

GROUP 13

Voice Unveiled

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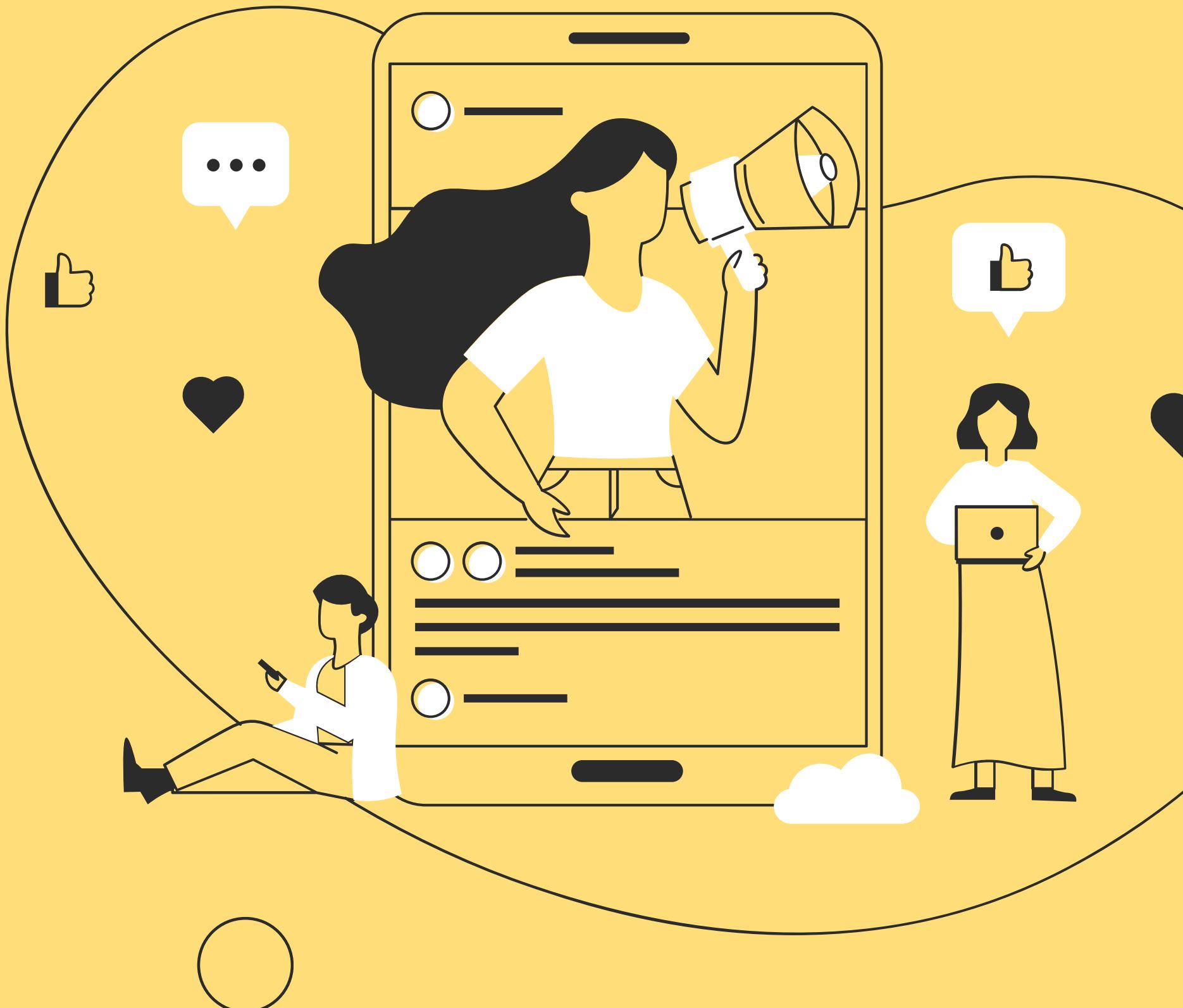


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Our Client

CHRIS HUYBREGTS

Who is Chris?

- A Product Manager with 23 years of expertise, specializing in virtualized device enablement (GPU/TPU/FPGA) for AI, ML, and remote visualization in cloud infrastructures.
- Technical Product And Program Manager
- 11 years of experience leading world-class development teams at Amazon, Google, Microsoft, and Meta
- Chris excels in leading large-scale programs, fostering collaboration between customers, product managers, engineers, and senior leadership.



TOPIC SELECTION



LinkedIn

Hey Chris! Would you be interested in working with us on a cool project?

Sounds cool! Count me in!

Awesome! Let's schedule a team call!

Personal Connection

Chris's advocacy stems from his father's experience with Spasmodic Dysphonia.

Needs Identification

Recognized the lack of support and resources for Spasmodic Dysphonia.

Solution Focus

Decided to develop the VoiceUnveiled app to enhance communication for affected individuals.

Alignment with Values

Chose this project as it aligns with our goals to make meaningful, user-centered technological contributions.

What is Voice Unveiled?

A transformative communication app empowering clear and natural communication primarily for individuals with Spasmodic Dysphonia, enabling them to speak confidently and comfortably in their authentic voice.



USAGE RESEARCH

Interview and Observation Methods

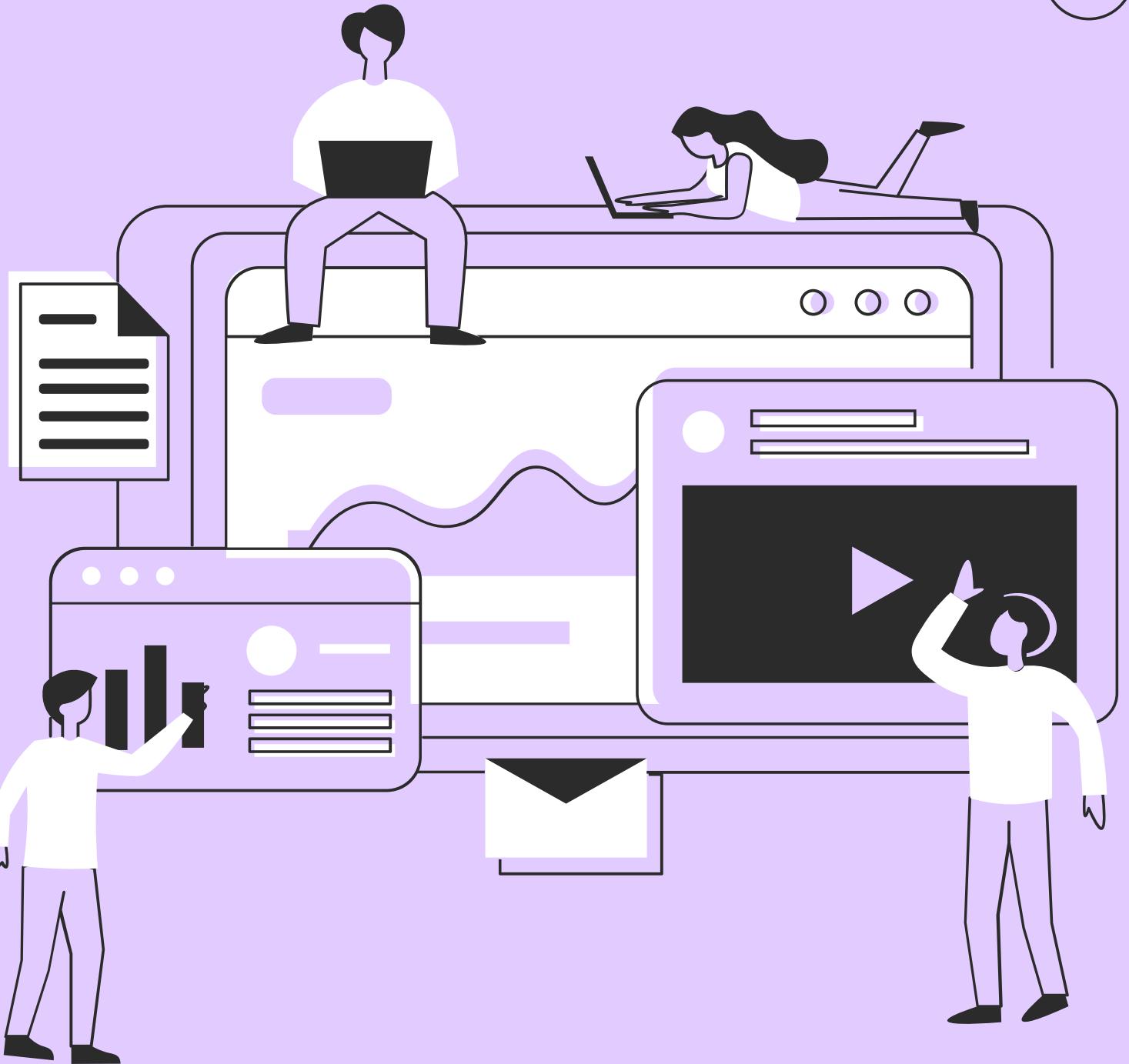
Conducted interviews with Chris for initial design ideas and product vision, and obtained feedback from his father on the designs. Observations were made through recorded Zoom meetings, with notes taken and real-time edits performed on Figma.

Interesting Data Samples Collected

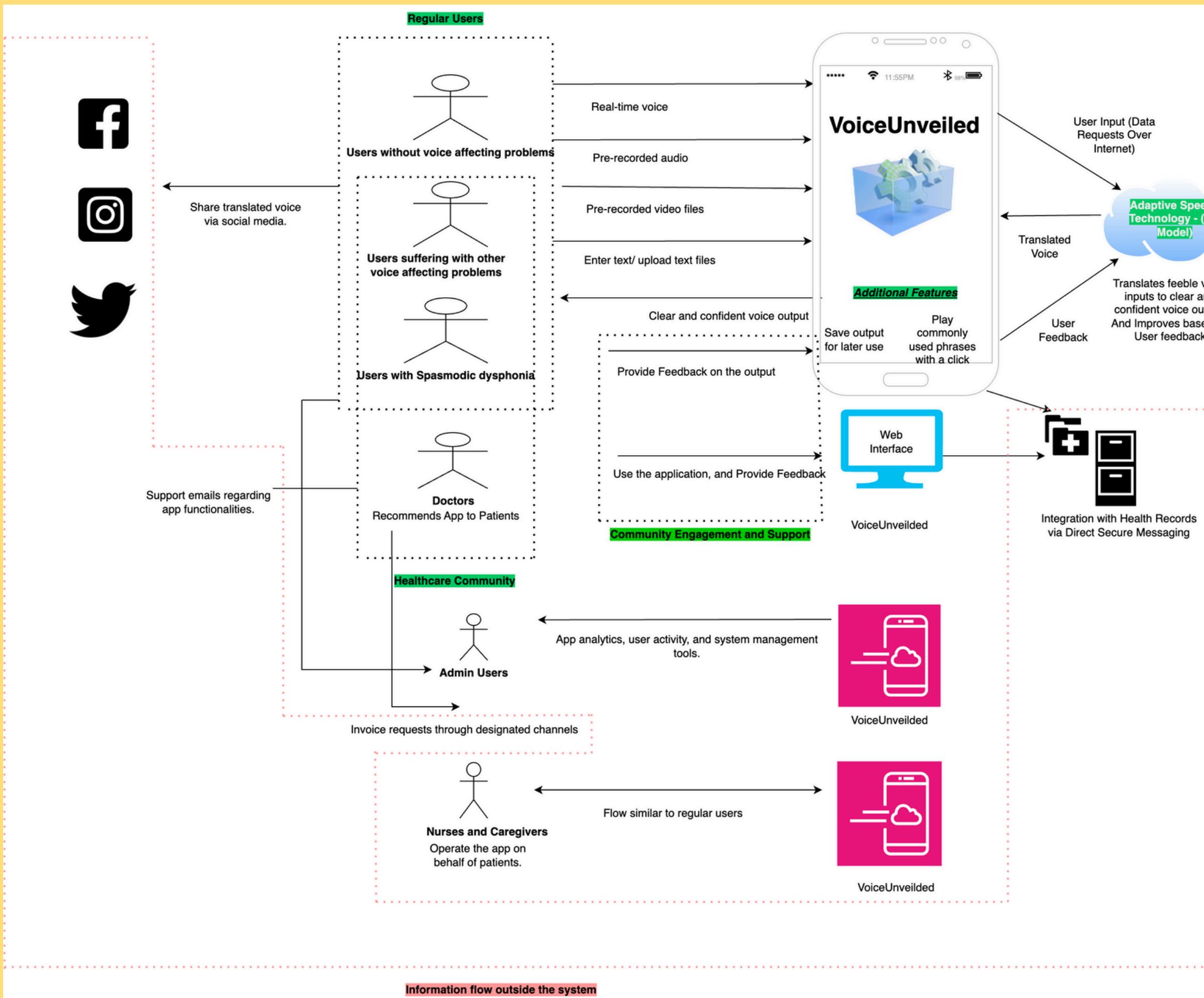
Gathered feedback on UI usability and voice enhancements from Chris and his father. Additional data included user engagement metrics, task error rates, and user satisfaction interviews.

Organization of Collected Data

The activity notes documented user reactions and feedback during testing, focusing on interface usability and navigation improvements, particularly insights from Chris's father on voice enhancements and UI adjustments.



Flow Model



Work Roles:

1. Regular Users
2. Doctors:
3. Healthcare Community:
4. Nurses and Caregivers:

Machine Roles:

1. ML Model
2. App Functionalities:
 - a. Real-time voice transformation
 - b. Upload pre-recorded audio/video
 - c. Provide clear and confident voice output
3. Additional Features:
 - a. Save transformed voice output.
 - b. Play commonly used phrases easily.
4. Feedback Loop

Information

1. Voice flows from the user to the app
2. App sends voice to the cloud model
3. Loud and Confident voice output is returned to the user

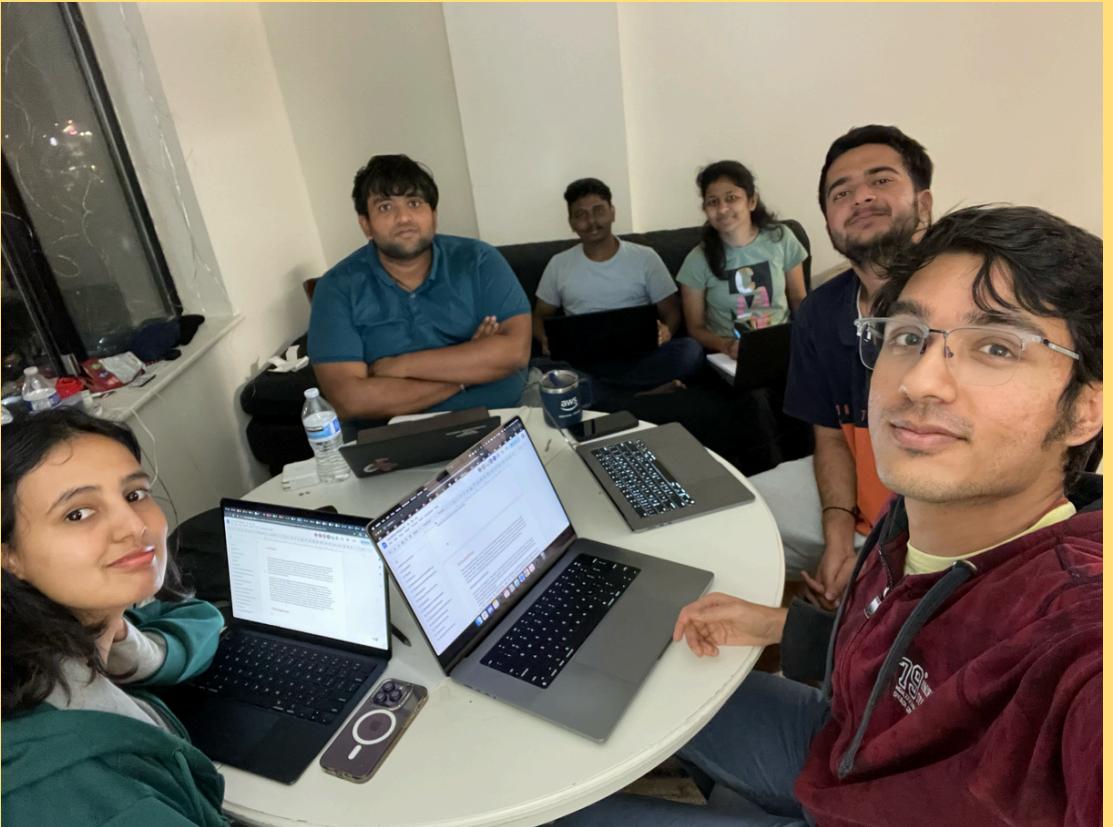
Persona

ALEX JOHNSON

- **Age:** 32
- **Occupation:** Professor
- **Background:** Alex has been living with Spasmodic Dysphonia for over 5 years, which has progressively made communication more challenging, both professionally and personally.
- **Technological Proficiency:** Intermediate; comfortable using smartphones and various apps.
- **Goals:**
 - a. To communicate more clearly and confidently in both personal and work settings.
 - b. To connect with others facing similar challenges.
- **Needs:**
 - a. A user-friendly app that enhances vocal clarity without extensive technical setup.
 - b. Features for recording, analyzing, and improving speech patterns.
 - c. Community features to share experiences and tips.
- **Frustrations:**
 - a. Apps that are complex to navigate.
 - b. Feeling isolated due to communication challenges.



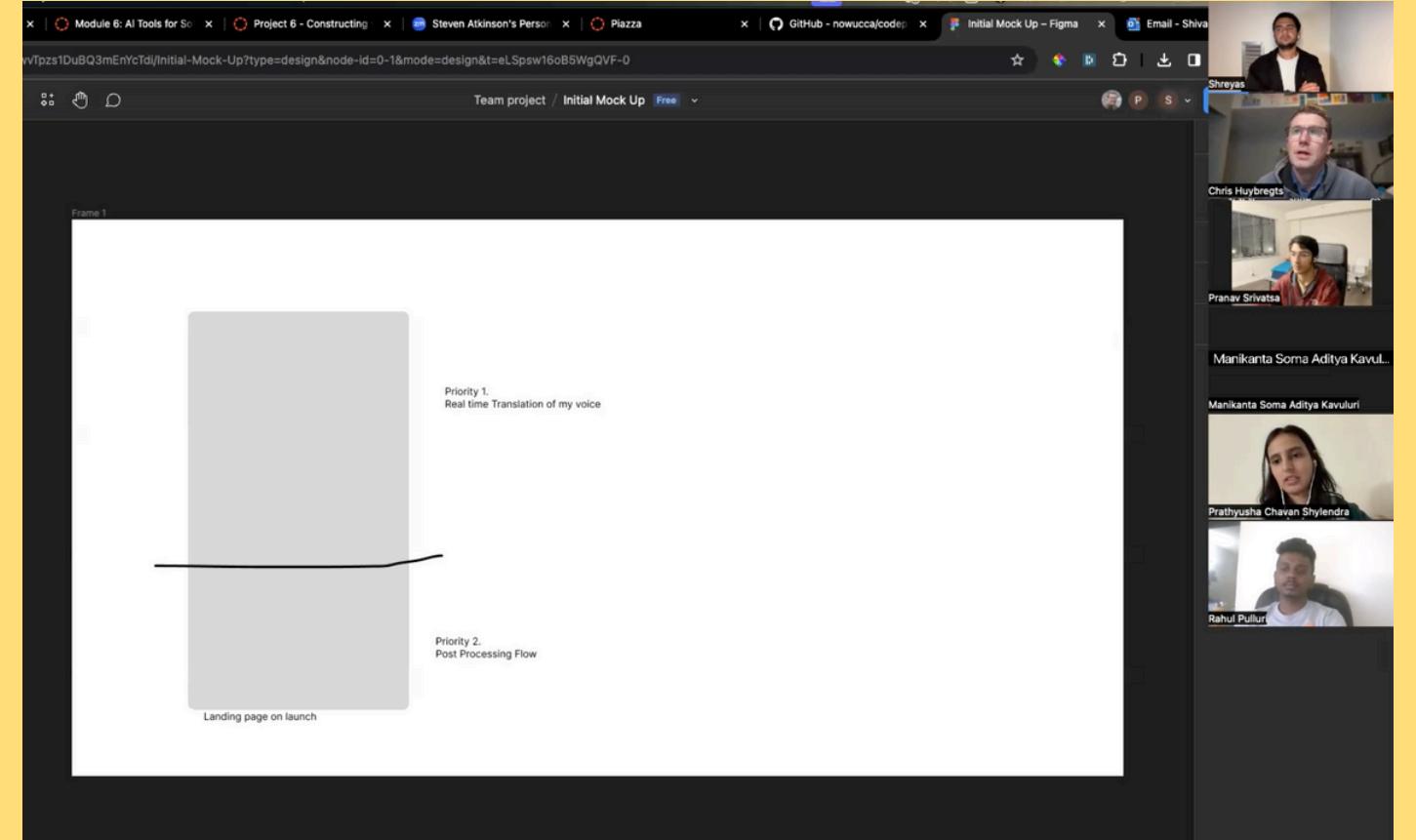
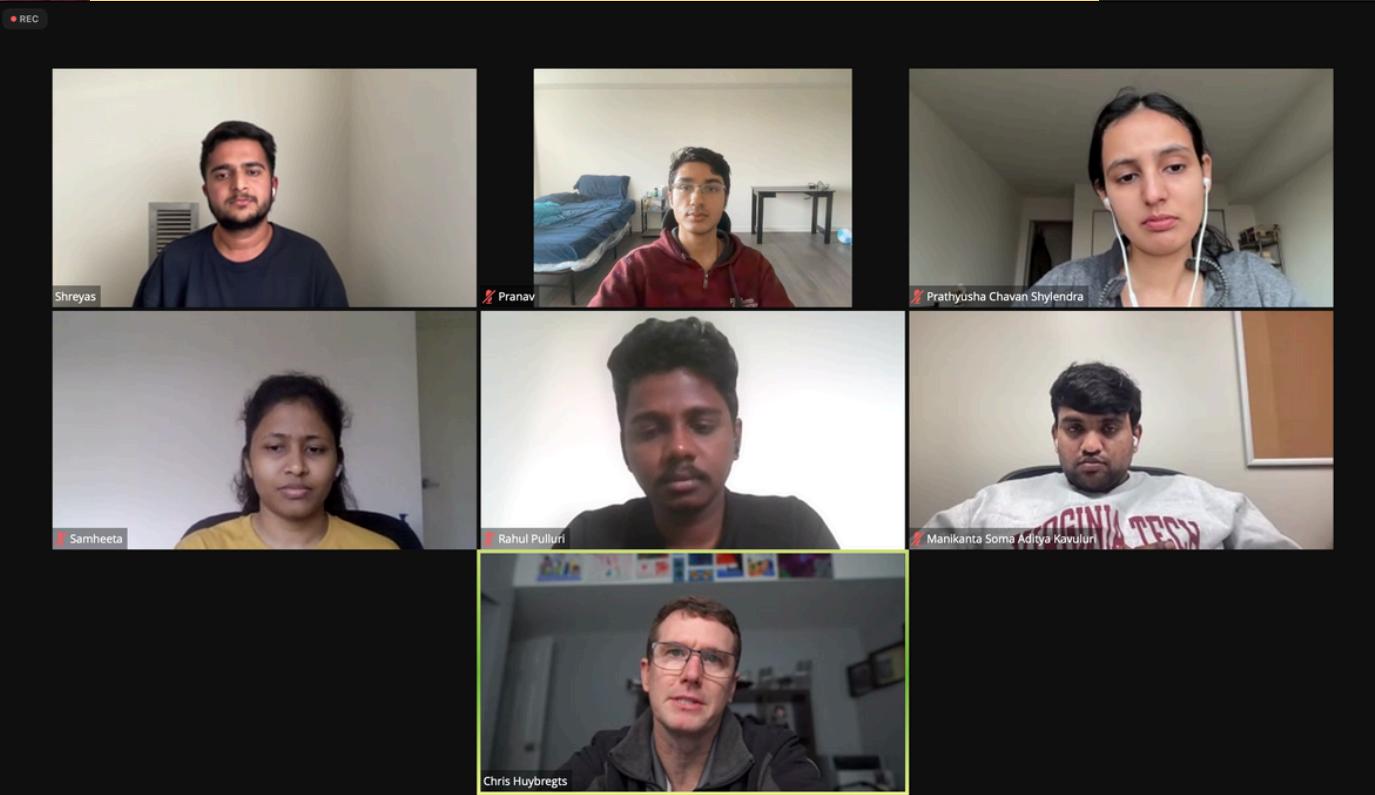
TEAM AT WORK



Zoom calls with
the client &
internal online
sync ups



Meeting up offline
at the round table
to discuss



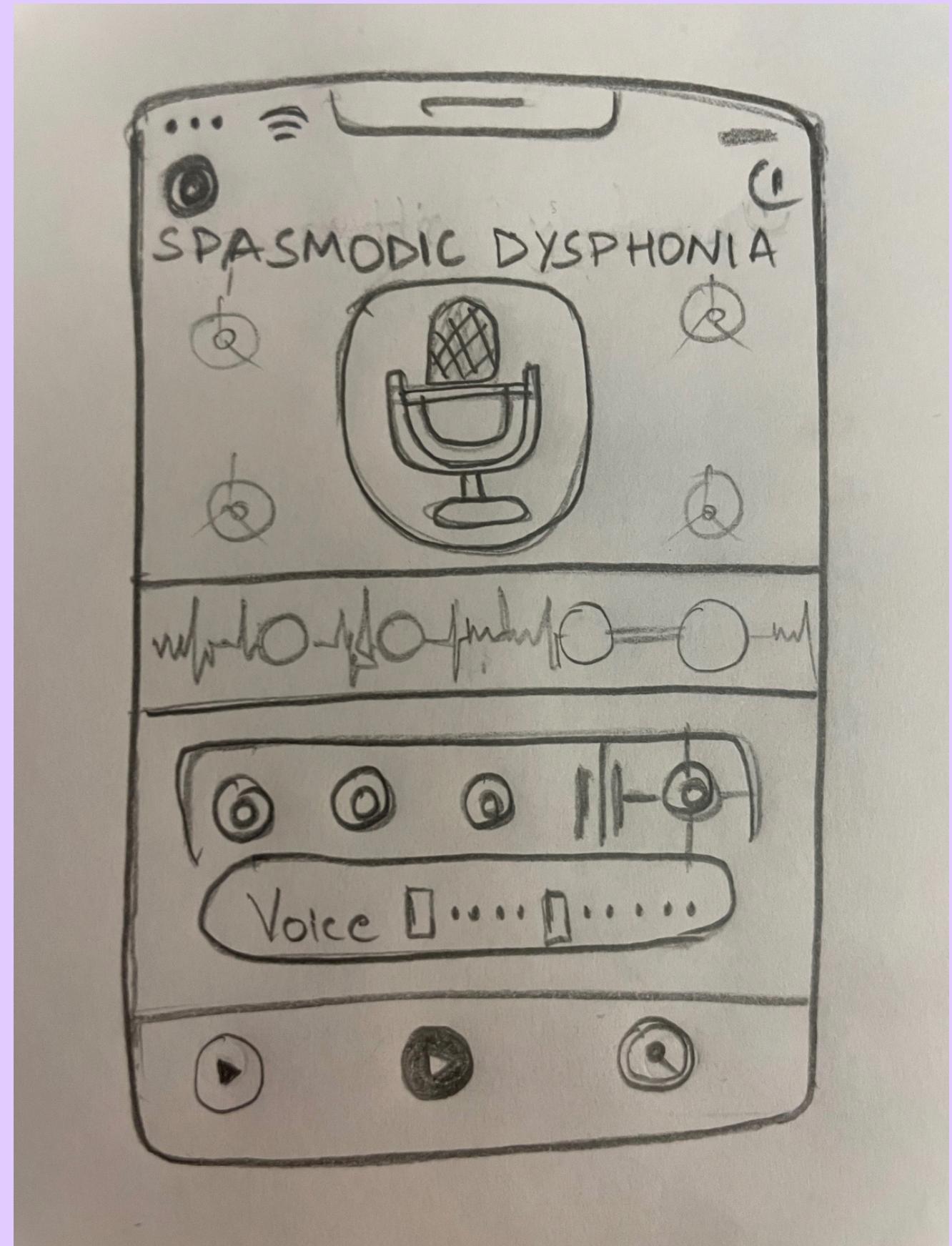
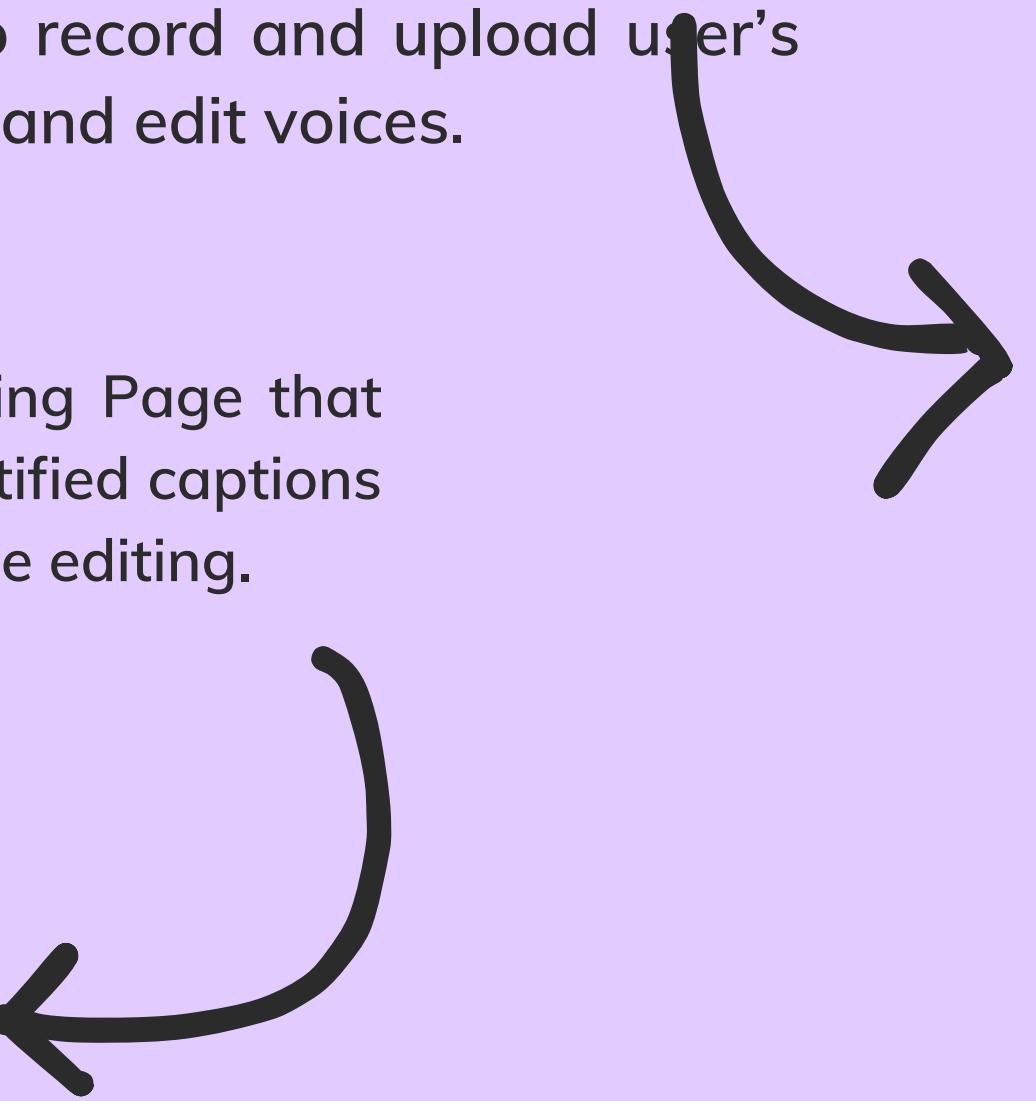
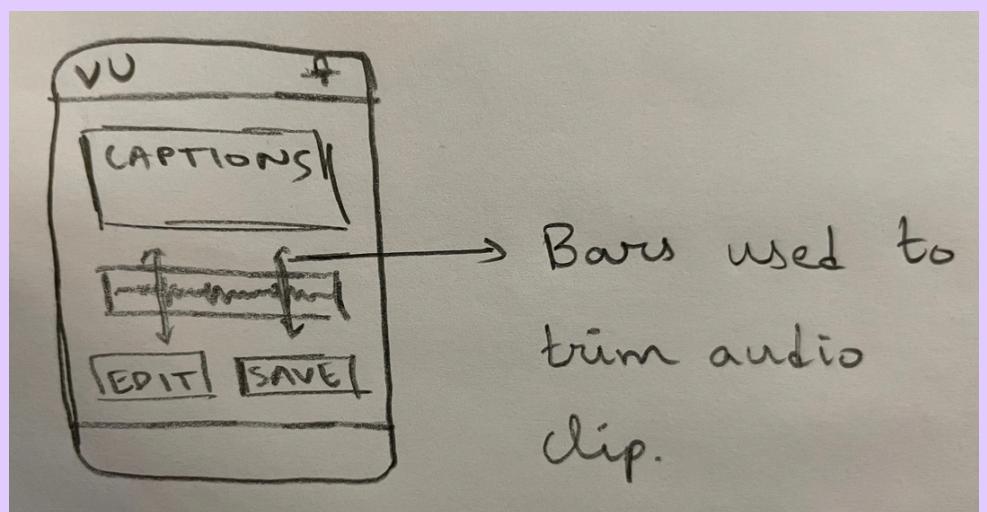
Collaborating on
Figma for wireframe
and design ideation

SELECTED SKETCHES

Edit Page

Ecology of the app's features, mainly including a header and footer, and a prominent button to record and upload user's voice along with capability to trim and edit voices.

Alternate sketch of the Edit Recording Page that shows the capability of viewing identified captions of the recording for real-time accurate editing.



SELECTED SCENARIO

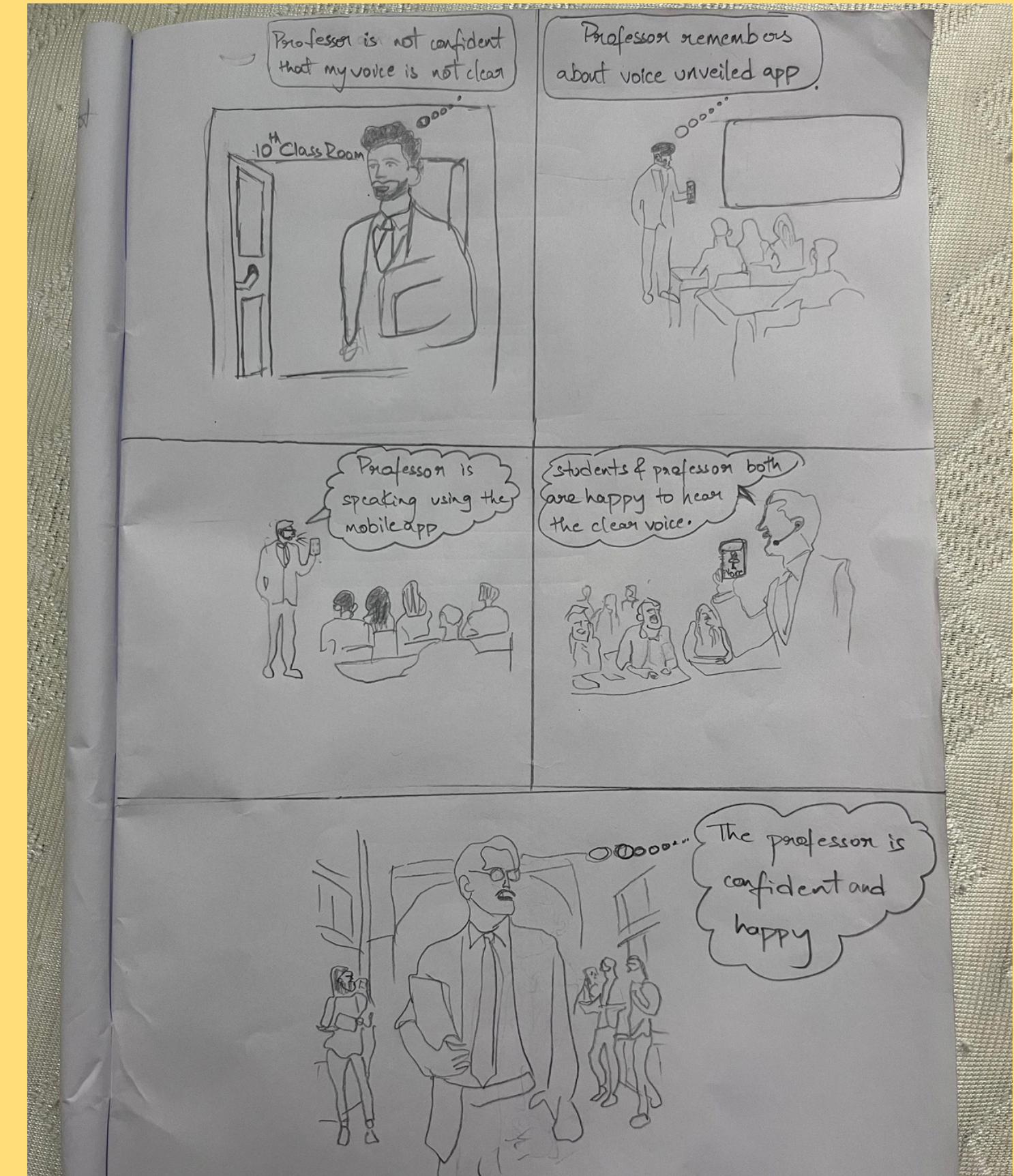
The selected scenario is “Real-Time Voice Enhancement”.

This was chosen as it is the prime pain point our app solves, as described below.

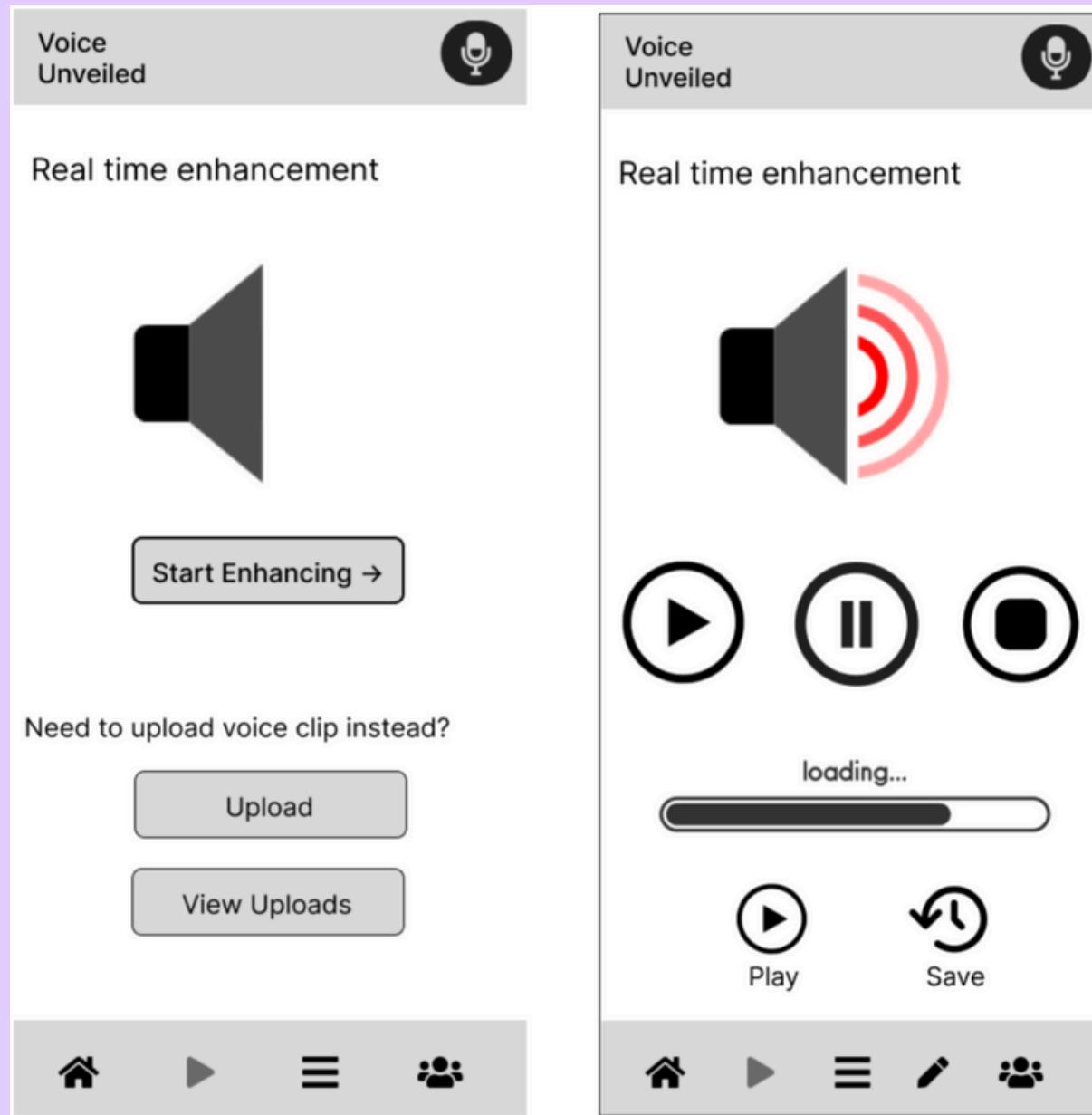
Problem: Alex, a professor with Spasmodic Dysphonia, is concerned his impaired speech will hinder student comprehension.

Solution: He uses a real-time voice recording feature with a simple interface. The feature enhances his voice clarity, making it easier for students to understand.

Outcome: Alex, despite limited tech proficiency, easily records and manages his enhanced voice. Both he and his students are satisfied with the improved learning environment.



Prototype



- Separate logins for User and Doctor view.
- Accessible bottom navigation bar.
- Logo in header leading to main offering of the app.
- Homepage introducing different sections of the app.

[Prototype Link](#)
on Figma

Evaluation Plan



Key User Work Roles and Inspectors

- Chief Inspectors: Pranav Srivatsa (detail-oriented), Prathyusha Chavan Shylendra (usability testing expert)
- Support Team: Samheeta Gourammolla, Rahul Ishwar Pulluri, Aditya Kavuluri, Shreyas Shivakumar
- Client Representative: Chris Huybregts, providing user-centric insights from the perspective of individuals with Spasmodic Dysphonia

UX Inspection and Rapid Empirical Evaluation Processes

- UX Inspection: Employed the following Heuristic Evaluations such as Visibility of system status, User control and freedom, Consistency and standards, Aesthetic and minimalist design, Match between system and the real world, Error prevention.
- Rapid Empirical Evaluation: Used the Think Aloud protocol, focusing on tasks like login, profile setup, voice enhancement, and patient management.

Problems Identified and Method Comparison

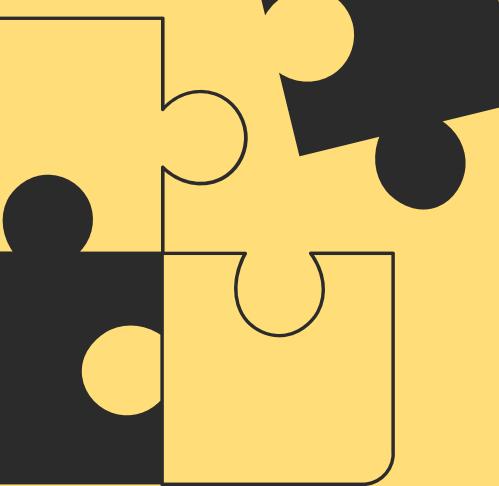
Problems Identified

- UX Inspection Issues: Complex navigation, Lack of standardized accessibility, and technical feedback mechanisms.
- Rapid Empirical Evaluation Issues: Need for enhanced gesture control, simplification of feedback mechanisms, and streamlined voice settings adjustments.

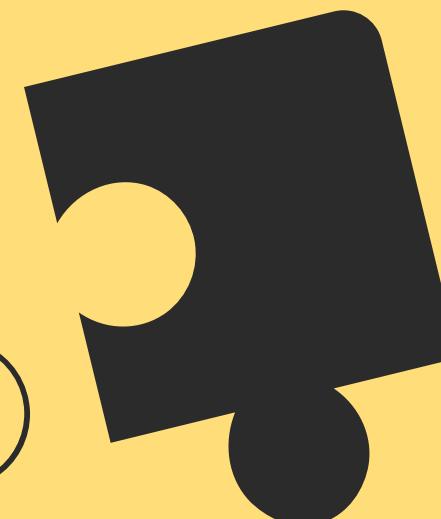
Similarities and Differences

- Similarities: Both methods identified issues related to user interface complexity and accessibility features.
- Differences: UX Inspection focused more on adherence to usability principles, while Rapid Empirical Evaluation provided direct insights from user interactions and feedback.





UX Evaluation Report



Target Outcomes to be achieve from Cost Importance Table

Complex Navigation

- Target: Simplify the navigation to enhance usability.
- Outcome: With Redesigning the navigation structure will make it more intuitive and user-friendly, enhancing the visibility of important buttons and reducing navigational steps.

Inconsistent Accessibility Features

- Target: Standardize accessibility features across all parts of the prototype.
- Outcome: Uniform application of color contrasts, text sizes, and voice-over enhancements will improve inclusivity and reduce the user confusion.

Technical Feedback Mechanisms

- Target: Redesign feedback mechanisms to be less technical and more user-friendly.
- Outcome: Feedback messages will be clarified, technical jargon would minimized, and visual cues will introduce to guide users, making the app more accessible and easier to use.

Recommendations for Prioritization of Problems

High Priority - Technical Feedback Mechanisms

- Recommendation: Continue to streamline error messages and status updates to ensure they are informative and user-friendly.
- Justification: Clear feedback is crucial for users with communication challenges, enhancing user confidence and reducing frustration.

Moderate to High Priority - Inconsistent Accessibility Features

- Recommendation: Maintain and improve standardized accessibility across the app to ensure it remains inclusive for all users.
- Justification: Ensuring uniform accessibility is vital for users with disabilities, fostering equitable use of the app.

Moderate Priority - Complex Navigation

- Recommendation: Further refine the navigation system to ensure it aligns with user expectations and ease of use.
- Justification: Improved navigation will further reduce the learning curve and enhance user engagement, benefiting overall user experience.





Any Questions?

OUR TEAM, GROUP 13



Pranav Srivatsa

Bad usability will make your users question their life choices.

Prathyusha Chavan Shylendra

A user interface is like a joke. If you have to explain it, it's not that good

Manikanta Soma Aditya Kavuluri

When you are stuck, walk away from the laptop and draw.

Shreyas Shivakumar

User interfaces are like road signs. If you have to stop and think, they're probably wrong.

Rahul Pulluri

You can't depend on your eyes when your imagination is out of focus.

Samheeta Gourmmolla

The function of design is letting design function.

Thank You!

