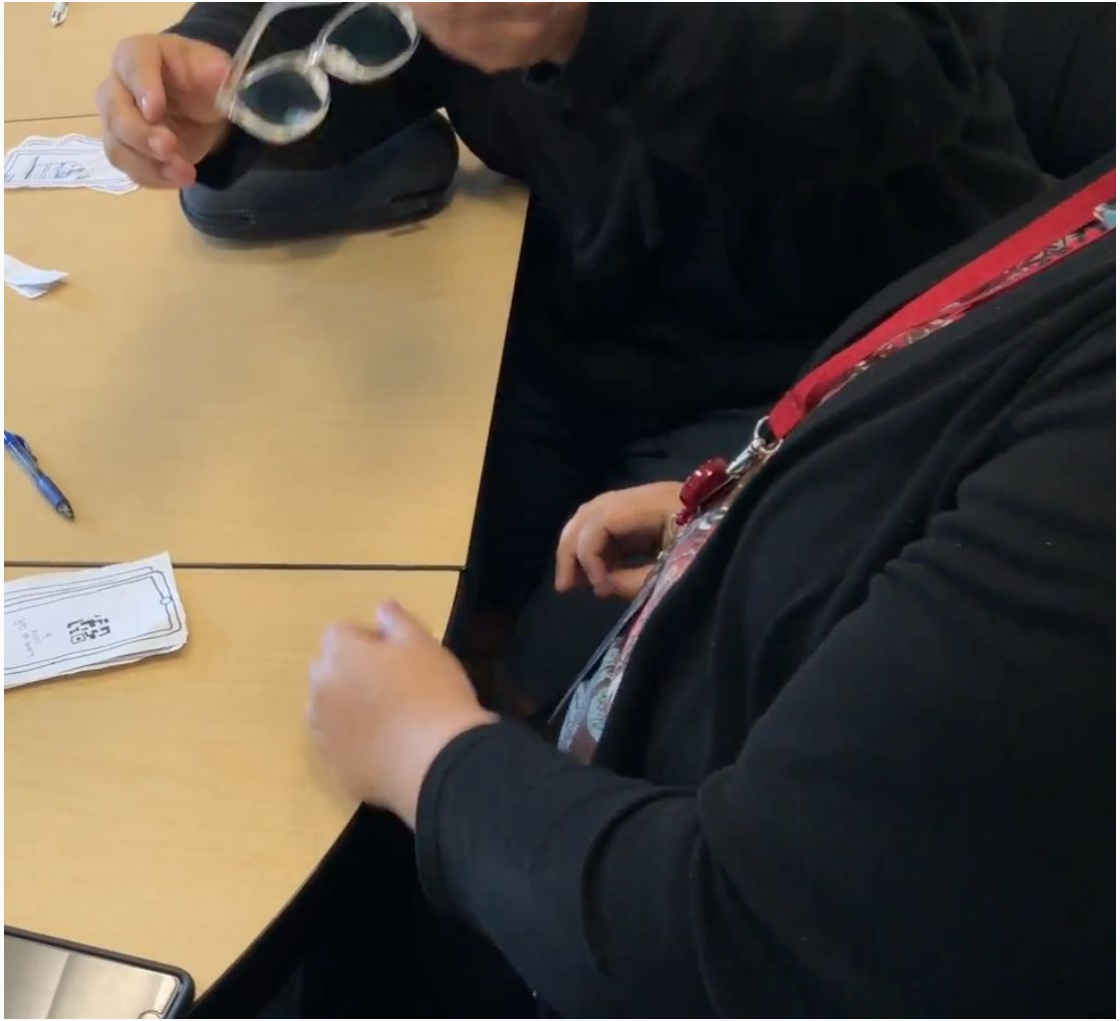
Overview:

Existing caption technology assists students, but is slow and sometimes creates confusion.

By using wearables, users can have instant, guided captioning that provides equal access to education.

We created a lo-fi prototype to test tasks with all targeted end users: administration, hard of hearing folk, and educators.

Our 5 designs: were Chatbot, Gesture, App, Haptic, Drone



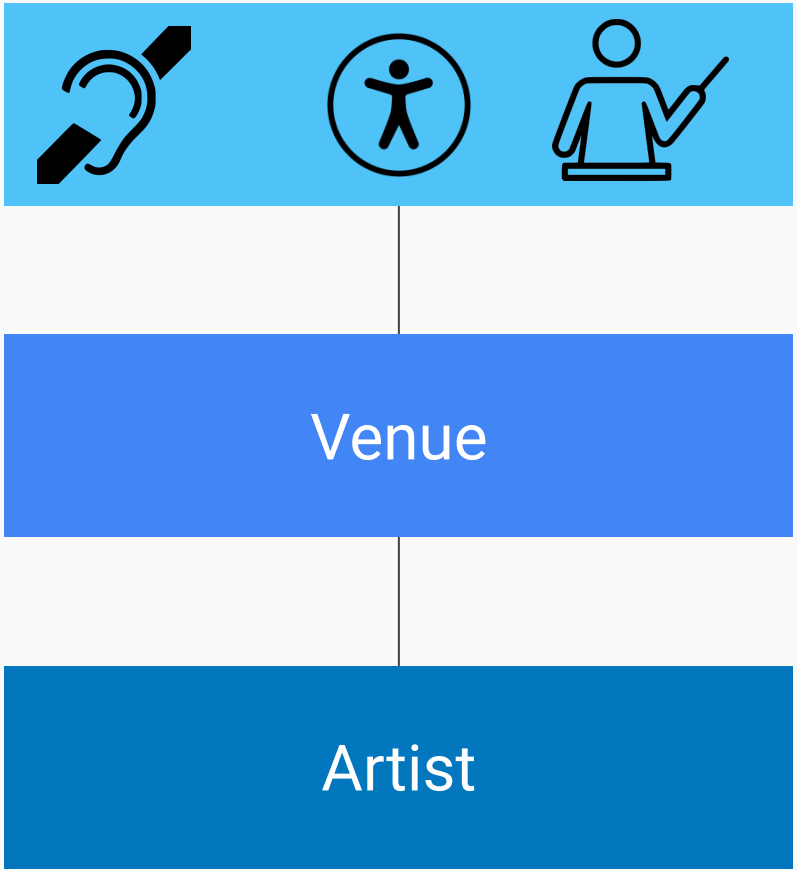
Experimental Methods

We wanted to test our lo-fi with the target group for our end users.

That is ones that are admins, users, or people who will be captioned.

Two members simulated roles for the user, while one was the “app”

We sought clarity with what we were doing. Focused on emotions more so pertaining to agitation or confusion and delight.



Lo-Fi Experimental Results

“Who worked through our Audio Reality tasks?”

Participant 1

Accommodations Coordinator

Task 1:
Classes don’t require that much information.
Class Code instant.

Task 2:
The moving arrow is confusing.
Flip orientation better.

Task 3:
Fairly well, if possible to connect to what’s already being broadcast with the existing tech.

Lo-Fi Experimental Results

“Who worked through our Audio Reality tasks?”

Participant 2

Severe Hearing Loss

Task 1:
Does not think that OAE should be in the app.

Task 2:
Location tracking is beneficial and will help her.

Task 3:
Seeing the text is super helpful, if says 248 can’t hear the 8.

Lo-Fi Experimental Results

“Who worked through our Audio Reality tasks?”

Participant 3

Course Assistant

Task 1:
Understood quickly how to navigate through the app and zoomed through the test.

Task 2:
The triangle does seem to point at the right person.

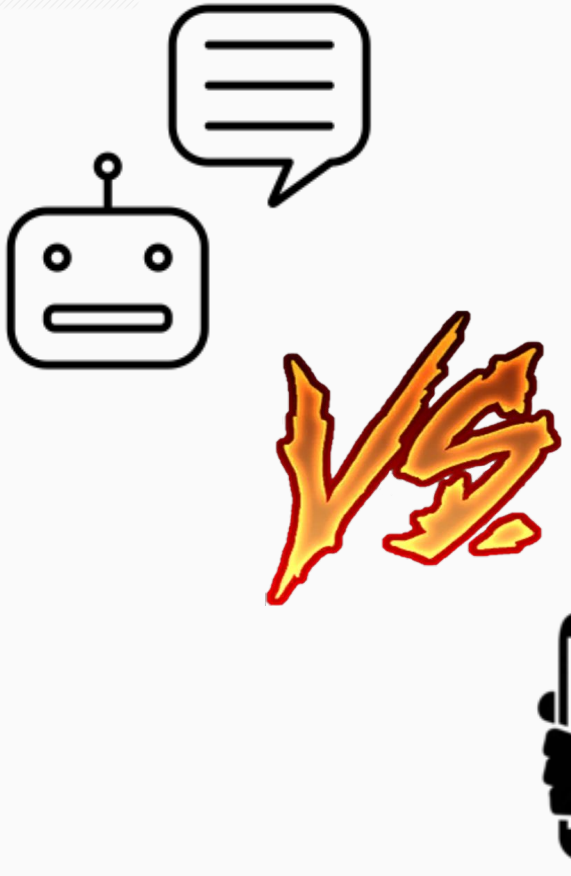
Task 3:
Captions are innovative, but how much more do they help?

Summary

- ★ Captioning could be improved in classrooms, and administration would use our app.
- ★ OAE technology is almost there, the experience factor is missing.
- ★ A more simplified User Interface with a communication protocol in place with OAE.

Suggested UI Changes

- ★ Keep Transcripts
- ★ Less Menu Selections
  - ○ Less OAE Role
- ★ Make it more unique
- ★ Have connecting capabilities.



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Wearable glasses will provide augmented reality capabilities.

Through these glasses, the audio barrier in class is broken.