



showMe

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## INTRODUCTION

showMe aims to create a sharing community that fosters user connectivity and music discovery using proximity and tailored suggestions.

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We believe it's possible to create a sharing community that fosters both musical discovery and user connectivity using proximity and tailored suggestions. We want to eliminate archaic forms of sharing and progress to a system that catalogues our music suggestions so they are always available. showMe aims to present individuals with their own personal suggestions in an aesthetic and pleasing form, while creating a minimalistic form of organization for your suggestions. Lastly, we want individuals to discover new music from others than their friends, for this, we introduce the 'Location/Genre' feature that allows users to surf suggestions and accumulate new music.

Everyone can fall in love with music, and we want to help.

## PROTOTYPE DESCRIPTION

For our prototype, the main page is a live feed of the user's current playlist because it offers information that is both personally relevant as well as dynamic. The three main features (sending a song, receiving a song by making a playlist, and finding popular local songs) correspond to three main buttons at the bottom of the main screen:

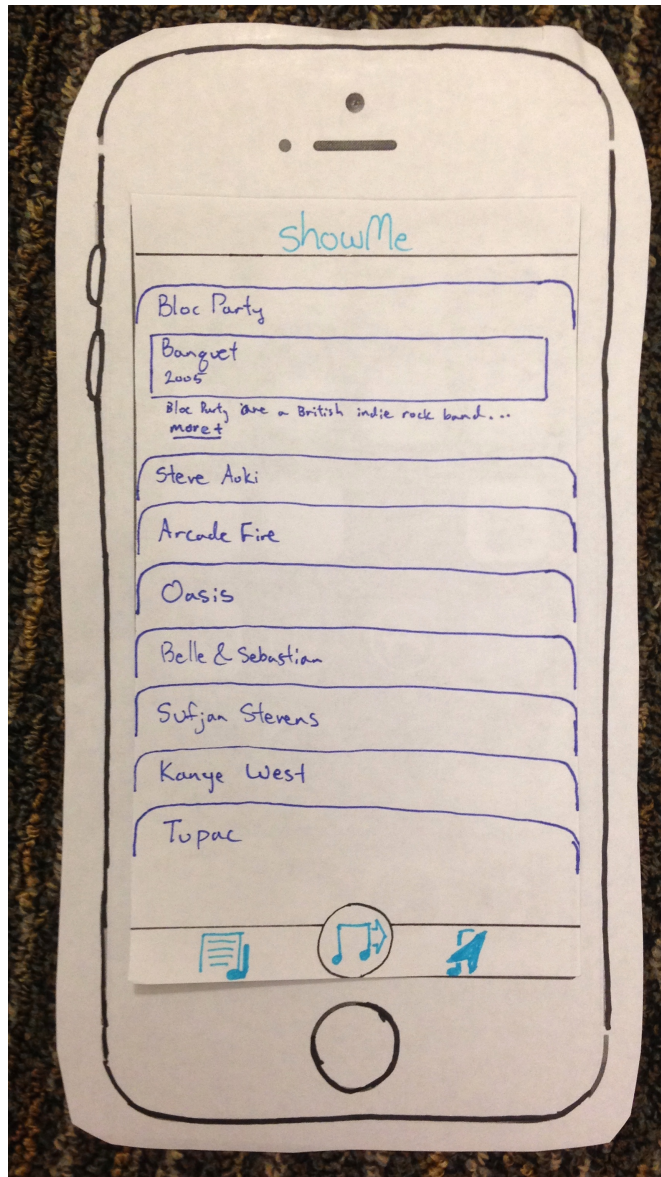


Figure 1. Main screen for showMe

For every task, the user will begin at the home screen. Due to our reference to location, we'd hope the request would warrant the user to interact with a location icon. Interacting with the icon will guide the user to a screen with a map and list of trending songs. The user then has the option to choose a new location, new genre, or scroll through top trending songs.



Figure 2: Find a song that is popular in your local area.

The user will begin at the home screen where the central icon allows users to share suggestions. Our aim here is to gauge the extent of information users want when using the application. To begin, users would hopefully select one of the bubbles and interact with (+) icon to add a song to that user's list of suggestions. This would take them to an "input recommendation" screen where an accompanying message could be added, it is here that the user can decide to add 'multiple people' to the recommendation. Choosing this feature displays a friend list where multiple individuals can be chosen.

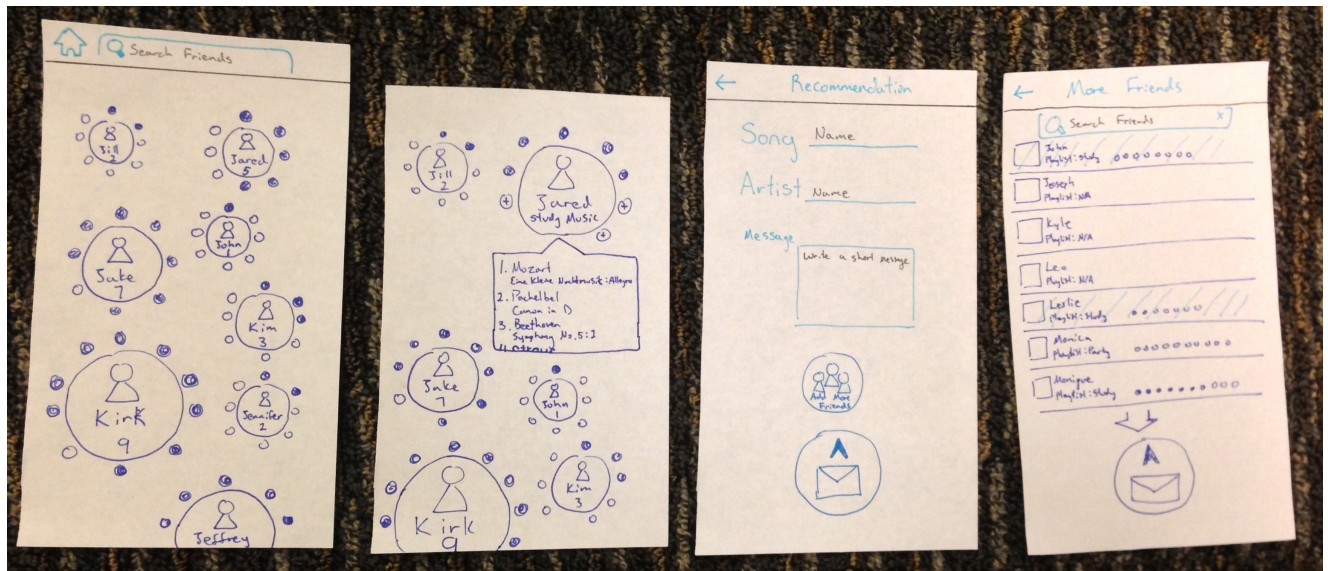


Figure 3 : Send a song to a friend, while you're at it, send it to two friends.





Figure 4: Request some songs suggestions via a new playlist.

The final icon at the bottom of the screen of a playlist would suggest to the user that this relates to our aforementioned “playlist”. From here, we want the users to input very simple : i) a name for their playlist, ii) a musical style / genre for their playlist and iii) a numerical limit of the number of songs they want individuals to be able to suggest to them.

## METHOD

Three experiment participants were selected from a variety of backgrounds to represent a diverse user base. We offered them donuts as compensation for their time. Our first participant was selected due to a prior relationship with a group member; they consistently share music with our member and so felt appropriate as a test subject. The second participant was a previously unknown individual found at the Treasure Island Music Festival. Lastly, The third participant was a student going in between classes listening to music to try the application to gauge the convenience of the product. These individuals culminated to a representative scope of interest for our product and were able to give us both stylistic and conceptual feedback. Each was offered a song suggestion of some genre of their choosing to compensate individuals for their time.

Due to the portability of our idea, we tested in more than one setting. Our second participant was interviewed in a restaurant in Berkeley, while the first and third participants were interviewed in Huang Engineering Center. Our set-up was identical in each situation: we used a table and 2 chairs to emulate a user-space for the “computer” and participant. Our

participants would manipulate a paper prototype of our product while the computer, who would not answer questions, reacted to the situation and switch screens/menus. All of this was recorded for later referencing while a final individual read the script in a presenter type fashion. The participant had no prior knowledge of any of the interactive elements of the application and so the testing represented a user's first interaction with the product.

We had each participant execute our three tasks, which we feel give a truly holistic representation of our application. The breakdown of our tasks is listed below. Before each test, we introduced the concept and the product, and gave our participant a short demo with a simple mailbox application to help them understand how to interact with the computer.

Substantial levels of planning went into each level of our methodology. Firstly, to design our Lo-Fi prototype, we came together as a whole to definitively design our paper model. Doing this gave us each a full understanding of every aspect of our idea from both a conceptual and design standpoint. Following this, we modeled our experiment around our three core tasks; therefore our questions for our script were structured as how to best portray our tasks as an interactive question. It was at this point we fleshed out our questions into a fully interactive script that could be used for the experiment (see Appendix.). Our roles broke down such that Cliff played "Computer", Fran/Jared played "Presenter" and Inseong documented events while formulating the final design sketches for the prototype.

During each experiment, we sought out every form of reaction from verbal to inferable body language. We logged all of these interactions and ranked them based on how 'critical' or 'crucial' we felt the incident was to the interface, while highlighting any enlightening words of wisdom that may shine through during testing. Each event was timed, and any deviations from the suspected path were recorded. Lastly, we logged all forms of feedback following each interaction to understand any issues users had from start to finish with showMe.

The data we collected was behavioral observation and interview feedback. For our results, we measured user errors such as incorrect taps, as well as verbal comments and questions. We encouraged our users to think out loud so that we could follow their thought processes.

## RESULTS

### Participant 1:

P1 is amused with playing "Computer", and is eager to begin. The first screen confused P1 because they did not understand why we were going to make a playlist if one was already shown for the app's main page. For the first task, P1 did the best of all three participants. They only had one question, wondering whether our popularity recommendation would only display songs they owned or all songs in general. They did not offer feedback for this task because they found it simple and intuitive. For the next two tasks, all three participants voiced similar concerns. P1's biggest problem was with sending a song was that they believed the song should have been selected before the person. Next, a shared issue amongst the participants was how to send to multiple users simultaneously. P1 tried tapping two bubbles (names) simultaneously, before tapping just one, followed by a "+" bubble – indicating sharing a suggestion. P1 did not have any problems with the remainder of this task. However,

they did voice the concern of how to share a song of a different genre than the genre specified by the friend. For the final task, P1 did not have any outstanding issues. They did ask for a no limit option though, such that they could have a full history of shared songs similar to a photo book.

### Participant 2:

Participant 2 did not understand the Computer concept as well as P1 and tried to ask multiple forbidden questions, but still played along well. The first issue they ran into with the Task 1, finding popular music, was that they expected the location to be done automatically; our Computer required a user to input text into the search box. A helpful comment P2 and P3 both gave at this stage was that search boxes should not appear in the middle of the screen; this led to confusion. The next issue P2 faced involved the second task. They tried the same simultaneous tapping as P1, but also tried a variety of different tapping combinations. P2 showed visible signs of frustration upon adding the first person, but finished the task without further complications. For the final task, P2 showed visible happiness after being able to select their own genre. They experienced difficulties selecting a playlist suggestion limit, but attributed it to their own user error.

### Participant 3:

Participant 3 was the most excited to see this idea come into fruition. Since P3 also has significant experience in mobile development, they ran through the Computer experiment the fastest and was able to give the most feedback in terms of design. P3's only issue with the first section was the same issue as P2 – search bars should not be in the middle of the screen. P2 showed visible confusion with the second task, and felt the interface seemed cluttered and uninformative. While P2 made no errors in this section, they did not appreciate the layout. P3 made no mistakes with the final task as well and enjoyed its simplicity. However, they did not understand how to either view or send to different playlists.

## DISCUSSION

Overall, our participants were intrigued by the prospect of a music sharing app, but stumbled over some of our design features. A general goal we have for the next iterations of our product is to streamline visuals and remove confusing elements. For example, the page with friends' playlists represented as bubble pinwheels looks very cluttered and may deter the user from wanting to use the app. On the popular by location page, search bars should not be located in the middle of the page—this can be easily fixed by moving them into separate pages. We can also improve upon the design of our icons; popping a plus bubble to add a song was not intuitive for all of the individuals we tested.

In addition to changing specific design elements that created errors in the experiments, we need to carefully rethink some of our design concepts to better accommodate the actual users. For example, the individuals in our experiment expected to select a song before they chose a friend to send the song to, but our prototype facilitated the opposite flow. We also aim

to make certain features easier to find—for example, being able to send the same song to multiple friends should be a primary feature, rather than one on a secondary menu hidden in the send page.

The experiment participants also expressed their desire to create multiple playlists and be able to ask for unlimited songs on a playlist. Initially, our team’s vision was to restrict the number of playlists and songs in order to establish a clear quota that would incite competition between individuals who want to send songs to the same friend. Perhaps we need to change our angle and make the sharing process more collaborative rather than competitive. Participants also indicated positive feedback for customizability, so we hope to incorporate other versatile elements in our next iteration.

## APPENDICES

### SCRIPT

“We are conducting an experiment to evaluate the user interface of our mobile application project for CS 147, showMe. showMe is a music suggestion service. The application allows you to send song suggestions to your friends, to create playlists and specify suggestions of specific genres you wish to receive, and see the most viral songs, by both genre and location. This application is meant to gather all your song suggestions in a central location so you don’t lose track, and to make the recommendation process more streamline. “

First, I’m going to demonstrate to you how to play “Computer.”

*Pick up iPhone cutout and sample Mail app*

So what you do is pretend this is just a super big iPhone, and once you click a button on a current screen, we will act as a computer and replace it with a new screen. Please remember that if you become frustrated or confused, it is not your fault but a problem in our design. Before we begin, I’m first going to show you how a simple Mail app works, then ask you to demonstrate it back to me.

*Press the Compose button. Switch to Mail’s Compose screen. Fake type. Press send.*

**Let user repeat.**

Now I’d like you perform three tasks to the best of your ability and give us honest feedback of our interface. If you have questions about what a task entails, I can clarify. However, I will not be allowed to give you hints nor answer Yes/No questions. If at any point you get stuck, just tap a screen and see where it takes you. We will be evaluating our interface to determine how easy it is for the user to navigate through screens and accomplish these three tasks. This application is still being designed, so feel free to provide us with your thoughts and opinions. If you can think aloud while using the app, your input will be greatly appreciated. Good luck!

#### **Task 1: Find Songs Based off Location Popularity**

**The first task is to find a popular song in your area that appeals to you. This requires you to open the map to your location and find the top song of your favorite genre.**

Cool. Do you have any particular feedback you would like to voice with this task?

**Task Description 2: Send a Song to Friend(s)**

**Now, I want you to send a song to two friends simultaneously.**

Cool. Do you have any particular feedback you would like to voice with this task?

**Task Description 3: Request Song Suggestions via Your Playlist**

**Last task. I want you to setup a playlist so that your friends can send you music. Please give it a name and specify the type of music you wish to receive.**

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**CONSENT FORM**

The showMe application is being produced as part of the coursework for CS147 at Stanford University. Participants in experimental evaluation of the application provide data that is used to evaluate and modify the interface of showMe. 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 (Frances Guo, Inseong Cho, Clifford Huang, and Jared Wolens) 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 showMe 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 \_\_\_\_\_



Participant Number \_\_\_\_\_

Date \_\_\_\_\_

Signature \_\_\_\_\_

Witness name \_\_\_\_\_

Witness signature \_\_\_\_\_

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## RAW DATA

Raw Notes:

### **Participant 1:**

(1) Am I seeing only popular songs I won or all songs? No further issues.

(2) We should have a plus sign next to the playlist so it signifies new playlist.

It sucks that I only get 8 suggestions

I thought I have to pick a song before I send it. Our app requires you to send then pick a song.

User tried to select two friends at once by double tapping. This failed.

Then user tried select once. User wanted to send Rap music. However, Jared only wants “study Music? What do I do at this point? “ She reluctantly agrees to send rap song. Do I tap the mini bubble?? Wait how many playlists are allowed per person? Like if he wants rap and study can i send it to the second playlist? How do I see his second playlist? Is there any privacy here? What do I do if it’s full? (*We don’t have an example of that*).

What does the 8 bubbles mean? Why can they only have 8 songs?

Why is the Add More Friends button the very last thing? It should be side to side with the send button. Also it should be send to more friends, Add doesn’t make sense.

Are you sending a playlist? Or just a song? Why does it mention their playlist? Can people have more than one playlist?

What is the point of the arrow? User thinks down arrow is archaic. This is intuitive.

(3) User understands the limit aspect fine. Why is there no option for no limit?? What if I’m popular, FUCK!!!

Wait this is stupid because I can’t listen to songs from in here.

How do you switch between playlists??

What if I want specific artist? Not just Genre.

Rename Music Style so we can choose something other than genre, aka Rihanna.

### **Participant 2:**

(1) Hey so I don’t have an iPhone, I hope this won’t affect me. So how come there is no dot? How come I have to search for my location and it doesn’t do it automatically? Google Maps does, can’t you integrate that in so I don’t have to type? The Genre search bar in the middle of

the page is confusing, can you move that elsewhere? I mean if you show the symbol that's in Google Maps, people are gonna expect you to just find all this stuff automatically. What happens if I want to find multiple genres? Is there also any default?

(2) Wow this one is so confusing. So tapping this doesn't work? (Simultaneous double tap). I mean that's pretty counter-intuitive. And so is tapping another bubble making the first bubble disappear (Not disappear, but just hide the playlist details). Okay now I think I'm going in circles.

Okay I literally pressed everything. Ohhhh, those are "+"s"? I didn't get that, but yeah, okay that makes sense now. Okay well now that we're on this next page the Add More Friends is pretty obvious. I feel like this shouldn't really be here, it's really weird adding a friend from another friend's screen. At the very least you could have told me that much (Possibly make a tutorial demonstrating this??)

(3) This is neat. Well what happens to my old playlists? How many playlists do I get to have? Adding Christmas Music as a manual entry genre. What's the difference between naming and genre? Why can't you just use the name as the genre or the other way around? Will this be shared with all friends or just those I want? (Privacy concern??) Oh, the limit is change-able? That should be made more obvious.

### **Participant 3:**

(1) i'm so excited, i love to share music with my friends!  
i dont have spotify so this app is perfect for me (I don't think she fully understands)  
I want to find the popular artists in my area so i'm going to click this icon with the location tab. i feel like there shouldn't be two search things in one screen, it looks weird. i'm going to click location.

(2) i have no idea what to do here, what are these numbers underneath these bubbles? ok i'm going to send it to jared, mozart oh i love sound of music! are all of these pluses now? does it matter which plus i click? are these all his favorites? ok, clicking this.  
add friends.  
i'm going to send it to joseph too. and then i click send.

(3) "create playlist, tap bar icon. name playlist name! click playlist name! taylor swift! music style? pop! click! limit! click! 8 click send!" This one was the most straight forward. But it also looks the simplest. What's the difference with this playlist and the first?