SENG 310 – Human Computer Interaction

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Vertical Prototype

Description: Our current prototype includes proof-of-concept pages featuring hard-coded data with interlinked navigation to simulate a practical user experience. This approach allows participants to feel like they are using a real app rather than just paper or video simulations. The pre-built pages include **Sign-in, Sign-up, Home, Your Hikes, Hikes Near You, Achievements**, and an **AR Glasses** page.

- Sign-in: This page contains text boxes for email and password, alternative sign-in options such as Google, and a link to the Sign-up page.

- Sign-up: This page includes text boxes for first name, last name, email, and password, along with a sign-up button to create an account.

- Home: The Home page features a welcome message, a menu button for navigating to other pages, weather information, and a list of popular hikes. Clicking the menu button in the top-right corner opens a menu with links to the Home, Your Hikes, Hikes Near You, Achievements, and AR Glasses pages.

- Your Hikes: This page displays a list of your past hikes, each with a description. Each hike item is clickable, opening a detailed view of the hike that includes information on difficulty, distance, time, and nature items scanned with AR glasses during the hike. Clicking on any Flora or Fauna category takes you to a detailed page about the discovered flora or fauna, including descriptions and information.

- Hikes Near You: Similar to the Your Hikes page, this page lists nearby hikes with hike information instead of user-specific stats and discovered items.
- Achievements: Accessible from the menu, this page displays rewards you have received from hiking and scanning different flora or fauna.

- AR Glasses: Also accessible from the menu, this page shows the status of your AR glasses, display preferences, and custom display settings for easy manipulation of the visual screen on the AR glasses.

This detailed prototype effectively demonstrates the functionality and user experience of the application, providing a realistic and interactive environment for participants testing the app.

Evaluation Plan

To evaluate our current prototype we will perform a study with potential users using our prototype to navigate through pages on the app to locate a specific hike with correlating details. Our participants will range from novice to experienced hikers as they may have different experiences using similar applications allowing for a broad range of feedback.

a. Goal for the usability testing user-evaluation

- The goal of this study is to identify any pain points for users when revisiting previous hiking flora and fauna scans following an excursion wearing the AR glasses for the first time. In addition, another goal of this study is to determine if users can easily perform the app's navigation after first use and what potential pain points exist in the design, even after repeated use.

b. Steps for a single evaluation session (be meticulous and detail-oriented)

1. Provide information about the test context to the participant via instruction document or word of mouth.
    a. Eg: “You have just completed a hike wearing AR glasses, navigate through the application to find the hike and correlating components including flora and fauna scans, pictures, and the path took”
    b. Ensure understanding, and provide clarification if required
2. Present user with prototype

3. Start recording their exploration of the application via screen capture and audio, with consent
4. Mark down any comments, questions, or confused areas of exploration
5. Once complete, ask users questions about their experience
    a. What areas were unclear?
    b. What would you change?
6. After a brief break, get the participant to redo the task and repeat steps 3-4
7. Ask users questions, for a summary of their experience, and any notes they have
    a. What icons were unclear or performed an unexpected action?
    b. What were the most challenging aspects?
    c. What did you enjoy or find helpful on the app?
    d. Verify what they would change
    e. Collect final notes from participant

c. Anticipated problems and challenges

1. Users may need help understanding the goal of the task given, as they haven't loaded data onto the app
2. Users may get stuck on certain pages that have icons primarily

d. Remedies for those problems

1. The guide in the study will answer questions at the start of the recording to ensure the user understands the purpose of their actions
2. Guide will note moments of this confusion, and assist with the next step to be efficient with time

e. Data collection

- The data collected from participants will provide us with the data on the bottlenecks of our design
- The data collected will provide us with additional ideas from potential users that will provide a different lens than we have had working on this project.

References

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