Wingtip - Fornacis

Wyatt Whiting, Oregon State University
Kyle Folk-Freund, Oregon State University
Ethan Hirsch, Oregon State University
Nicholas Minton, Oregon State University
Joseph Tong, Oregon State University

In this paper, we share the insights and results generated from a set of both analytical and empirical evaluations. We include a recap of our analysis methods, along with the data we generated from both series of analyses. This information will be used to further develop and refine our UX model. In total, we have two independent sets of analytical evaluations, which approach the problem using several analytic heuristics. We further have two sets of empirical evaluations which are performed with test subjects. These are intended to evaluate our design from the perspective of a real-world user.

KEYWORDS

social media; bird watching; reference; citizen science; analytical; heuristic; Nielsen; empirical; evaluation; usability; learnability; efficiency

1. Introduction

Evaluating a prototype is a critical step in the UX design process. To this end, we have conducted a total of four (4) evaluations using two (2) unique evaluation methods. These were a pair of analytical evaluations, along with a pair of empirical evaluations. The analytical evaluations were performed by two group members independently from one another, but sharing a set of heuristics by which to evaluate the design. The empirical evaluations were carried out by two other group members, each independent both from one another and from those conducting the analytical evaluations. Two test subjects were recruited to participate in the empirical evaluations, and were selected to be representative users of the imagined end product. Following is a breakdown of the methods used to conduct each set of evaluations, along with the results of said evaluations.

2. Analytical Evaluation

2.1 Goals

The purpose of these evaluations was to analyze our low fidelity prototype for the WingTip bird watching application with respect to its usability. By having experts analyze the prototype, guided by the Nielsen Heuristics for usability testing, we were able to gather insights about the learnability, flexibility, efficiency, consistency, and intuitiveness of the prototype. These insights will allow us to make targeted improvements to the low-fidelity prototype before moving on to creating a higher fidelity, fully interactive and complete prototype. This is important because we can more easily make changes to the logical organization and functionality of the prototype now, while it is still its lower fidelity state than it will be once the scope and interactivity are fully implemented.

2.2 Methods and Techniques

For the analytical evaluations, we performed a heuristic analysis using the questions based on the Nielsen Heuristics which are listed in section 2.3 below. We performed the analysis on a low fidelity prototype created from the consolidation of our three initial concepts for the WingTip app, which is shown in appendix E at the end of the document. Two members of the team, Joseph Tong and Kyle Folk-Freund, analyzed the various screens in the prototype identifying any usability issues they observed. In addition to analyzing the individual screens, the two evaluators stepped

through three tasks using the prototype. The tasks were performed in a different order by each of the evaluators in case the order in which the tasks are done may hide or reveal problems with the user experience. These tasks were:

- View the profile of the user at the top of the state leaderboard.
- Find out when purple finches are active.
- View the details of a local bird sighting.

2.3 Materials

Images of the prototype used in the evaluation are shown in appendix E at the end of this document. The heuristics used in the evaluation were based on the Nielsen Heuristics. The Nielsen Heuristics (numbered 1-10 below) and the specific questions we devised based on them are as follows:

1. Visibility of system status
    a. When the system is performing a task that the user must wait on, does it inform the user of what is happening?
    b. Does the system always inform the user of where they are both within the app and on the current page? (This question is an addition to the W6 plan.)
2. Match between the system and the real world
    a. Does the system use only words and symbols that are easily understood by the lay-person?
3. User control and freedom
    a. Does the system allow the user to easily back-track on screens or cancel actions?
4. Consistency and standards
    a. Are words and symbols used for a given purpose the same on every page within the system?
    b. Are words and symbols used for purposes common to other applications similar enough to be easily recognizable?
5. Error prevention
    a. Is it possible or likely for the system to allow the user to enter an error state?
6. Recognition rather than recall
    a. Can the user easily navigate to all of the apps features without having to remember long paths of screens and button taps?
    b. Is all of the information the user needs to perform a task on a given screen immediately available?
7. Flexibility and efficiency of use
    a. Are closely related features linked so that the user can easily transfer information from one to the other where appropriate without backtracking and re-entering the information?
8. Aesthetic and minimalist design
    a. Is relevant information easy to locate on each page?
    b. Is only relevant information displayed on each page?
9. Help users recognize, diagnose, and recover from errors
    a. If an error message is displayed, is it easily understood by the lay-person?
    b. Can the user easily return the system to the state it was in before the error occurred?
10. Help and documentation
    a. Can the user quickly obtain help documentation related to the feature they are currently interacting with?

2.4 Evaluation Data

The data collected from the heuristic evaluations is shown is appendices A and B at the end of this document.

2.5 Results and Insights

A number of issues related to the usability of the WingTip prototype were identified during the two heuristic evaluations. Below is a list of the issues, their severity rating (along with the justification for this rating), and our initial plans for addressing them:

- When navigating certain pages, such as user profiles or Birdpedia results page, there is no indication to the user that they can scroll the page or how far they can scroll in any direction.
    - Severity 2: Although the presence of "cut off" content at the bottom of the screen will in most cases indicate to the user that they can scroll down, it is also conceivable that the bottom of the screen could fall between content sections so that nothing is cut off and the user may be unaware that there is additional content. Additionally, without a position indicator, it is difficult for the user to keep track of the location of information within a page that they may want to return to.
    - We plan to add scroll bars to pages with content that continues beyond the bottom of the screen. This will allow users to always know when there is additional content beyond what is currently visible and it will make it easier for them to keep track of the location of content within the page.
- When the user navigates to another user's profile page, they have reached a "dead end" and have no easy way to return to where they came from.
    - Severity 3: The social media features are a major aspect of the app. Users will often view the profiles of other users in order to send messages or view photos or videos uploaded by that user. Currently, the user will have to return to the home screen of the app or navigate to one of the other features from the navigation bar after accessing a user profile, rather than being able to return to the page that they accessed the page from. This could be a major annoyance and a time waster for users.
    - We will add a back button to the profile pages that will return the user to the page that they came from so that they do not have to manually navigate back to where they were.
- There is currently no way for a user to search for another user. The only way a user can view another user's profile is to find that user on another page, such as the leaderboards or bird sighting map.
    - Severity 3: As noted above, the social features of this app are a major component. This makes the lack of a way to reliably locate a given user's profile a major drawback.
    - At minimum, we will provide a way for users to search for other users by real name or user name. We also could add a way for users to add other users to a "friends" or "following" list. This will make it much faster and more reliable for users to locate another specific user's profile.
- The only way for the user to enter a bird sighting is to use the "New Post" button on the home page and enter all of the data for the sighting manually.
    - Severity 2: The button to post a sighting is easy to find since it is at the top of the home page, which can be accessed at any time from the navigation bar. However, the flexibility and efficiency of the process could be improved by integrating it with other features of the app so that the user does not have to navigate away from them and re-enter information that they may have already entered on another screen.
    - We will add a "Post a Sighting" button within the Birdpedia. When the user taps this button, the species of the bird whose page they were on will be pre-populated in the bird sighting form. Additionally, if the user reached that page through the bird identifier feature, the photo or recording they used to search for the species can be automatically attached to the sighting.
- The font sizes on many of the screens are too small to be easily read on a phone screen.

    - Severity 3: The font is large enough to be legible, but too small to be comfortable for the average user to read. Most users will not want to use an app that they have to squint at to read.
    - Will will increase the minimum font size so that it is large enough to be read comfortably by the average user on a mobile phone screen. Additionally, we may add a font size option that will allow the user to scale the font size to their preference.
- When the user is entering a password on the account creation page, there is no text informing them of any constraints on the password.
    - Severity 2: If the user has to attempt to enter a valid password multiple times because they aren't aware of the constraints, they could be driven away from the app before they even start using it.
    - We will add text to the registration page informing the user of any constraints on the password so that they are aware of them prior to attempting to submit their registration.

3. Empirical Evaluation

3.1 Goals

Our team will carry out a set of empirical evaluations with potential users in order to generate insight on the usability of our design. With these evaluations, we hope to gain information on whether a number of tasks are easy to intuit. We hope the app will appeal to both experienced bird watchers as well as those who have only a passing interest in the hobby, or are just beginning. In essence, we want this to be a proverbial "One Stop Shop" for bird watching.

3.2 Methods and Techniques

For the empirical evaluation, we will be interviewing and observing two people, outside of our group, stepping through prescribed tasks in the WingTip application. During the interview, we will have the interviewee mimic using the app while presenting each screen in succession, manually changing the screens as the prototype does not work on its own yet. The interviewee will not receive any training or direction on the functionality of the app before the evaluation as to prevent biases from entering the data. We want the interviewee to experience the interface as if there were no interviewer at all. The tasks for this observation will include:

- View the profile of the user at the top of the state leaderboard.
- Find out when purple finches are active.
- View the details of a local bird sighting.

After the task description has been explained to the user and any preliminary questions have been answered, the evaluation will begin. No assistance will be provided by the interviewer to the interviewee during the core of the evaluation, other than indicating whether certain actions can not be completed (for example, tapping on a button for which no prototype has been developed yet).

The interviewer will take notes of the interviewee's comments and workflow before, during, and after the core of the evaluation. Additionally, the interviewer will indicate whether the interviewee was able to complete the tasks, and take note of any roadblocks the interviewee encountered when trying to accomplish the tasks set before them.

After the observation, the interviewer will prompt the interviewee with a list of questions to summarize the interviewee's experience working through each task.

3.3 Materials

The prototype used in this evaluation was a slideshow made up of several screen mockups. This slideshow can be found in appendix E. The interview questions that we created and used in this evaluation are as follows:

1. What are your general thoughts about the workflow of these tasks?
2. What difficulties did you encounter when trying to accomplish these tasks?

3. For any difficulties you faced, what was your initial instinct?
4. How difficult was searching for the “purple finch?”
5. How difficult was creating a new account?
6. How difficult was locating recent sightings in your area?
7. How difficult was locating your own profile?
8. What information were you expecting to find in the Wiki page that wasn’t there?
9. What were your broad thoughts on the app’s navigation?
10. Did you find any feature particularly easy to understand?
    a. If so, do you know why?
11. If you could design this app, what are 2 things you would change immediately?
12. Do you have any final thoughts or comments?

3.4 Evaluation Data

The data that we collected from our empirical evaluations is shown in appendices C and D at the end of this document.

3.5 Results and Insights

Throughout our testing, we were able to surmise that our application has a few issues to work out but overall is intuitive for users to navigate. The intuitiveness of this application was an important piece of information for us to ascertain as it was one of our goals listed in our evaluation plan. Each user that the evaluation and interview was conducted with had constructive opinions regarding the features and functionality of WingTip; these included adding a follow feature to user profiles so that the news feed prioritizes specific users, implementing a sorting feature to the map page so that the user has more control over what data is populated on this page, and re-thinking what search criteria are available to users when searching for a specific species. Here are some quotes from appendices C and D describing some of the usability issues that we found and how they could be addressed:

In regards to the searching features, “The search criteria given were useful, but I think it would be beneficial to add a variety of basic search filters such as color and size. These would be useful to newer birdwatchers, like myself, who may be less familiar with things like diet and species names.”

In regards to the map and recent sighting functionality, “For finding the nearest sighting in my area, it would have been the pin on the map and then I would have instinctively used the filter or gear button to filter by recency, maybe something of that nature. Maybe if the map had a time signature on the pin, like ‘4:50 pm’ with the date or something.”

Even though the application is not in its final state, the insight that we received from the evaluations will be very useful moving forward. It will help us improve the content we currently have while making us aware of areas in which we could use improvement.

Overall, the comments from the users in appendices C and D were positive in regards to the layout and visual of our prototype for WingTip; at the same time, they pointed out some smaller details that need to be ironed out regarding the functionality of the application. Both users saw a need to improve the specificity of the searching page, while separately, they had issues with the sign-up and map pages.

4. Appendices

A. Heuristic Evaluation 1

This evaluation was performed by Joseph Tong, using an interactive PowerPoint version of the prototype shown in appendix E was used. The interactive version was visually identical to the appendix E prototype, with buttons added to the images to allow automatic navigation to the correct screens. The order of tasks performed was as follows:

- Find out when purple finches are active
- View the profile of the user at the top of the state leaderboard.

- View the details of a local bird sighting.

The following data was collected from this analysis:

1. ***Visibility of system status***
    a. When the system is performing a task that the user must wait on, does it inform the user of what is happening?
        i. Since everything is hard-coded in the prototype, the user doesn't currently have to wait for anything. However, features such as the bird search and bird identifier (not accessible in the current prototype) will need some form of "loading screen" or animation to display to the user while the system is working on returning results to them.
    b. Does the system always inform the user of where they are both within the app and on the current page?
        i. On the bird search results screen, the results continue off the bottom of the screen, but there is no scroll bar to indicate to the user that they can scroll or how far.
        ii. The same problem as above is present on the two user profile screens.
        iii. The problem is also present on the Daily Challenge page.
        iv. It is difficult to distinguish the clickable area of each entry on the Daily Challenge page since there is no border around them.
2. ***Match between the system and the real world***
    a. Does the system use only words and symbols that are easily understood by the lay-person?
        i. No issues related to this question were identified in the current prototype. All buttons and text use common words and symbols.
3. ***User control and freedom***
    a. Does the system allow the user to easily back-track on screens or cancel actions?
        i. When the user navigates to a user profile page, there is no way for them to return directly to the page that brought them there.
4. ***Consistency and standards***
    a. Are words and symbols used for a given purpose the same on every page within the system?
        i. No issues related to this question were identified in the current prototype. For the most part, the buttons all have different functions. However, in cases where they were the same, such as the navigation bar at the bottom of each screen or the back button at the top of screens 8, 9, and 12, the words and symbols used were the same.
    b. Are words and symbols used for purposes common to other applications similar enough to be easily recognizable?
        i. No issues related to this question were identified in the current prototype. Where operations in the application are the same or similar to those common to other applications, the words and symbols used to describe them are also the same or similar. However, this only applies to the features that are functional in the current prototype. The binocular icon at the bottom of each screen is the placeholder for the bird identifier features. This icon may need to be changed since it could be confused for a search feature.
5. ***Error prevention***
    a. Is it possible or likely for the system to allow the user to enter an error state?
        i. No issues related to this question were identified in the current prototype. Most user interaction takes place through simple button taps. No possible error states related to the user interface could be identified in the features present.

6. ***Recognition rather than recall***
    a. Can the user easily navigate to all of the apps features without having to remember long paths of screens and button taps?
        i. There is currently no way to reach a given user's profile page (not the currently logged in user) without finding a link to that user's profile on the leaderboards or sightings map.
    b. Is all of the information the user needs to perform a task on a given screen immediately available?
        i. No issues related to this question were identified in the current prototype. The user does not have to refer to or remember information from another page in order to complete any currently implemented tasks.
7. ***Flexibility and efficiency of use***
    a. Are closely related features linked so that the user can easily transfer information from one to the other where appropriate without backtracking and re-entering the information?
        i. Currently, the only way a user can log a sighting is by using the "new post" button on the home page. It would be more convenient to also allow them to log a sighting from the birdpedia entry for the species they spotted or from the map by tapping or double-tapping a location. Then the species or location information could be pre-populated on the sighting entry screen (not yet implemented in the current prototype).
8. ***Aesthetic and minimalist design***
    a. Is relevant information easy to locate on each page?
        i. The font sizes used for various text are legible when the prototype is viewed on a computer monitor of a reasonable size, but may be too small when viewed on a real smartphone screen. This problem is present on almost every screen.
    b. Is only relevant information displayed on each page?
        i. No issues related to this question were identified in the current prototype. Information on each screen is organized into sections or blocks with only a handful per page. The information in each section is relevant to the page on which it is displayed.
9. ***Help users recognize, diagnose, and recover from errors***
    a. If an error message is displayed, is it easily understood by the lay-person?
        i. No issues related to this question were identified in the current prototype. No error messages were displayed since no error states have been identified in the user interface.
    b. Can the user easily return the system to the state it was in before the error occurred?
        i. No issues related to this question were identified in the current prototype. No error messages were displayed since no error states have been identified in the user interface.
10. ***Help and documentation***
    a. Can the user quickly obtain help documentation related to the feature they are currently interacting with?
        i. Help documentation has not been implemented in the prototype.

B. Heuristic Evaluation 2

1. ***Visibility of system status***
    a. When the system is performing a task that the user must wait on, does it inform the user of what is happening?
        i. Currently the user would not have to wait for any task. The first screen shows whether the user is logged in or needs to sign up. Each screen clearly shows which screen you are on and describes it. What needs to

be added to certain screens like “Birdpedia” is when a user is searching, that there is a loading screen that while waiting for the results, shows the status in an appealing way,

b. Does the system always inform the user of where they are both within the app and on the current page?
    i. On every page there is a header showing where the user is in the app.
    ii. The map screen is not clear if you can move around the map to the parts not seen in the screen.
    iii. Easy to track which section of the prototype the user is in because the navigation bar symbol is highlighted at the bottom.

2. Match between the system and the real world

a. Does the system use only words and symbols that are easily understood by the lay-person?
    i. Yes all symbols and words are easily understood. For example on the bottom of the screen there is a bar that shows 5 symbols and they are clearly understood. For example there’s a house symbol for the home screen, there is a book for the “Birdpedia” screen, etc.. For all other symbols and words are easily understood by a lay-person.

3. User control and freedom

a. Does the system allow the user to easily back-track on screens or cancel actions?
    i. Yes, the bird result pages and bird sighting page has back buttons to easily backtrack pages. The user profile doesn’t have a back button. All other screens can be accessed through the bottom bar so the user can cancel actions.

4. Consistency and standards

a. Are words and symbols used for a given purpose the same on every page within the system?
    i. Each button all has different purposes and functions. There are screens with the same buttons and their function is the same for every screen. There is a back button on the “Results” screens and “Bird Sighting” screen. The bottom navigation buttons and functions remain the same on all screens, allowing the user to access other screens. The “Map” screen and its words and symbols remain the same for each screen.

b. Are words and symbols used for purposes common to other applications similar enough to be easily recognizable?
    i. Majority of all symbols and words are common to other applications and can be easily recognized. The app starts with a sign-in page which is common to apps. The navigation bar all has easy to recognize symbols. The gear button in the top right is the setting which is common for most apps.

5. Error prevention

a. Is it possible or likely for the system to allow the user to enter an error state?
    i. Throughout the system there is no clear way to enter an error state. Maybe in the “Signup” page if there are any constraints to the password the app should provide tips and validate to prevent errors.

6. Recognition rather than recall

a. Can the user easily navigate to all of the apps features without having to remember long paths of screens and button taps?
    i. Majority of paths are easy and not long to navigate. If the user was looking for another user to compare bird sightings and other stats, it could be difficult to find that user is not on the leaderboard.

b. Is all of the information the user needs to perform a task on a given screen immediately available?
    i. Each screen provides all the information necessary for the user to perform any given task on any screen. One slight improvement could

be when the user is searching the “Birdpedia” that there is a drop down that shows possible results when the user is typing.

7. ***Flexibility and efficiency of use***
    a. Are closely related features linked so that the user can easily transfer information from one to the other where appropriate without backtracking and re-entering the information?
        i. The “Results” screen and “Map” screen are closely related and it's easy for users to transfer bird sightings between the features.
8. ***Aesthetic and minimalist design***
    a. Is relevant information easy to locate on each page?
        i. Relevant information is easily located through each screen. One issue is the font may be too small for the app, particularly on screen 9 and 12. The font size may make it difficult for the user to read the relevant information.
    b. Is only relevant information displayed on each page?
        i. Yes, each screen only provides necessary information to the user for the task they are currently doing or ways to move around the prototype. Information in each screen is placed into different sections and blocks, which makes it easy to understand..
9. ***Help users recognize, diagnose, and recover from errors***
    a. If an error message is displayed, is it easily understood by the lay-person?
        i. The only possible error found in the prototype is regarding the password in the “Signup” screen and if an error did occur while signing up, the user could understand the issue before an error message.
    b. Can the user easily return the system to the state it was in before the error occurred?
        i. The only possible error found in the prototype is regarding the password in the “Signup” screen and if an error did occur while signing up then the user would remain on that page and could attempt another password..
10. ***Help and documentation***
    a. Can the user quickly obtain help documentation related to the feature they are currently interacting with?
        i. There is no help documentation for this prototype

C. Empirical Evaluation 1

This evaluation was performed by Nick Minton, and the outside user was a 25 year old female medical student. Similar to the analytical evaluations, this evaluation was aided by an interactive PowerPoint presentation that allowed the user to interact with screen mockups in a way that resembles a functioning application. The mockups used were identical to the prototype in appendix E.

Tasks Completed and User-Comments

1. From the welcome screen, create a new account
    a. “Sign-up was intuitive, but could benefit from linking to an email or phone number for account recovery”.
2. Use the search feature to locate a “purple finch”
    a. “The search criteria given were useful, but I think it would be beneficial to add a variety of basic search filters such as color and size. These would be useful to newer birdwatchers, like myself, who may be less familiar with things like diet and species names.”
3. Find the most recent bird sighting in your local area
    a. “It seems to be a relatively intuitive and useful feature.”
4. View your own profile
    a. “Would have liked to see a friends feature or at least some way to follow specific users.”

5. On the daily challenge, view the profile of the first-place user.
    a. “Leaderboards feature made sense, but the again, possibly adding a friends or follow feature could elevate this.”

Post-Evaluation Interview Questions

1. What are your general thoughts about the workflow of these tasks?
    a. “They seem pretty inline with other apps and have intuitive workflows.”
2. What difficulties did you encounter when trying to accomplish these tasks?
    a. “My primary issues came from the search options. There should be more options to cater to people who are amatuer, possibly allowing a search to be filtered based on color or other descriptive features.”
3. For any difficulties you faced, what was your initial instinct?
    a. “I felt that a search would be more easily handled as a google search, so their instinct would be to use another platform to search for the species.”
4. How difficult was searching for the “purple finch?”
    a. “Searching for the “purple finch” was easy as the name was given.”
5. How difficult was creating a new account?
    a. “Creating a new account was standard, but could benefit from an email field and the inclusion of account recovery tools.”
6. How difficult was locating recent sightings in your area?
    a. “Not difficult at all, the map appeared to function similarly to commonly used applications like Google Maps and Yelp.”
7. How difficult was locating your own profile?
    a. “Profile was easy to find since it was in a fixed location and used a common profile logo.”
8. What information were you expecting to find in the Wiki page that wasn’t there?
    a. “The wiki page had everything that I was looking for in the text description. However, it would have been nice if there was a bird-noise button that could play a sound clip of the bird's call. Also, on the wiki page it would be cool to possibly display or link a gallery of community photos of that specific species.”
9. What were your broad thoughts on the app’s navigation?
    a. “I liked how easy the app’s interface was to understand, as it had a lot of layout similarities to other applications that I have used.”
10. Did you find any feature particularly easy to understand?
    a. If so, do you know why?
        i. “The map and profile were quite easy to understand as those two were the most similar to the map and profile features on other applications that I commonly use.”
11. If you could design this app, what are 2 things you would change immediately?
    a. “Add an email field to the sign-up page.”
    b. “Add in more search filters when looking for species in the Birdpedia.”
12. Do you have any final thoughts or comments?
    a. “Consider creating an inner app community that helps bird conservation and is involved with related community service projects.”

D. Empirical Evaluation 2

I began by informing the test subject of his rights, and obtaining a verbal confirmation that wanted to proceed with the study. Due to COVID-19 pandemic, what would otherwise have been an in-person interview was conducted over a Discord voice chat. To present the prototype, I screen-shared the screens we have developed and switched through them as necessary to simulate interaction with the program. To begin the assessment, I informed him of the tasks he was to accomplish. There were several times throughout when he asked for guidance for how to complete a certain task, which I declined to answer. At some other points, he asked for a reminder on the tasks to complete, to which I gave him a short reminder of those tasks in question.

It was clear to me following the assessment that the ‘map’ functionality for locating recent and nearby sightings was the least intuitive of all the features. I believe we will have to put a decent amount of work into improving these elements of our design. Other than that, most tasks did not present a significant challenge to the user.

Below you can find the notes I took during the interview session. They include the minutes of the assessment along with commentary. Bullets with quotation marks are quotes from the user. Bullets without quotes are general notes I took. Questions and answers are marked with Q and A.

Q: My first task is to sign up?
A: yes
-User taps on ‘sign up’ button
-”Generally what I would do first is look through before signing up. I’d click through each tab and see if it’s something I’m interested in, and then sign up.”
-”Go ahead, put my username as … I don’t know… big bird”
-User gets through sign-up page
-User asks for next task reminder, I tell him to locate purple finch with search
-”I’m not sure what the correct icon is, as both the book and binocular could be the search function”
-User taps on binoculars, I indicate that page is currently non-functional
-User taps on book icon, I present search screen
-”I type in the name ‘purple finch’ but I don’t know the other information so I just type in the name and press search”
-I present search results page
-”I’m surprised the purple finch wouldn’t be on top, considering it’s what I was searching for. But I do see the purple finch, so I tap on that”
-I present the purple finch wiki page.
-”I’d read all the information on here and then scroll down to see the rest of the information on it.
-I indicate these pages are strictly static for the time being, so that’s not possible.
-User moves on to new task
-User navigates back to home page
-”Cool. I tap on ‘find species near me’”
-”Wait, did you mean the most recent sighting in the local area?”
-I clarify task to user
-”I tap on the little map icon on the bottom”, I present that screen
-”okay… um… I’d probably try to user the filter or gear button to see if there is a ‘sort’ option”
-”I try clicking the home button again”
-”hmmm… ehhhh… shoot what was on the book page… everything else was search criteria”
-It seems like the UI doesn't make clear how to find specifically recent sightings
-”Guess I’ll click the map icon again, maybe I missed something”
-User navigates back to search page on the wiki tab
-”I can’t seem to find recent sightings”
-I remind user of next task, to find their profile
-He immediately navigates to the face icon on the bottom bar
-I remind user of next task, to look at profile of first-place on the leaderboard
-User navigates to the home page again
-”are you able to tap the daily challenge icon?” I decline to answer
-User taps on daily challenge entry
-The leaderboard seems to make intuitive sense to him.
-User taps first-place entry and gets to the profile with no problem.
-User notices the “cool awards”
-”I’d probably read them and see what they’re about”
-I give the user another shot at finding recent local sightings
-”The ‘local area’ leads me to believe it’s the map with the pin on it again”
-I present the map page to him
-It seems like the pins on the map aren’t seen as interactive on first glance

-”click home again”, I present home page

-bald eagle sighting on the front page could be misconstrued as the most recent local bird sighting too easily.

-”okay, profile again I guess” so I present it to him

-”I click on the book again,” I present that page

-user wants to go back to map screen, I present it

-”Can you click on the bubbles? … Interesting….”

-user indicates he is ready to end this portion of the interview.

REFLECTION SECTION

Q: What are your general thoughts about the workflow of these tasks?

A: I think for the most part, they’re pretty intuitive. The buttons are intuitive, could help me with most things I’m interested in when using it.

Q: What difficulties did you encounter when trying to accomplish these tasks?

A: Finding the most recent sightings was the hardest part. I also found it weird that the purple finch was not the top result in the search despite being the exact term I searched for.

Q: For any difficulties you faced, what was your initial instinct?

A: For finding nearest sighting in my area, it would have been the pin on the map and then I would have instinctively used the filter or gear button to filter by recency, maybe something of that nature. Maybe if the map had a time signature on the pin, like ‘4:50 pm’ with the date or something.

Q: How difficult was searching for the “Purple Finch?”

A: On a scale from 1 to 10, 1 and a half.

Q: How difficult was creating a new account?

A: 0 out of 10.

Q: How difficult was locating recent sightings in your area?

A: Uh, like 7 out of 10.

Q: How difficult was locating your own profile?

A: 0 out of 10.

Q: What information were you expecting to find on the Wiki page that wasn’t there?

A: Maybe like, I don’t know, more information or a more visual representation of these things. Maybe like a picture of the US and a shaded region where they’re found or reference to size with common household objects.

Q: What were your broad thoughts on the app’s navigation?

A: I think it has a very modern feel to it in the sense that a lot of applications these days have a toolbar on the bottom with 4 or 5 different sections. It was logical, and looked sleek.

Q: Did you find any feature particularly easy to understand?

A: The search function. Although I was confused to see ‘diet’ as a search criteria. I would have expected name and region, and it would have been easier to use ‘locale’ if it was a drop-down menu. The diet also sticks out as a search criteria, but I guess if you’re looking for predatory birds it makes more sense.

Q: If you could design this app, what are 2 things you would change immediately?

A: I would change recent sightings to be something on the home page. I’d also add more visuals to the wiki page. Maps and pictures make me happy.

Q: Do you have any final thoughts or comments?

A: Uh, nope. It’s all good.

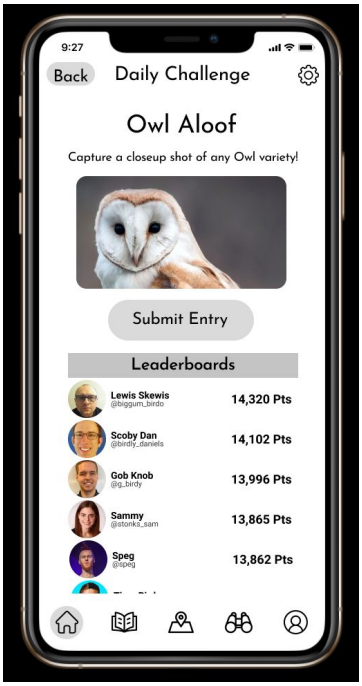
E. Prototype

#1 Welcome Screen

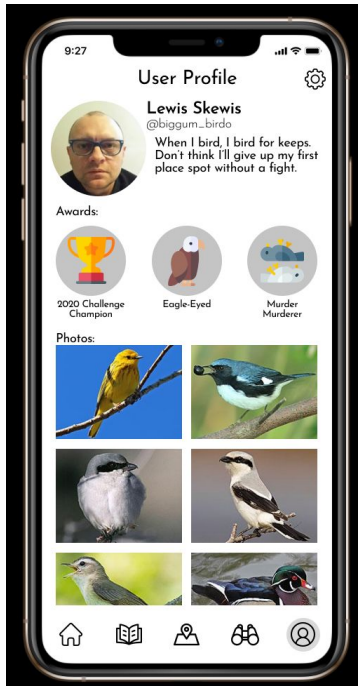
#2 User Sign-In

#3 New User Sign-Up

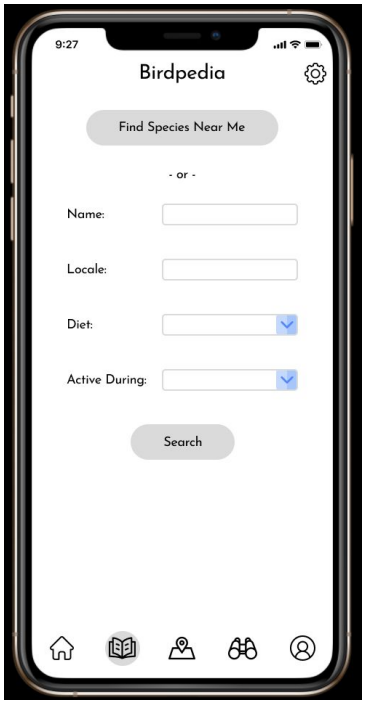
#4 Activity Feed



#5 Daily Challenge Detail



#6 Non-User Profile

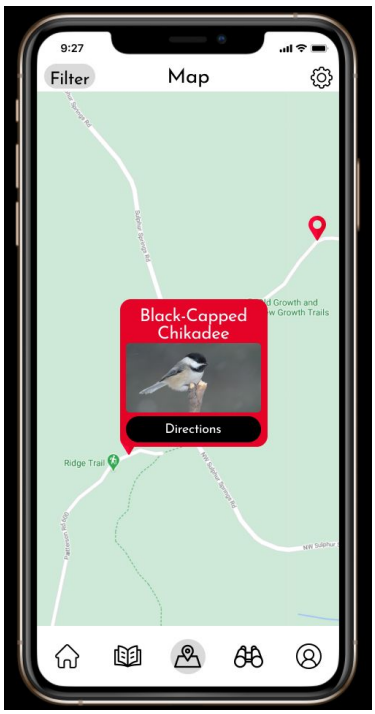


#7 Search Screen

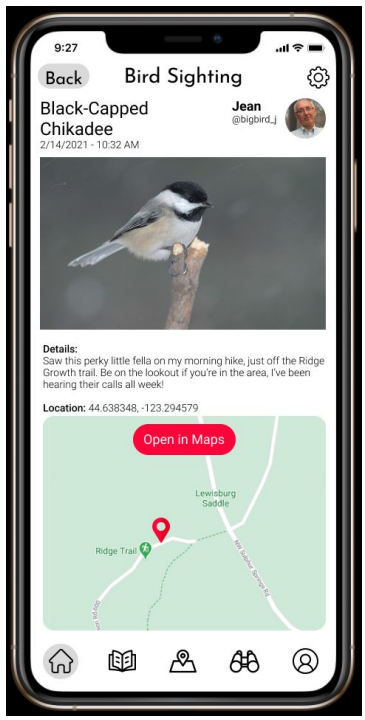
#8 Search Results

#9 Birdpedia Entry

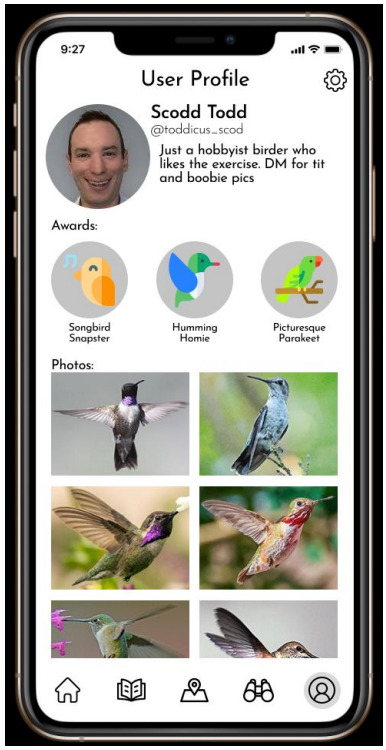
#10 Local Map



#11 Local Map with Selected Sighting



#12 Sighting Detail



#13 User Profile

Peer Evaluation

Member Name	Role	Responsibilities / Assigned Task	Task Completion Grade (0-5)
Ethan Hirsch	User Research and Communication	- Updated prototype	5
Joseph Tong	Writing/Deliverables	- Analytical Evaluation section - Heuristic Evaluation 1	5
Kyle Folk-Freund	Visual Design/UX Design	- Heuristic Evaluation 2	5
Nicholas Minton	Visual Design/UX Design	- Empirical Evaluation 2 - Empirical Evaluation Results and Insights	5
Wyatt Whiting	Leader/Manager	- Empirical Evaluation section - Empirical Evaluation 1	5