

barefoot

one step at a time

INTRODUCTION

Value Proposition:

one step at a time

Mission Statement:

We hope barefoot can help people foster a deeper connection with the outdoors by immersing them in nature with contextual learning.

Problem / Solution Overview:

Technology has made it incredibly easy to live a sedentary lifestyle and lose awareness of the environment around us. This lack of environmental education and care makes it difficult for individuals to take action to live sustainably. With this platform, users can seamlessly interact with nature and learn about the flora, fauna, and history of their surroundings while strengthening their appreciation and awareness of nature. We hope this in turn promotes more sustainable living.

SKETCHES

Mobile App

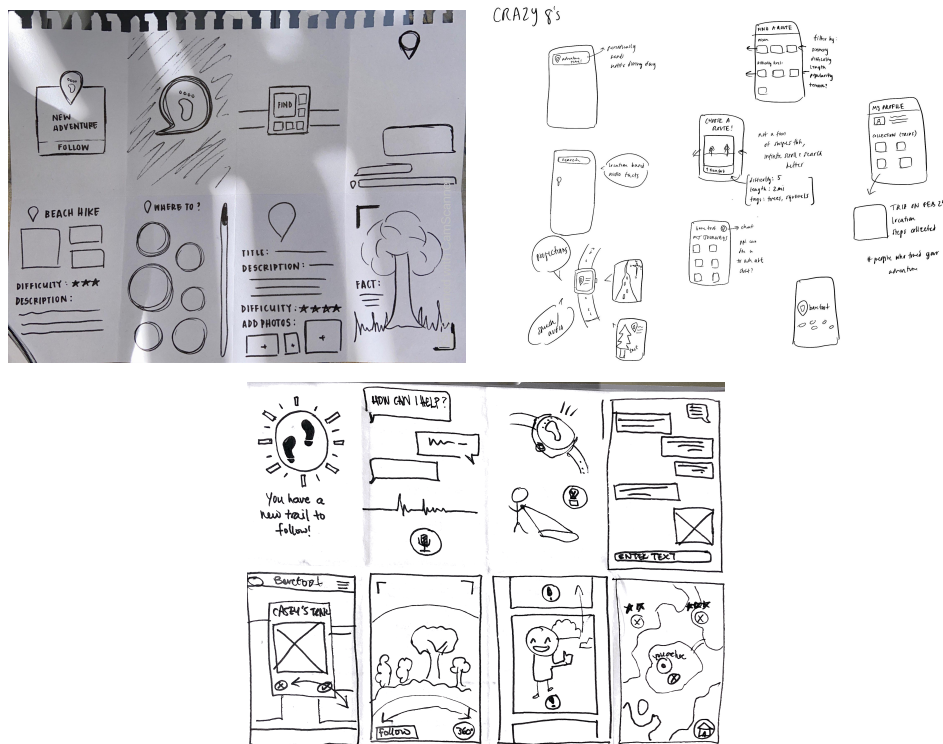


Figure 1: Individual brainstorming processes for various screens of the app

Virtual Reality

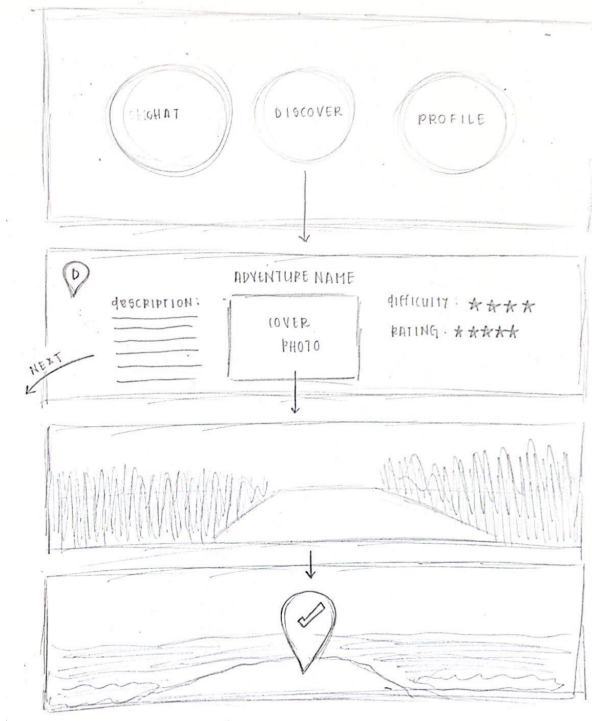


Figure 2: Virtual Reality UI Sketches

Web Application

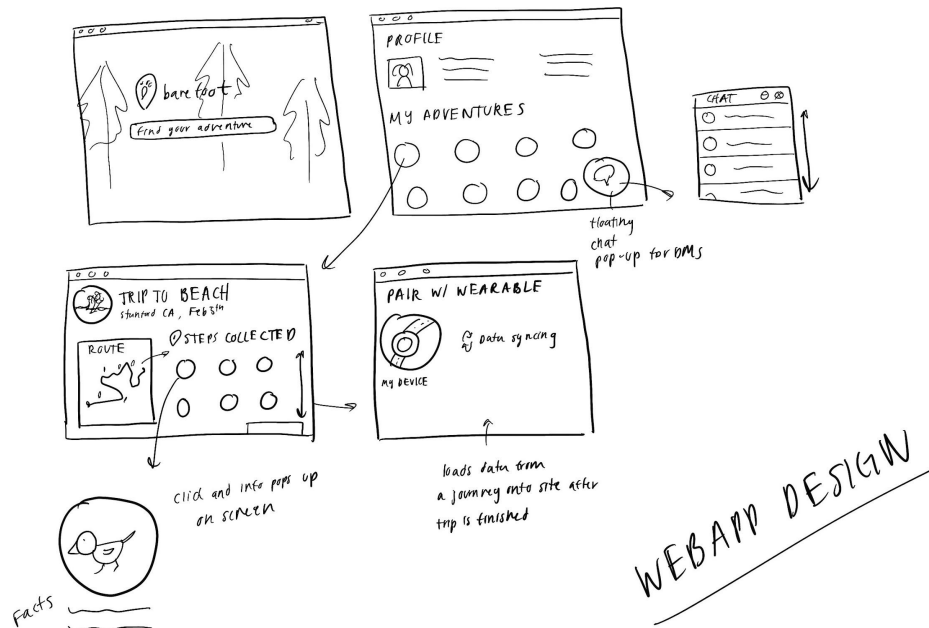


Figure 3: Web App UI Sketches

Augmented Reality Glasses

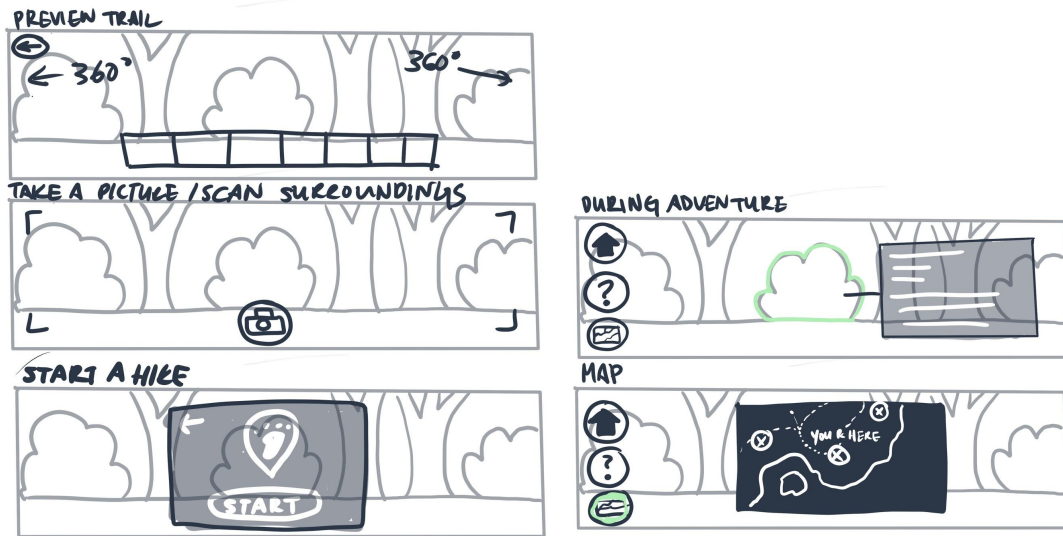


Figure 4: Augmented Reality UI Sketches

Wearable (Watch)

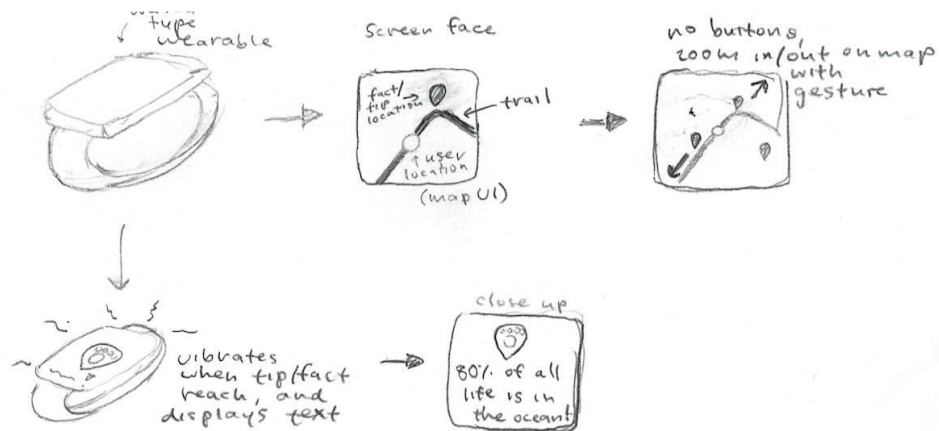


Figure 5: Wearable (watch) UI Sketches

TOP 2 STORYBOARDS

Wearable (Watch)

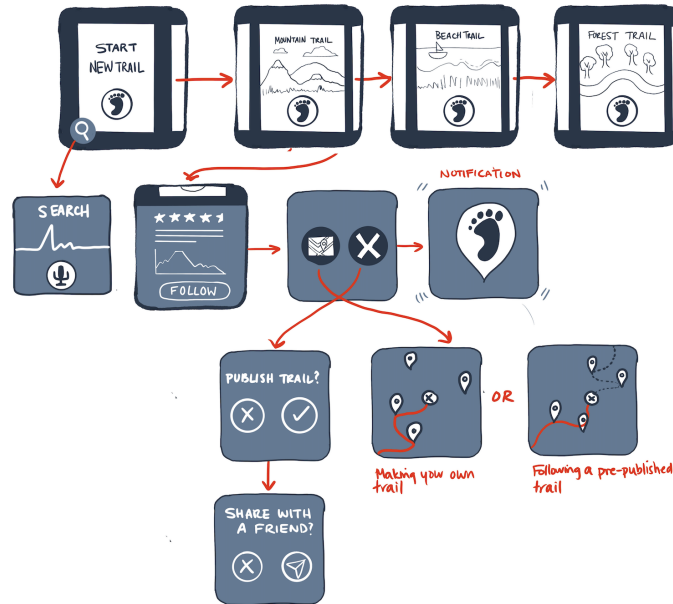
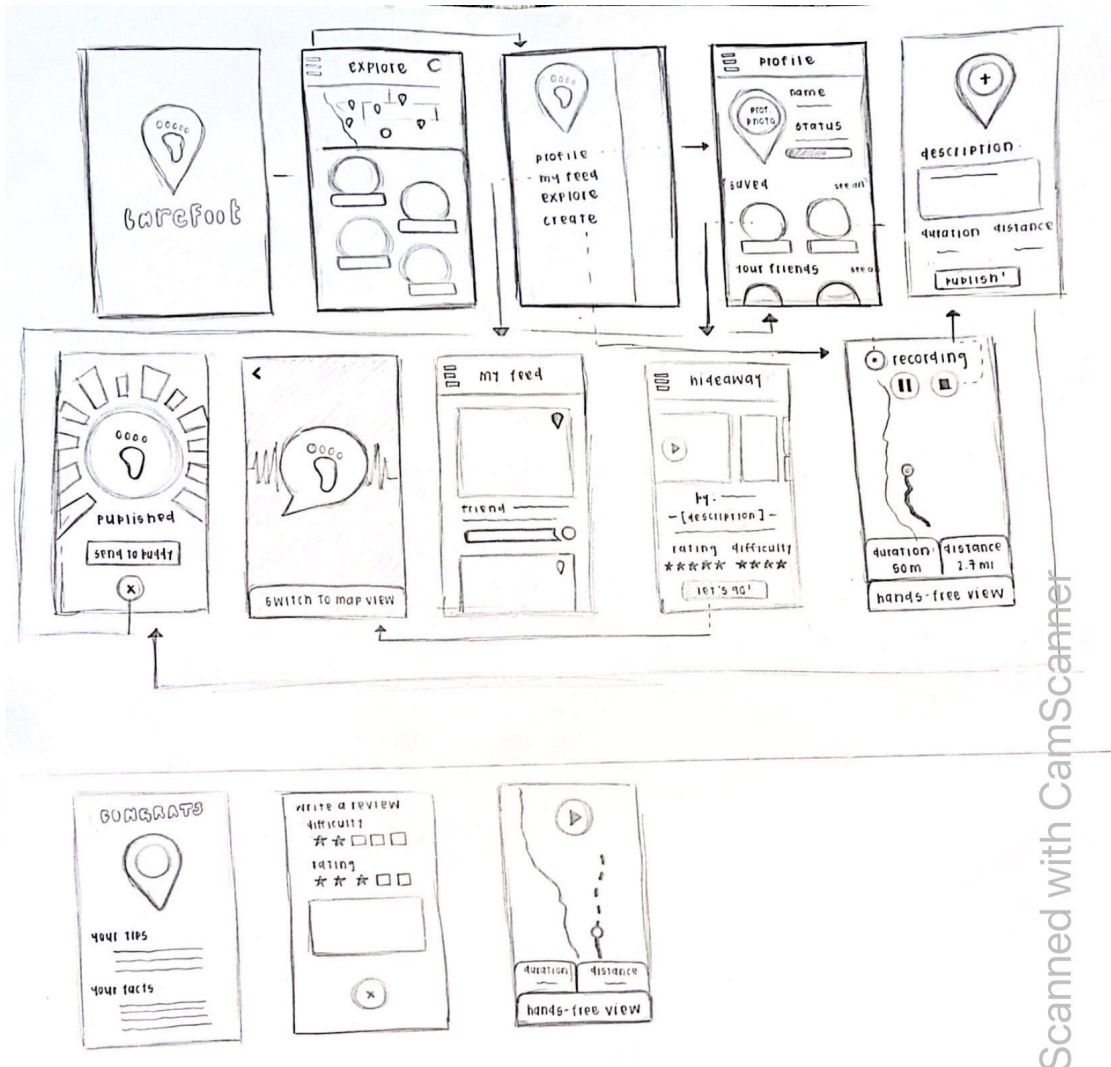


Figure 6: Reiterated Wearable UI Design

Pros	Cons
<ul style="list-style-type: none"> • Balance between immersion and having tech for guidance • Facts given in context • Primarily synchronous: focus is on the adventure 	<ul style="list-style-type: none"> • Hard to navigate on such a small screen • Minimal functionality outside of hiking -- no interactivity or community or caching • Need to buy a watch


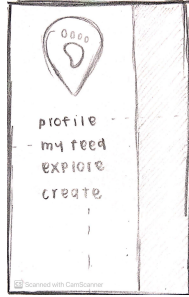

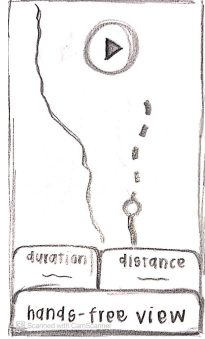

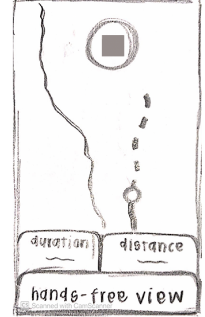

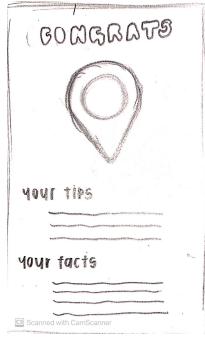
Mobile App


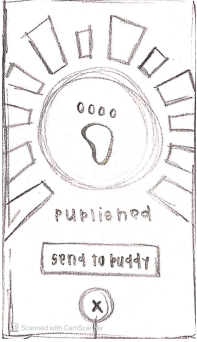




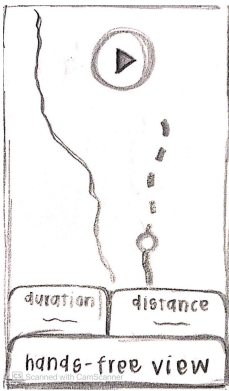


Scanned with CamScanner

Figure 7: Reiterated Low-fi Prototype Sketches

Pros	Cons
<ul style="list-style-type: none"> ● Can be used anytime/anywhere ● Includes sharing / social media component ● Can view all other components of platform easily (larger screen size) ● Familiar interface ● Easily accessible with smartphone ● Better for long-term use 	<ul style="list-style-type: none"> ● Must actively be using app while on adventure to navigate/hear facts ● Want to avoid becoming too "social-media-esque"

BUTTON	BUTTON ELEMENT	FUNCTIONALITY	ENDING SCREEN
	<p>"Menu" button</p>	<p>Opens hamburger menu to allow for navigation to other pages</p>	
	<p>"Let's Go" button</p>	<p>Begins chosen adventure and leads you to GPS navigation page</p>	
	<p>"Play" button</p>	<p>Allows you to begin recording your path</p>	
	<p>"Stop" button</p>	<p>Stops recording of path, concludes adventure, takes you to "Congrats" page</p>	

	<p>"Publish" button</p>	<p>Publishes your path after filling out information about your recorded adventure</p>	
	<p>"Share" button</p>	<p>Allows you to share your published adventure with a buddy</p>	
	<p>"Send" button</p>	<p>Allows you to share your new adventure with your person of choice</p>	
<p>create</p>	<p>"Create" button</p>	<p>Leads you to the GPS navigation page where you can begin recording your new path</p>	

	<p>"Hands-Free-View" button</p>	<p>Sends you to an audio-only page that allows you to disconnect from your screen</p>	
	<p>"Map-View" button</p>	<p>Sends you back to map view from the audio-only page</p>	

TESTING METHODOLOGY

Participants and demographic:

1. Middle-aged stay-at-home mom from the Bay who loves to take her family and dogs for outdoor activities
2. Stanford student from Boulder who is an avid hiker, mathematician, and physicist.
3. Introverted college senior who doesn't use social media or like going outdoors.
4. Active, young woman who enjoys hiking, biking, running, and exploring.

Environment:

Remote interviews via Zoom

Tasks:

- a. View your profile
- b. View your feed
- c. Navigate to explore page
- d. Create your own trail
 - i. Switch to hands free view
 - ii. Say "You're walking down your trail and you hear your phone audio say "You are passing a giant eucalyptus tree. Some fun facts are that Eucalyptus leaves help treat malaria and help manage waste water issues by acting like a filter."
 - iii. Publish trail and try sharing with friends
- e. Now, try to follow a trail that was previously published

Procedure:

- Greeted participant and explained why we are interviewing them
- Explained purpose and function of our app and gave a general overview
- Ask participant to narrate thoughts, feelings, and what they were doing
- Asked participate to proceed with the 5 tasks
- Asked what they thought of the app and for feedback pertaining to any part of the app
- Thanked them for their time

TEST MEASURES

We primarily wanted to examine the successes of our current prototype, as well as points of confusion or errors that arose through interactions with our UI. Our metrics for success were whether the participant was able to correctly navigate through their given tasks, and whether their actions translated into changes that they expected within the task flows. We also gathered insights from points of confusion, such as instances where certain buttons or screens weren't what was expected, or if there were errors in navigating through the given task. These were consolidated into actionable changes we will incorporate into future iterations of our interface.

TEAM MEMBER ROLES

Interview Number	Greeter/ Facilitator	Computer	Observer
1	katrina	grace	rachel
2	anthony	rachel	grace
3	grace	katrina	anthony
4	rachel	anthony	katrina

RESULTS

- 3 participants did not know how to get back to the menu during the hiking, completing hike, and sharing flows.
- 3 participants expressed enthusiasm for learning more about their environment. They even suggested incorporating historical learning into the app.
- “Hands free view” wording was confusing for 1 user
- All users were familiar with accessing profile and social media components, but became more confused after selecting trail.
- 2 participants expressed confusion with the play button as it was not intuitive to them
- 2 participants expressed confusion with publishing a trail because the word publish did not make sense if one is following a trail
 - One participant suggested having options to share post publicly, directly, or save privately
 - Another participant thought it was too many clicks to get through the publishing process and a third participant didn't want to go through the publishing process every time a trail was completed
- Participants agreed with the explore page being the home page and the first thing you see when you open the app
 - One participant suggested landing on the social media page after publishing publically
- Participants gave mixed reviews on social media aspect of app: some thought it was unnecessary whereas others liked the idea of exploring new trails that their friends have experience

DISCUSSION

Overall, we felt that the interviewees did well completing the tasks we asked of them. It became clear to us that the largest issues with our design were navigating back and forth between screens and understanding what the record button was doing during the adventures.

Although the individuals were able to complete the task of choosing a trail relatively intuitively, they pointed out that they wanted the option of going back to the menu to exit out of the adventure that they were currently on if they didn't want to complete it. Originally, we were thinking that people wouldn't want this option and that they would complete all adventures to the end; however, clicking through the stop button and the congrats could be a very annoying task for individuals to complete, especially if they

are in a rush. We feel as though we could easily remedy this by means of adding a back button on all screens with a menu accessible at all times.

Another issue that we ran into in our interviews was seeing that individuals were confused about the recording button. In order to fix this problem, we thought it was best to make the recording button optional and discrete on the map screen.

In addition to problems within the existing design, we were also given helpful suggestions about possible additional features. One unanimous suggestion was a tagging feature that would allow users to categorize their created adventures and allow searching users to more easily decide which adventures that they would want to go on. Two of our participants also suggested being able to add their own landmarks to rails. Another participant suggested having different sharing options, since she found the current process confusing. We hadn't considered these ideas while creating the original design, so we are eager to incorporate new features to make the app more accessible and more navigable.

Despite the kinks in our design, we were happy to see excitement regarding the mission and the implementation of the app. Although there are similarities to existing apps, there was a lot of enthusiasm surrounding the environmental education aspect of ours. We were able to extrapolate a lot of very useful information from the feedback from our interviewees and some helpful suggestions that were brought to our attention. We are excited to see what comes for the next iteration of our design after making the changes we deem necessary.

APPENDIX

Word count: 1499

PARTICIPANT 1:

INCIDENT	SEVERITY RATING
Furrowed eyebrows when asked to find the menu button	1 (scanning of hand-drawn images were imperfect)
Asked "Are these other people's experiences that I can choose from?" while pointing to a circle image on the explore page	1 (no images were drawn in lo-fi prototype so it is difficult to infer shapes are representative of images)
Asked "How can I take photos?" She wants to be able to drop a photo on journey where it was taken, an aspect we did not consider before	4
"I don't want to see 100 pictures someone took on their hike"	2
Can't go back to map	
Tries to type in tips summary after completing hike	2
"Can I go back to the page before?" referring to the recording page	4 (we need a back button!!)
Tries to rate difficulty on summary page	1 (this part was not implemented yet)
Clicks on friend to invite and clicks send and then repeats the process implying that she did not think the request went through	3
Clicks back button on hands free view but nothing happens	2 (forgot to wire that part of the app)
"You need a closing option for the menu"	4
"From other social media apps you can	4

take a photo directly from the app or you can select a photo from your album. People are used to that option."	
"It might be nice to see a notification while reaching a view or something special" Would like to see highlights coming up while hiking	3
"Maybe you have people choosing one thing that was notable to share with other people [it would be useful]". Tagging a point of interest	4

PARTICIPANT 2:

INCIDENT	SEVERITY
Navigated easily from explore menu to profile and feed	0
Hesitation in location of trails, clicked on the map first before the trail "bubbles"	2
Immediately understood the purpose of the record function	0
Immediately navigated to and understood purpose of hands-free view	0
Pointed out no menu button on the trail map view or hands-free view	3
Reacted positively to a fact being presented, brought up "history would be cool"	0
Stated that perhaps audio could be distracting	1
Confusion as to "I followed this trail, why am I publishing it"	3
Expected share to go directly to the feed rather than back to the explore page	2
Issue with the publishing/sharing system, said "too many clicks"	3
Issue with sharing, did not understand how to get back to the menu	4

PARTICIPANT 3:

INCIDENT	SEVERITY
Liked different modes for following and creating own trail	0
"Do you have a search feature, if you want to find trails near me?"	1
"What's supposed to be the default screen?" -- explore page -- he said ("ohhh ok makes sense")	0
Some confusion about saving trail vs following trail -- somehow make it more obvious that it's saving, because the current icon in feed looks like a location icon	3
"Hazardous organism warning" could be helpful on the description page	0
"So is this like for when I'm walking?" [in reference to the hands-free view], once task completed, went "oooooh I see"	3
"You could also do like facts about the specific animals or plants on the trail"	0
"I'll click 'x' i guess" -- confusion about the buttons and how to navigate back to other screens	2
"pressing the play button wasn't my intention, you'd probably have to put it somewhere else to make it clearer"	3
Thought it was unnecessary to have to go through the publish page after finishing recording every time	3
Asked about status bar in profile, how it	0

was measured	
Instinct was to find a trail through the map vs the below menu	0
"Feed seems unnecessary"	1
"oh you can't search anyone up?" -- would like to be able to search users	1

PARTICIPANT 4

INCIDENT	SEVERITY
"What is the progress bar? There isn't an explanation about what it is or what it indicates."	3
Confused about the purpose of "Hands-Free Mode"; thought it was a disability feature rather than a GPS/audible voice at first	4 (Perhaps use something that has the word "audible" integrated in it)
"Why is there a square in the box?" - "Stop Recording" button wasn't intuitive	4
"Explore page is a good option for the default screen."	1
"It seems easy to navigate but it will be easier with a little familiarity later on."	1
"I would want to be able to search people to look at their hikes."	1 (feature available but not clear due to scanning quality)
"The hamburger menu is annoying. Maybe try something like the Instagram UI where the menu takes the form of buttons at the bottom."	4
"Status based on mileage is sort of classist. I'd rather it be based on the amount of trips you've completed."	2
"I like the idea of being able to see the reviews and comments that other people have left for me."	1
"I'd also want to see a rating for each person overall."	2
"I think tagging would be helpful for understanding the adventures better and choosing which ones I'd like to go on."	4

“Whenever I go on a hike, I like to look at the pictures posted from the day before so I can see the conditions.”

1