VisuSpeak

User Testing Report

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Introduction

The purpose of this report is to document the findings from user testing conducted on the ViuSpeak application. We initiated our user testing at the beginning of January reaching out to several industry experts to guide us through the implementation phases. The initial testing sessions commenced in January with our users testing our application. Over the three months, we conducted several testing sessions, amounting to three rounds (Phase 1, Phase 2 and Phase 3) of testing with our users. These testing sessions were instrumental in gathering insights into user experiences, usability, functionality of the application, and other areas that required improvement as we progressed.

Phase 1

In Phase 1 of user testing, feedback highlighted the strong usability of VisuSpeak's front-end interface, the positive feedback on the ease of navigation and adherence to accessibility standards. Testers expressed satisfaction with the accuracy of the AI model in recognizing five ASL words (Hello, Yes, No, Please and Thankyou) at the time. They also suggested integrating facial expressions and cautioned against reliance on English idioms, feedback which our team duly noted and incorporated into our plans. Furthermore, testers appreciated the application's emphasis on accessibility. As a team, we discussed plans to expand the dataset, ensuring our AI model can effectively recognize letters (A-Z) and a wider array of words and phrases.

Deliverables	Description	Feedback
Front-end	Navigation	- Strong usability, intuitive navigation, adherence to accessibility standards. - Positive remarks on ease of use.
AI Model	Accuracy and effectiveness of predictions	- Very impressed with the AI model's accuracy in recognizing five ASL words. - Suggested integration of facial expressions, cautioned against reliance on English idioms.
Overall Feedback by Testers	- Appreciation for the application's emphasis on accessibility. - The AI model predicting ASL words is impressive.	

Table 1. Phase 1 User Testing Feedback Summary

Phase 2

In Phase 2 of user testing, we received valuable feedback, as we made significant progress towards our application's development. Key improvements included expansion of the dataset (adding letter and words support), successful implementation of chat functionality, and the integration of ASl to English translation. We also refined our interface to meet AAA accessibility standards. The users praised the clean and user-friendly interface stating it has seamless navigation. Participants expressed satisfaction with the responsiveness and ease of use of the chat feature, although the users encountered technical difficulties such as font visibility issues and challenges with gesture recognition due to the hand gesture recognition being sensitive and requiring specific angles, which were duly noted by the developer to improve. Additionally, users highlighted the need for improvement in word detection accuracy and suggested enhancements to address specific issues encountered during interaction with the AI model. Overall, the feedback was positive in regards to user experience with the chat functionality while providing constructive feedback for further enhancements towards the project.

Deliverables	Description	Feedback
Interface UI Improvements	Improved navigation,	- Clean and user-friendly interface - Seamless navigation
Chat Functionality	Setup Procedure, Responsiveness and ease of use	- The addition of chat functionality is appreciated, enabling real-time interaction with the AI model simulates natural conversation. - The integration of ASL to English translation further enriched the chat experience, facilitating seamless communication between ASL and non-ASL users.
AI model	Accuracy and effectiveness of predictions on the expanded dataset	- The added support for Letters and words in the expansion of the dataset is very impressive. - Majority of the predicted words and letters were highly accurate.
Technical Difficulties	Font visibility and gesture recognition challenges	- Encountered technical difficulties such as font visibility issues on predictions and challenges with gesture recognition due to sensitivity and angle requirements.
Suggestions for Improvement	Enhancements for word detection accuracy	- Emphasize the importance of improving word detection accuracy to ensure precise communication.

Table 2. Phase 2 User Testing Feedback Summary

Phase 3

In the final phase of user testing, comprehensive feedback was gathered, as we evaluated VisuSpeak as a completed product with our users. Users provided insights across various aspects, highlighting both strengths and areas of improvement. The feedback emphasized the application's appealing color palette and UI design, while also mentioning the importance of consistency in the UI across all pages. Initially, responsiveness issues were observed with the chat page on mobile devices, but these were successfully addressed by switching to the desktop version of the application on the mobile device. Another notable concern raised was the accessibility of the chat feature before signing in, as participants noted the absence of a label to indicate its presence, relying solely on an icon. The participants appreciated features such as ASl Dictionary, translation speed adjustment buttons and the countdown feature which served as an alert for the users, suggesting room for improved usability. Additionally, this final phase of testing addresses technical issues like non-functional buttons and inconsistencies in page rendering across the application. Overall, the feedback from this final testing phase provided valuable insights for refining and optimizing the VisuSpeak application for a seamless user experience.

Deliverables	Description	Feedback
General Feedback	Overall impressions and notable aspects	- Application's appealing color palette and UI design is impressive - Emphasis on maintaining UI consistency across all pages.
User Interface & Navigation	Intuitiveness and accessibility of interface	- Responsiveness issues on the chat page, but resolved by switching to desktop mode on mobile devices.
Feature Testing	Evaluation of specific features	- ASL Dictionary, translation speed adjustment buttons and the countdown feature for word translation is a nice addition to the application
Performance & Responsiveness	Application response and functionality	- Identified issues with non-functional buttons and inconsistencies in page rendering, highlighting areas for improvement. - Emphasize the need for improved responsiveness and accessibility.
Compatibility	Cross-device and browser compatibility	- Tested application on mobile browser without encountering compatibility issues.
Suggestions & Improvements	Recommendations for enhancing functionality	-Further refinement of features and technical aspects required to enhance overall usability and user experience.

Table 3. Phase 3 User Testing Feedback Summary

Conclusion

The three-phase user testing of VisuSpeak provided invaluable insights into our development process. Through this testing, we acquired crucial information about the ASL community and their communication practices in various contexts. Participants' feedback highlighted both positive aspects and areas requiring improvement. As a team, we carefully considered the participants' ideas and comments, ensuring that any feedback not immediately implemented had a strong rationale behind it. We prioritized changes that would truly enhance the functionality and usability of VisuSpeak, aligning with our goal of creating a platform that serves the needs of ASL users and fosters inclusive communication.