

# CS 147 Assignment 5:

## LO-FI PROTOTYPE AND TESTING

WORD COUNT: 2390

Michael F - team manager, and software engineering

Andrea R - designer, and software engineering

Alan K - Usability testing

## 1. Introduction

### a. Mission Statement/Value Proposition

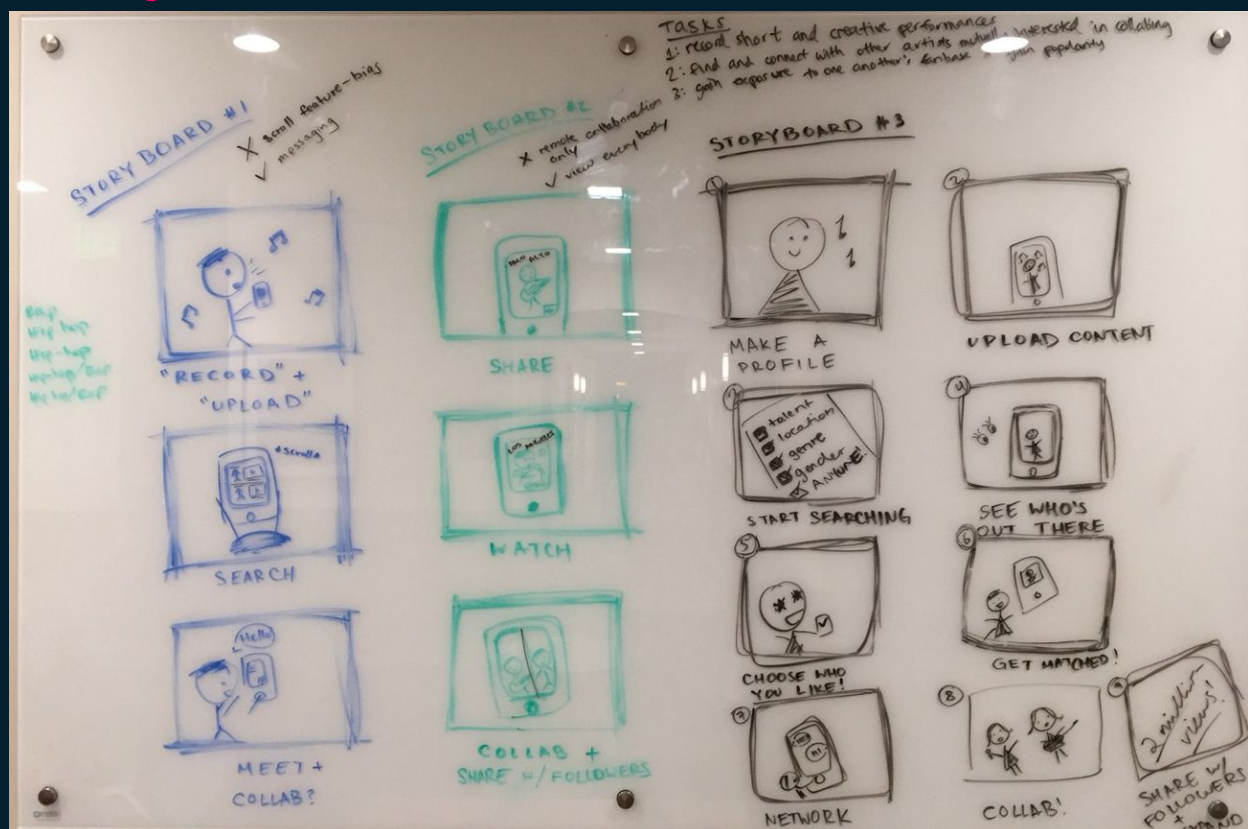
How musicians meet

### b. Problem / Solution Overview

There are few avenues for up-and-coming musicians to share their talent with other musicians through collaboration. We have sought to solve this problem by providing a platform for musicians to share short, no longer than 16 second videos of their talent with other musicians, collaborate if there's mutual interest, and hopefully gain exposure to each other's fan base.

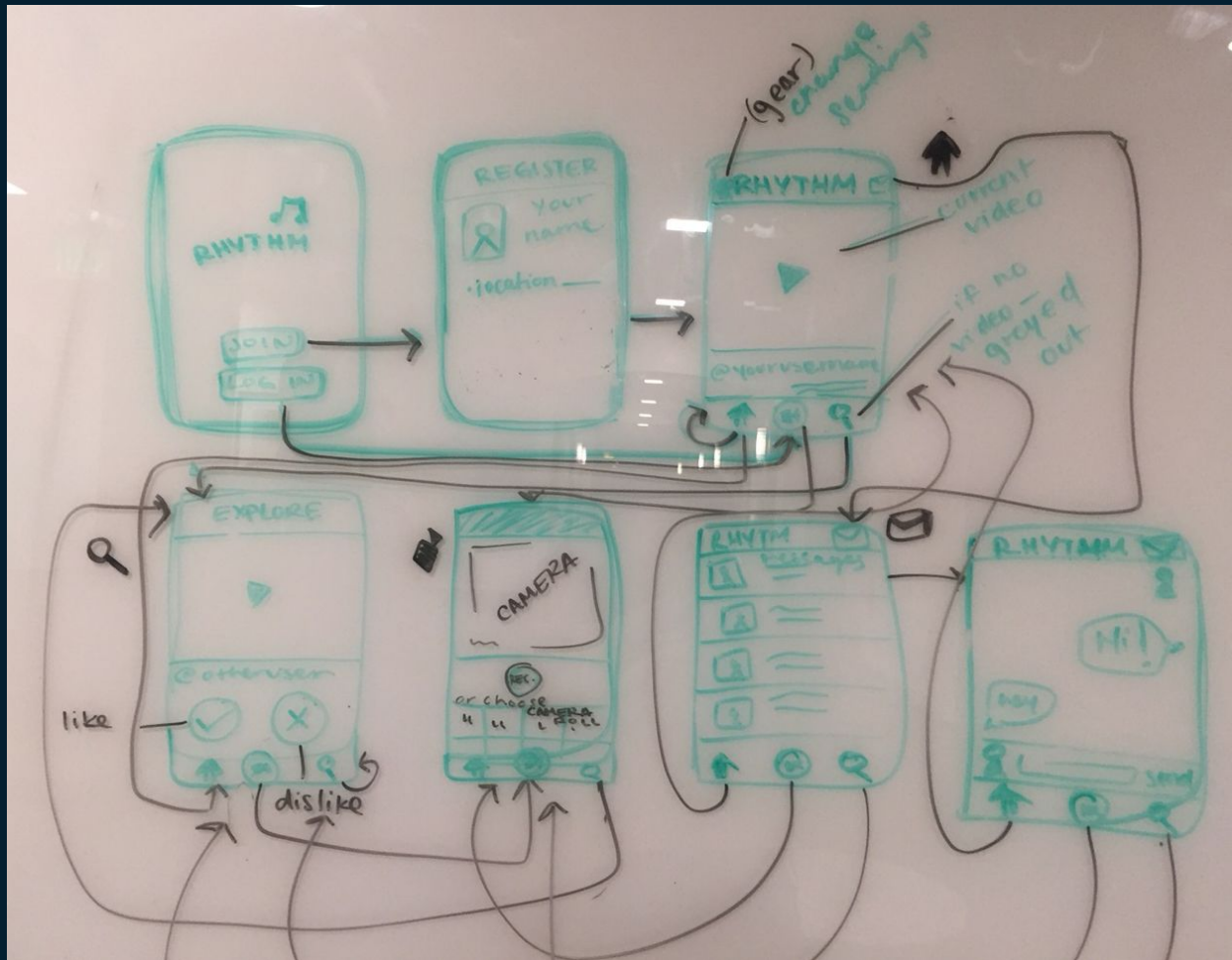
## 2. Sketches

### a. Overview image of the 15-20 sketches



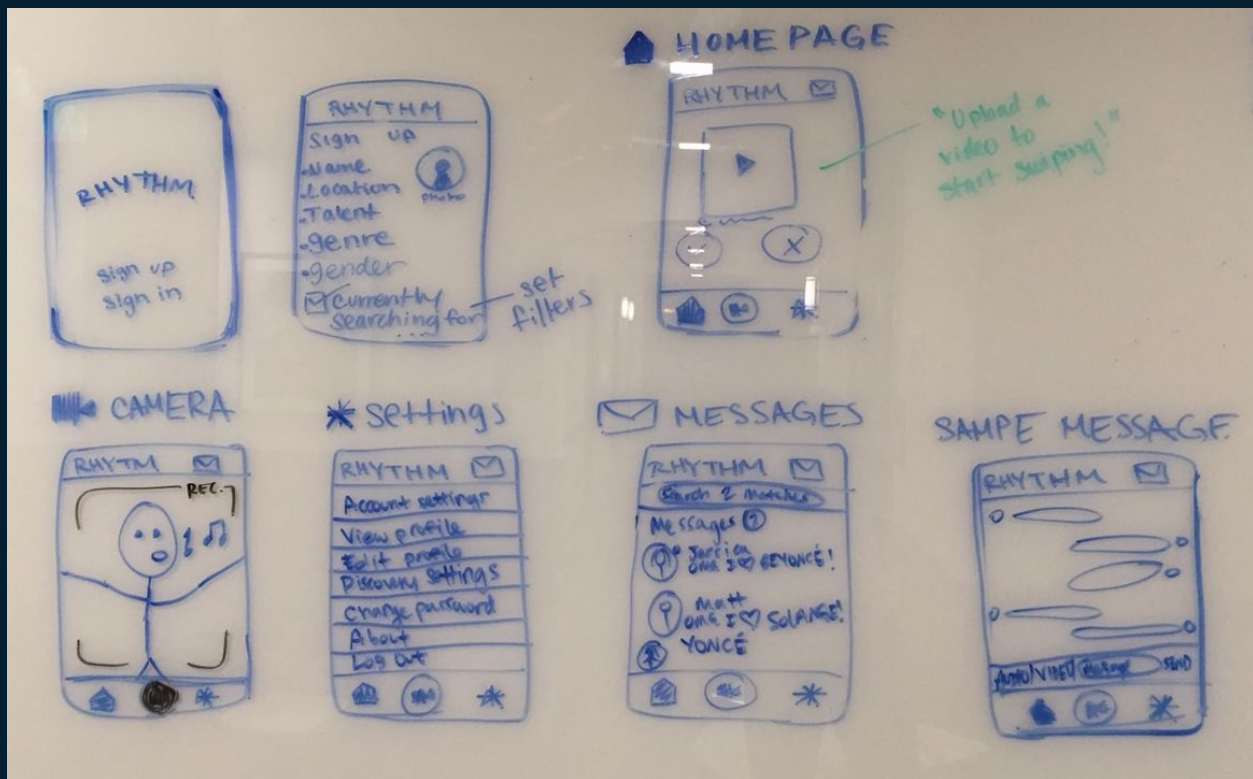
## b. Top two designs

Based on storyboard 1:



Our first interface design allows the user to create a profile, and record a short, creative performance demonstrating their musical talent using the camera (or upload a video from their camera roll) to place inside of their profile. When the user signs in, the default tab is the "home" tab, which shows a feed of people around the world by profile video. The user may scroll the feed to "like" certain profiles that he/she finds impressive and may spark a collaboration through instant messaging of text, audio, and or video content. Alternatively, the user may select the "explore" tab (the search icon) to see individual profiles one by one and swipe to indicate their interest/disinterest (However they are forced to make a choice, unlike in the feed tab).

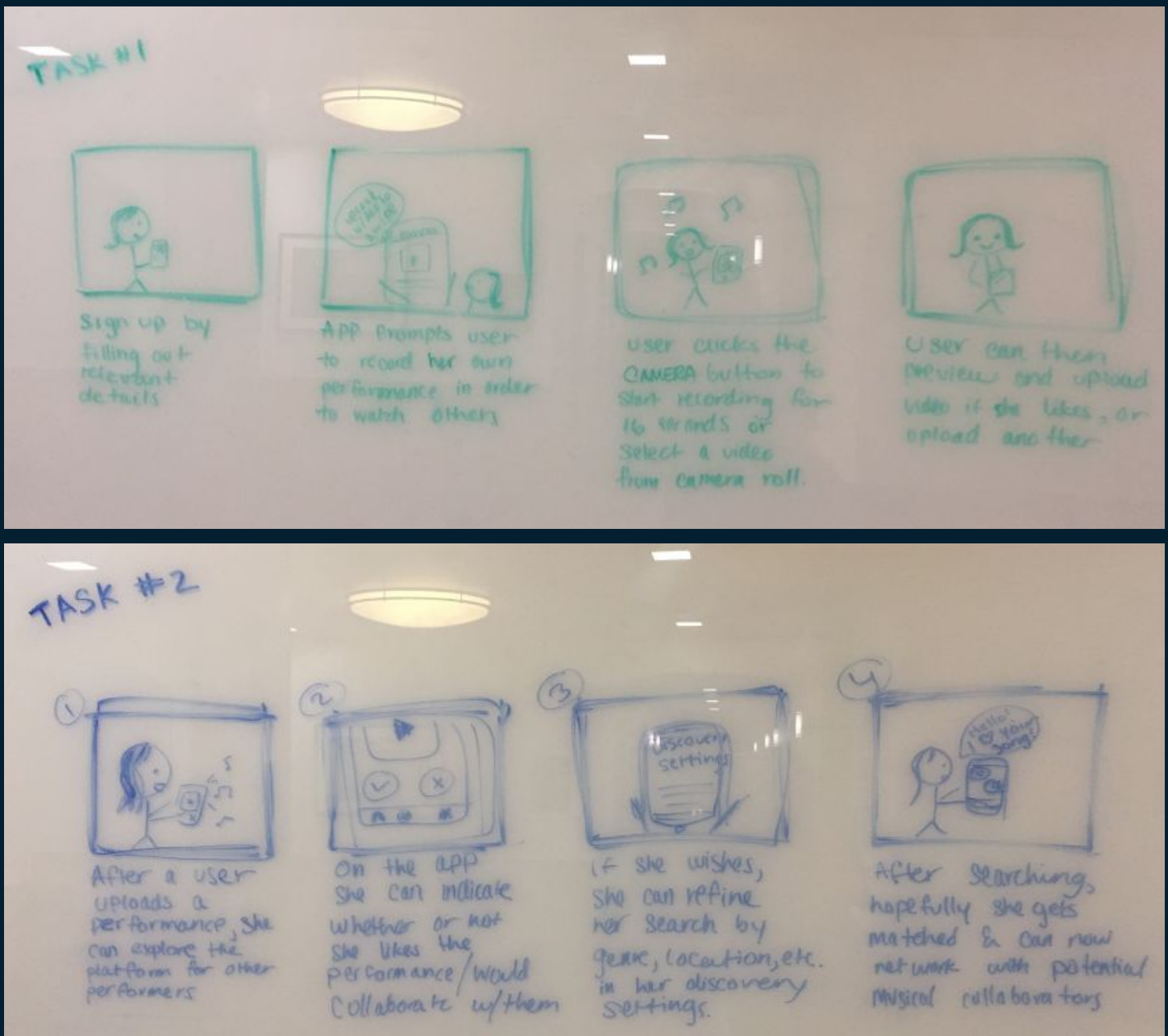
### Based on storyboard 3:



Our second interface design takes a lot of the functionality of the first interface, but adds/changes a few things. We removed the option to view a feed, but instead allow for greater level of customization in terms of filters for the discovery tab. Under the account settings, user may select discovery settings, which allows for users to filter which profiles they are shown by gender, talent, genre, and distance. This means that even though the user will have to swipe through profiles one-by-one, they may choose stricter filters to avoid being seen profiles of people who do not necessarily match their current artistic interests.

# 3. Selected Interface Design

## a. Storyboards for 3 tasks





## TASK 3



Users can start the collaborating process on the platform by sending music/project/video files etc.



Users can use the platform to plan to collaborate together



Ideally, by collaborating, users will have been able to get exposure & expand their fan bases

### **b. Reasoning for selection**

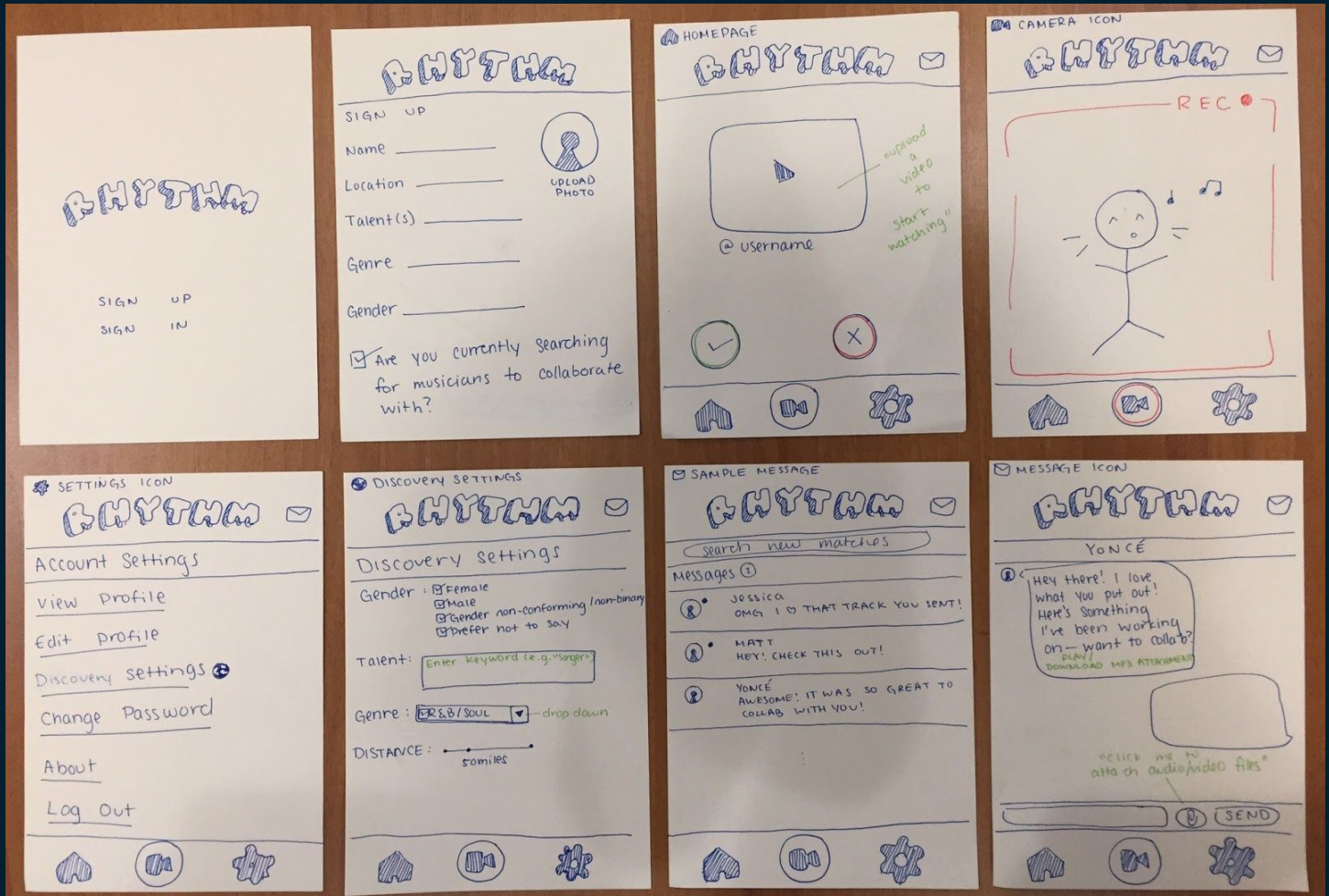
Ultimately, we chose the design with the filters (Storyboard 2) for the following reasons

- Our past interviews revealed that people users generally prefer simpler, less involved UIs over more complex ones even if the complex ones provide for more functionality. This leads us to think that a user would prefer one swipe/discovery tab that could be customized using discovery settings over having a swipe/discovery tab and a newsfeed-style tab.
- The discovery settings allow for a user to more easily find artists who are in their location and makes it much more straightforward
- It would be much more difficult to determine a good algorithm for what exactly would determine the order in which profile videos would populate a person's feed without using some sort of "following", "friending", or similar such capability, which we feel may overcomplicate our app and cause it to lose some of its novelty.
- We felt that a news feed setup may be inappropriate in this context and may give rise to bias. What exactly would determine whether or not a person would scroll past a user on their feed? With the swipe/discovery, we recognize that the user could still swipe through people without giving them much of a chance due to some internal bias, but we feel that forcing the user to actually make a decision on each and every video will encourage the user to give each user more of a listen before swiping.

# 4. Prototype Description

Our prototype was made with white paper and colored markers. We used smaller rectangular-shaped pieces of paper and oriented them vertically to mimic the iPhone layout.

## Entire System:



## Front Page and Sign-up Page:

The image shows two hand-drawn sketches on a wooden surface. The left sketch is the front page, featuring a stylized logo 'RHYTHM' at the top and two buttons labeled 'SIGN UP' and 'SIGN IN' at the bottom. The right sketch is the sign-up page, featuring the same 'RHYTHM' logo at the top. Below the logo is a horizontal line. Underneath the line are five input fields: 'Name', 'Location', 'Talent(s)', 'Genre', and 'Gender'. To the right of these fields is a circular icon with a person silhouette and the text 'UPLOAD PHOTO' below it. At the bottom of the sign-up page is a checkbox with the text 'Are you currently searching for musicians to collaborate with?'.

**Front Page:**

RHYTHM

SIGN UP

SIGN IN

**Sign-up Page:**

RHYTHM

SIGN UP

Name \_\_\_\_\_

Location \_\_\_\_\_

Talent(s) \_\_\_\_\_

Genre \_\_\_\_\_

Gender \_\_\_\_\_

UPLOAD PHOTO

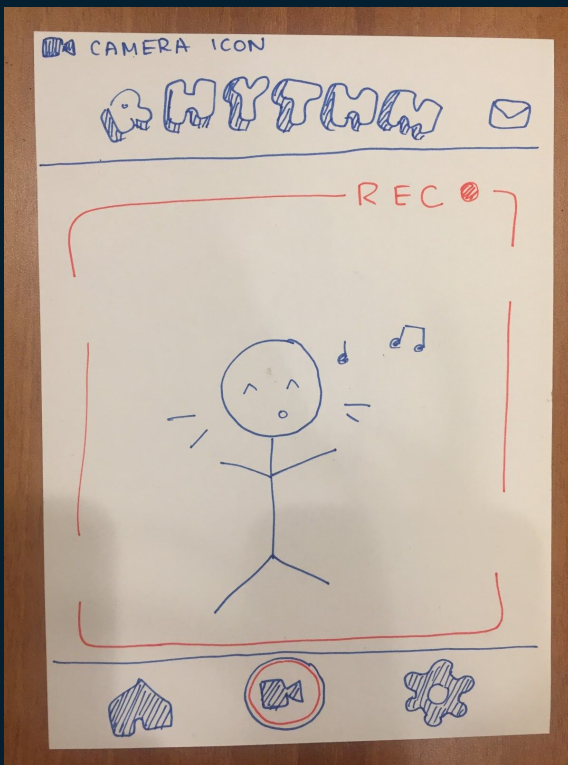
☒ Are you currently searching for musicians to collaborate with?

The front page allows the user to sign up for an account or create one. In order to register, the user must provide their preferred username, talent keywords, choose their genre(s) (they may choose multiple) from the drop-down menu, their gender, and upload a profile Photo. Once they leave this page, they are shown the Camera for recording/uploading their short performance (a pop-up will let them know before they are shown the camera that they must upload something to advance).

If they already have a profile and sign-in, they will be taken directly to the home page.

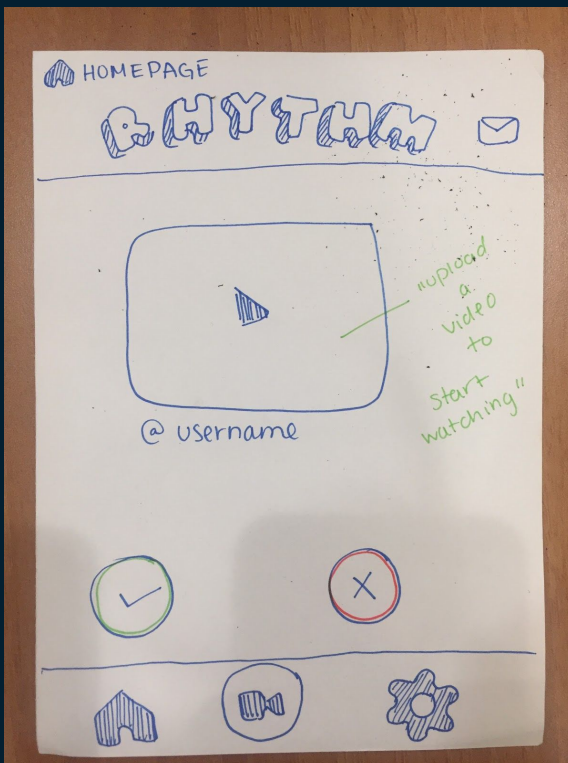


## Camera Page:



With the camera, the user may record a video using their phone in order to post as their talent demonstration. A strict 16-second limit will be enforced to keep our app in tune with many other social platforms, like Instagram (previously had a 16-second time limit) and Vine (has a 6-second time limit).

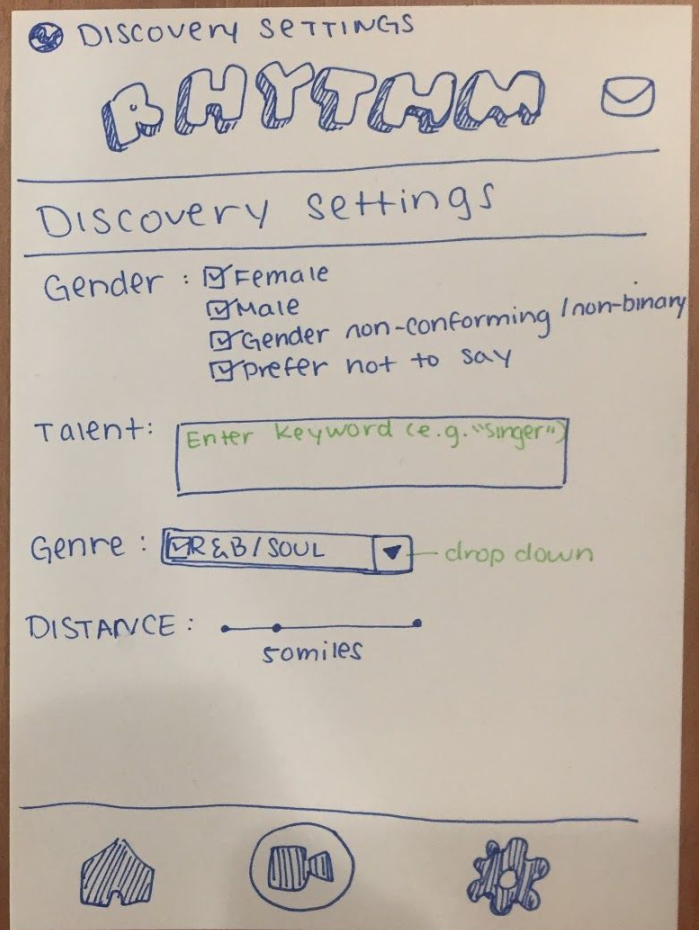
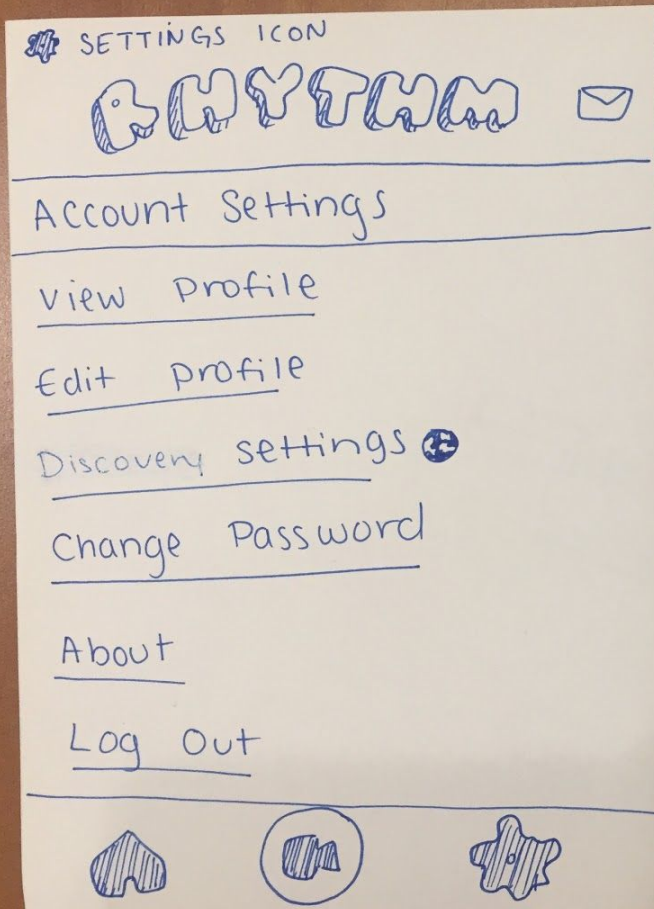
## Homepage:



Once they have created a profile and made a video, they will be shown the homepage, where they may view other users' videos and indicate their interest using the "✓" and the "X" buttons. If they are matched with another user (meaning both users swipe right after viewing one another's videos), a pop-up will display to indicate to one another that they have been matched.

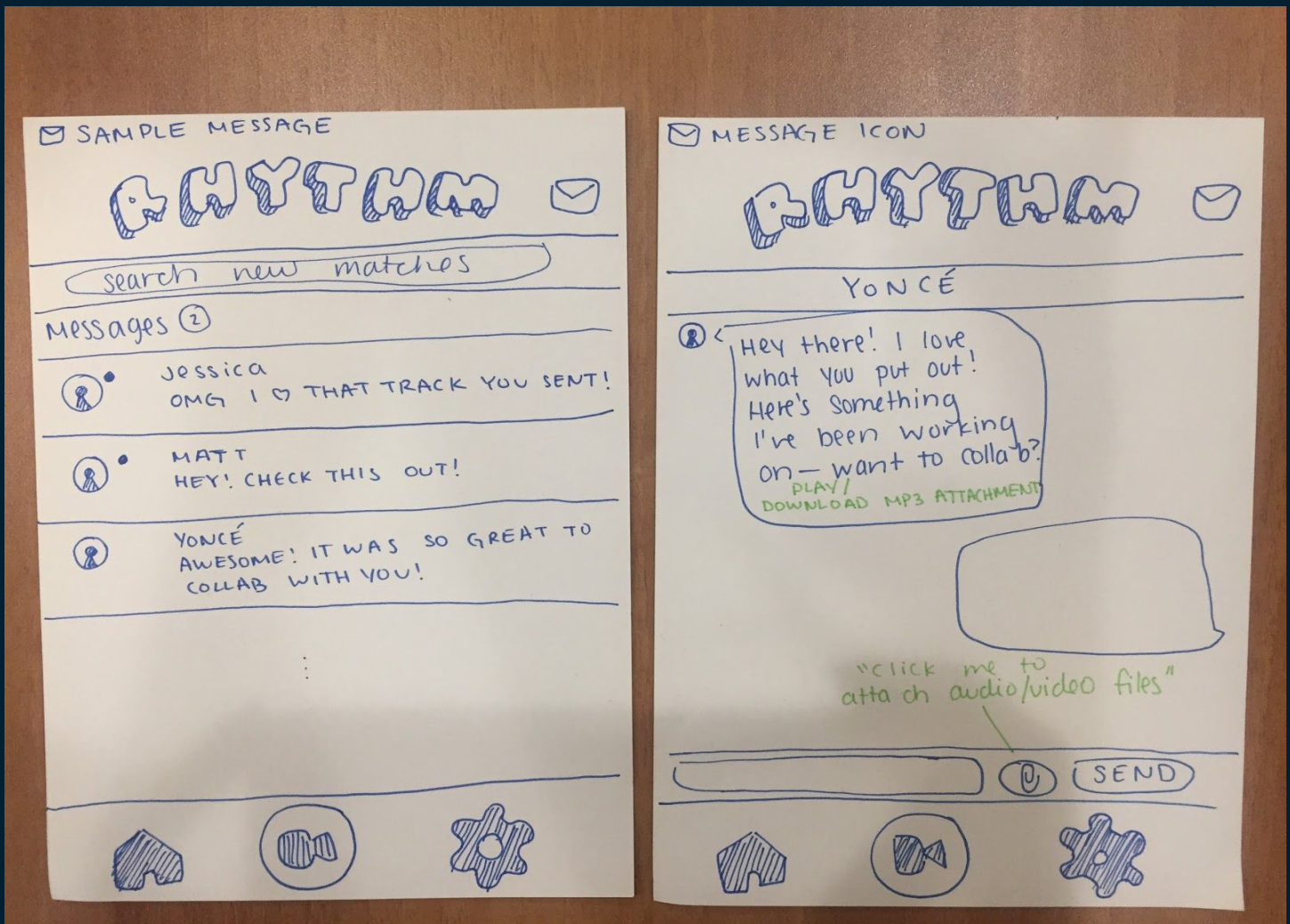


## Settings Page & Discovery Settings Page:



If the user clicks the gear in the bottom right corner, they will be taken to the account settings page on the left. Here, they can view their own profile, edit their profile (genre, talent keywords, etc), change their filter/discovery settings, and change their password. If they choose to edit their discovery settings, they will be taken to the page on the right. They can edit their gender, talent, genre, and distance preferences. Although it is not shown, they can also choose to not have their profile show up in the discovery in this page.

## Messaging Pages:



If they click the envelope in the top right corner, they will be taken to the messages page. This will show them all of their successful matches, with the most recent messages being shown on top.

# 5. Method

## a. Participants: demographics, how recruited/compensated

### Participant 1

About: Female, age 20, guitarist, sometimes sings, in a band

Recruited: friend of friend at radio station

### Participant 2

About: Male, age 27, has electronic music projects, has tried mixing but never got into it

Recruited: friend of friend at radio station

### Participant 3

About: Male, sophomore student, violinist, likes all genres of music

Recruited: approached at Arrillaga late night

We tried to find participants that were interested in music to some degree, had time to talk, and were ethnically and gender diverse. Participants were not offered any compensation for their time.

## b. Environment

Our first interviews were found through friends at a radio station where outside music aficionados frequently visit. Our last participant was scouted at Late Night at Arrillaga, where we interviewed him at an eating table.

## c. Tasks

1. Record short and creative musical performances.
2. Find and connect with other musical artists interested in collaborating.
3. Collaborate and hopefully gain exposure to one another's fanbase and gain popularity.

## d. Procedure

Each UI design was drawn on a page and given to the participant. They were expected to turn pages to simulate clicking through the app. Apart from the introduction page and sign-up pages, each page onwards was labeled according to the button that would bring the user there.

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### Script

"Hello! Thank you for participating in our project for musicians to meet! Before we test out our prototype with you, we would like to ask you a few questions about yourself. Firstly, what is your year/age? Do you consider yourself musically inclined or are you a musician? Do you have any musical projects or favorite music genres?"

(Participant Answers)

"Ok, thank you. Now we'll get to the prototype. I'm going to demonstrate how to use it, and then I'll hand it over to you. I'm going to pretend these are buttons of an app, and it will take me

through these pages. \*flips through pages with different button labels on them\* Now I will hand it over to you and see if you can understand what it's asking you to do"

(Participant starts out at the sign-up page, then should flip to the record page)

"Here you can be prompted to record and upload a performance. Try to see if you can figure that out." (Task 1)

(Participant should hopefully flip to the homepage.)

"Ok, now you can see other videos of performers. Try to see if you can figure out how to decide which ones you like and what you want to see." (Task 2)

(Participant should hopefully like the first video and ideally make use of the settings pages if he wants to)

"Cool! Now you can also message people who "match" with you. Try to see if you can figure out what that means you can do on the app" (Task 3)

(Participant should hopefully understand the networking and sharing own music aspect of the app that should ultimately lead to collaboration)

"Thanks so much for going through this prototype! Two last questions: how did you feel about the prototype overall? Where there any specific things that you found confusing?...Thanks again."

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### **Critical Incidents**

- "You upload yourself dancing?" - Participant 1 stated this after participant saw the recording page  
Severity rating = 2, the imagery used to represent the recording screen was probably distracting
- Participant 2 saw the decision to choose someone and elected not to choose them, when he should have in order to complete Task 2. We should have had more example users to hopefully prevent this from happening  
Severity rating = 2, ideally people would like the people on the platform and be able to use the collaboration/messaging features that come with the app
- Participant 3 shifted through pages really quickly  
Severity rating = 3, this suggested that the app wasn't engaging him



### e. Test Measures

- **How well they responded to the buttons and language used.** We wanted to be sure that our buttons were clear and straightforward, so that the average user could make sense of them without needing to ask for clarification.
- **Whether the user got stuck on something for any length of time.** Long pause periods indicates that a user is not understanding how to move forward from the page they're currently on.
- **Asking for help.** If the user had to ask us for help/clarification in general, something about the app isn't making complete sense.

## 6. Results

### Participant 1

- Thought there were too many questions to sign-up
- Without much context of the app concept, her first thought was "you upload yourself dancing?"
- Aside from that she thought it was kinda straightforward what the buttons were and that it looked cool, although she didn't understand why it would be used often

### Participant 2

- Wasn't sure why there was a gender option
- Thought the recording interface should take up the entire screen and have edit options or something
- Had to look at the Yes and No tinder thing longer to understand what it was

### Participant 3

- Assumed the recording page was already a video
- Wasn't sure was discovery settings was at first
- Liked that the app would allow him to showcase all his talents and gain feedback, which was important to him as a musician.

## 7. Discussion

Our results showed that while participants liked the overall style of the proposed app sketches, it wasn't inherently going to make the app completely utilizable. From the beginning we kept in mind our previous attempts at prototyping, where we learned to be really tactful about our diction and iconography, so this version was more understandable than the last. In our app we tried to borrow from other apps and use typical app buttons (home, camera, settings, messages) that feature easy to understand icons, which in our results showed that most people found it straight-forward. However, for the more complex tasks, it wasn't as easy to get people to understand where to make moves. In Task #2 for example, it was hard to get people to know that they could refine their search through the discovery settings page. Similarly, there were a lot of extra features in Task #3 that participants did not seem to comment on (for example, the ability to send files through messages with potential collaborators).

From these results, we learned how we could make the understanding of our app even clearer and more useful. For example, there was difficulty in finding the discovery settings because it was hidden in the settings page. A solution to make this easier to find could be adding a page dialogue, similar to the one that prompts users to upload performances. Another part we wanted to improve were our features. We want to make our app useful and we want to encourage musicians to use it. A participant noted that the recording screen could allow for clipping, which should help indicate that the app has more capabilities. Additionally, a participant commented that he liked how by providing matches, the app subtly gives feedback. It could also be useful to let users know what most people think of their work even if they don't necessarily match.

In the future we could implement these changes, and make it not only useful but entertaining for networking musicians as well. And hopefully with more user-generated content, users can also have fun hearing up-and-coming talented artists, be inspired to share their own work as well, and get started from there.

## 8. Appendices

### a. Raw Data

#### Participant 1:

- Female
- age 20
- Guitarist
- sometimes sings
- Played in a band for a while
- too many questions at sign-up
- "you upload yourself dancing?" (recording page confusing)
- kinda straightforward buttons
- looks cool

#### Participant 2:

- Male
- age 27
- has electronic music projects
- has tried mixing but never got into it
- "It's cute"
- "why is there a gender option?"
- recording interface should take up the entire screen or "it looks weird"
- should "have edit options or something"
- looked at the Yes and No tinder thing for a while until he got it

#### Participant 3:

- Male
- Sophomore at stanford

- Violinist
- (likes) all kinds of music
- "Looks pretty good"
- Recording page - confused
- Discovery settings - confusion
- "Pretty standard meet someone app"
- Probably wouldn't use?
- Likes that you can list talents
- Likes idea of feedback

**b. Signed consent forms (on next three pages)**

## Consent Form

The Rhythm application is being produced as part of the coursework for Computer Science course CS 147 at Stanford University. Participants in experimental evaluation of the application provide data that is used to evaluate and modify the interface of Rhythm. Data will be collected by interview, observation and questionnaire.

Participation in this experiment is voluntary. Participants may withdraw themselves and their data at any time without fear of consequences. Concerns about the experiment may be discussed with the researchers Andrea Rodriguez, Michael Freeman, Alan Khaledi, or with Professor James Landay, the instructor of CS 147:

James A. Landay  
CS Department  
Stanford University  
650-498-8215  
landay at cs.stanford.edu

Participant anonymity will be provided by the separate storage of names from data. Data will only be identified by participant number. No identifying information about the participants will be available to anyone except the student researchers and their supervisors/teaching staff.

I hereby acknowledge that I have been given an opportunity to ask questions about the nature of the experiment and my participation in it. I give my consent to have data collected on my behavior and opinions in relation to the Rhythm experiment. I also give permission for images/video of me using the application to be used in presentations or publications as long as I am not personally identifiable in the images/video. I understand I may withdraw my permission at any time

Name JULISSA MARTINEZ

Participant Number 1

Date 10-25-16

Signature Julissa Martinez

Witness name Andrea Rodriguez

Witness signature Andrea Rodriguez



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Name Alan Darmady

Participant Number 2

Date Oct. 24, 2016

Signature Alan Darmady

Witness name Andrea Rodriguez

Witness signature Andrea Rodriguez



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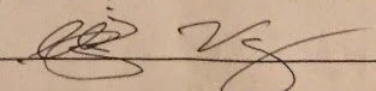
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Name Mike Vang

Participant Number 3

Date 10/27/16

Signature 

Witness name Andrea Rodriguez

Witness signature 