Heuristic Evaluation - s296247

Part I: Your Name

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Part II: Project Description

The "exerLIS" project is a desktop application designed for individuals learning or interested in the Italian Sign Language (LIS). It offers a user-centric experience, allowing users to practice, learn new signs, receive real-time feedback from an AI sign recognition system, engage in conversations with an AI signing avatar and / or connect with other learners.

Part III: Evaluation Execution

I conducted the following heuristic evaluation during the lab time slots, using both the prototype to be evaluated on Figma and an empty Google Drive document to jot down the positive aspects, issues, or imperfections that I would later relate to Nielsen's ten heuristics. I started testing the application one task at a time, paying close attention to every detail. Not because I wanted to find some problems at all costs, but because I know that any feedback from a user who is not one of the developers can be extremely useful in improving the work done, and I wanted to give my contribution. In the end, after testing all the features related to the three tasks, I began the actual evaluation of everything I had found.

I met the GEMS group, but I didn't need any specific explanations or clarifications about the application they developed, mainly because the README file was clear enough to understand the entire context. Then, with the other evaluators, we met online on Google Meet to merge all our evaluations.

Part IV: List of Violations

1. **H10:** Help and documentation

   Where: "Exercise" section
   What: The app does not provide a correct explanation for the user's level and the earned points.

Why: The user's levels and points should be explained well (with documentation or something else) because the user may be confused about how to gain points and how to use his levels.
Severity: 2

2. **H4:** Consistency and standards

   Where: Sidebar component
   What: When I open the sidebar I don't know if to close it I have to use the "go back" button or the "Hamburger" button.
   Why: User may be confused about the function of the "Hamburger" button and the "go back" button, both in the sidebar. Do they have the same function or not?
   Severity: 2

3. **H3:** User control and freedom

   Where: "Learn a new sign" section, "Conversate" section, "Exercise" section
   What: The app does not have a clear and immediate way to go to the home page.
   Why: If the user, from the main three sections of the app, wants to navigate to the home page, apart from the "go back" button, there is not a clear way to do it.
   Severity: 2

4. **H5:** Error prevention

   Where: Task 1 - "Exercise" section - Fingerspell the word
   What: I am doing my exercise, I am not on the first letter of the word, I click on the "Check the alphabet" button and when I go back I have to restart the word exercise from scratch.
   Why: If the user needs to check the alphabet for any reason, after going back he has to restart the exercise on the same word from scratch.
   Severity: 3

5. **H3:** User control and freedom

   Where: Task 1 - "Exercise" section - Guess the sign exercise
   What: I have just answered or skipped a sign, I want to navigate back to my previous answers but I am not able to do it.
   Why: If the user wants to see the correct answers he has already given he can't do it because the app does not have anything supporting this functionality.
   Severity: 1

6. **H3:** User control and freedom

   Where: Task1 - "Exercise" section - all the exercises
   What: The app does not have a clear button to abort the execution of an exercise.
   Why: If the user wants to exit from the exercise section, he does not have a clear and immediate way to do it.
   Severity: 2

7. **H1:** Visibility of system status

   Where: Task 1 - "Exercise" section
   What: On the last of a set of exercises, whatever they are, even if the answer is correct, the app displays a component with the message "Session completed" instead of a "correct answer" message like on the previous exercises.
   Why: The user may be confused because even if the set of exercises is finished he has to know if the last answer he gave is correct or not.
   Severity: 2

8. **H4:** Consistency and standards

   Where: Task 1 / 2 - "Exercise" section- Sign the word, "Learn a new sign" section - Words and Topics
   What: The app has an inconsistency about topic - hint picture.
   Why: If the topic is "colors", the picture that represents the color is going to be signed, cannot be a fruit.
   Severity: 2

9. **H5:** Error Prevention

   Where: Task 2 - "Learning a new sign" section, for each way to learn, into the learning exercises
   What: If I am doing a learning activity and I push one of the buttons (related to the tasks) in the sidebar, the app does not display any feedback or confirmation message to prevent a change of screen.
   Why: Without any feedback or confirmation message, if the user makes the mistake of pushing a button on the sidebar, he has to restart the activity from scratch.
   Severity: 3

10. **H4:** Aesthetic and minimalist design

    Where: Task 2 - "Learn a new sign" section - Words
    What: I am trying to sign a word, I make a wrong sign and the app displays an error component with this error message: "Try again" with the button message: "Retry".

Why: If the user provides a wrong answer, he may be a little bit confused with the error message and the error button message that are conveying the same information written in different ways.
Severity: 1

11. **H4:** Consistency and standards

    Where: Task 2 - "Learn a new sign" section - Topics
    What: The app under the topic "Regions" displays continents instead of regions (for instance regions of a country).
    Why: The user may be confused because if he wants to choose a specific region, he finds instead the continents of the world.
    Severity: 1

12. **H7:** Flexibility and efficiency of use

    Where: Task 2 - "Learn a new sign" section - Words
    What: When I tried to sign a word, if I want to learn another word, there is not a "Next" / "Previous" button to change words as in the other learning exercises of the "Learn a new sign" section.
    Why: The user has to go back twice to change a word to learn, instead of pushing the "Next" / "Previous" button like in the other learning exercises of this section.
    Severity: 1

13. **H4:** Consistency and standards

    Where: Task 2 - "Try to Sign" - Alphabet interface.
    What: When I click on the "go back" button, in all the scenarios but the "Try to sign alphabet" one, it goes back to the previous page, however when I click on the "go back" button into the "Try to sign alphabet" scenario, it takes you back to the initial "learn a new sign" section.
    Why: This creates ambiguity towards this button and inconsistency to what it actually does because sometimes it takes you back one page and sometimes it takes you back more than one page.
    Severity: 2

14. **H1:** Visibility of system status

    Where: Task 3 - "Conversate section" - during a conversation
    What: The app provides the translation functionality not only for the avatar but also for me during a conversation.

Why: Having the possibility to provide translations also for the user who wants to have a conversation can be useless.
Severity: 1

Part V: Summary and Recommendations

Heuristic	# violations
H1: Visibility of system status	2
H2: Match between system and the real world	0
H3: User control and freedom	3
H4: Consistency and standards	5
H5: Error prevention	2
H6: Recognition rather than recall	0
H7: Flexibility and efficiency of use	1
H8: Aesthetic and minimalist design	0
H9: Help users recognize, diagnose, and recover from errors	0
H10: Help and documentation	1
HN: Non-heuristic issue	0

In general, I can say that it was my first time doing an heuristic evaluation, and I must say that this allowed me to learn how to do something new and really interesting.

The "exerLIS" application I have just evaluated, is an uncommon project, innovative and with a certainly very noble purpose. As a matter of fact, it allows users of all kinds to get closer to the world of sign language, which for now, is somewhat unknown for a lot of people.

Although there are some errors and imperfections, surely also due to the limitations of the prototype type (Medium-Fidelity prototype) and Figma, the design tool, I truly loved testing this application.
I really appreciated that it was aimed at virtually all types of people, from the youngest to the oldest, with a focus on an issue that remains very sensitive even today. In addition, I

I think the opportunity to learn together with friends further conveys a sense of community and unity, which is not very easy to find.

In conclusion, I can say that one thing that in my opinion could be improved is, for example, the management of the user's experience level, achieved through scores in exercises. Currently, the level as it is doesn't serve any purpose. I would consider, for instance, the possibility of connecting not only the individual user to an avatar or a friend but also to all potential users of the application, such as those with the same level or a specific, higher, or lower level. This way, the individual user could also have the opportunity to meet new people and further challenge themselves. Anyway, in general, I saw a lot of design and implementation effort behind this project and, I am sure the final version would / will be even better.