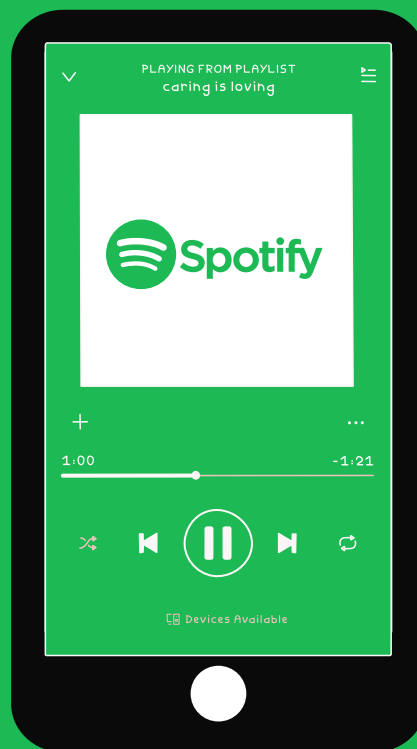


PROJECT #3

REDESIGN SPOTIFY MOBILE APP

Interactive Prototype: <https://tinyurl.com/y2lwe7eu>



Presented by
Gavin Renken
Sophie Yun
Tong Yang
Yujing Wen
Ziqian Liao



TEAM

RESPONSIBILITIES

✓ GAVIN RENKEN

- Research I – Card sorting materials preparation
- Research I – Moderator & notetaker
- Research II – Moderator & notetaker
- Research II Summary of Findings
- Research Questions
- User Profile
- Brief Report
- Presentation – Information

✓ SOPHIE YUN

- Research I – Card sorting materials preparation
- Research I – Moderator
- Research II – Heuristic evaluation questions
- Research II – Warmup
- Research II – Moderator
- Ultimate Root Cause Analysis
- Insight Highlights

✓ TONG YANG

- Research – Create, post study ads
- Research – Take attendance and update the study ads
- Research – Moderator & Notetaker
- Prototype – Brainstorming on the layout of social page
- Project write-up – User Persona
- Project write-up – User Scenario
- Project write-up – Proofreading and editing
- Presentation – Illustration and formatting

✓ YUJING WEN

- Protocol-Notetaker Reminder
- Research – Notetaker
- Research Session I – Moderator
- Project #3 Write-up – Requirement
- Prototype – Main Creator
- Presentation – Information Organization

✓ ZIQIAN LIAO

- Research I – Card sorting materials preparation
- Research II – Moderator & notetaker
- Protocol – Introduction
- Prototype – Main Creator
- Project #3 write-up – Requirements
- Presentation – Illustration, Information Organization

Our product idea is a redesign of the current mobile application of Spotify to help improve users' experiences while finding, organizing, and listening to their music.

The problem to be solved is the presentation of features in an architecture that is not overwhelming to users. Spotify has a lot of great recommendation features but to a point of excess. The current homepage, cluttered by different personal and general recommendations, counterintuitively leaves users unsatisfied with their sense of personalization and ownership over their listening experiences. As a streaming service, not only is solving this problem essential in Spotify's growth to users who consider their music to be a facet of who they are, but also in maintaining the support of users who value Spotify for its sense of general personalization.

This overarching issue to be solved was identified through several user-facing research methodologies: a focus group, process analysis, semi-structured interview, card sorting, and heuristic evaluation.

From the user research conducted thus far on this issue, our most important findings relate to Spotify's homepage, search, socialization, and liking and downloading features. Users across nearly all of our research methodologies reported feeling overwhelmed by the amount of information located on Spotify's current mobile homepage. The features offered by the homepage were often found to be entirely unrelated to a user's interests, listening histories, and uses of the application. Users reported being dissatisfied with this design and their inability to have tailored to their specific needs. Another integral aspect of the application that fell short across nearly all of our studies was the search bar. When asked to search for a friend's profile in the search bar, users often struggled to be able to quickly locate their friend's account. Users reported dissatisfaction with having to navigate through a list of artists and playlists before reaching user profiles. Another pain point for Spotify's mobile users was the absence of desktop socialization features on the mobile application. Many users appreciated being able to see their friends' listening patterns. Displeasure with the liking feature stemmed from its confusion with downloading. Users reported often liking a song, having it automatically downloaded onto their device, adding it to a playlist, and then having its download removed. Additional downloading functionality that users reported wishing they had was the ability to individually download songs instead of an entire playlist.

Based on our central findings, requirements of our prototype centered on customizing, downloading, disliking, and socializing. We propose a homepage customization feature where users can organize information according to their preferences. If uninterested in a particular general category or recommendation, users have freedom to remove it from their homepage. This design centralizes on reducing clutter so that users can look through their homepages with reduced cognitive loads. To enable Spotify to further personalize users' experiences, we prototyped a dislike button that enables users to provide feedback on songs they do not like and help Spotify optimize its recommendation algorithm. The music-centered social page enables users to search for friends to avoid confusion when looking for accounts in the general search bar and includes the desktop feature of followers' listening activity.

BRIEF REPORT

The brief report contains main objectives of project #3. For further details, please continue to the supplementary pages.

SUPPLEMENTARY PAGES



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USER PROFILE

Age

- Spotify's average user is 18 to 29-years-old (Watson 1).
- The user base is dominated by millenials and Gen Zers with 29 percent of its users aged 25 to 34 and 26 percent aged between 18 and 24 years old.

Location

- Users tend to reside in Europe (39%) and the Americas, 29% in North America and 21% in Latin America (Iqbal 6).

Occupation/Income

- Users range significantly in socioeconomic status with Spotify offering discounts to students but also being an attractive platform for established young professionals.
- A significant amount of users are students as a result of the student discount offered.

Background

- Many users are former Apple Music users that prefer Spotify's personalization algorithms over that of Apple's curated playlists.
- Many users formerly illegally downloaded music from the internet but are now attracted to the low cost alternative that Spotify presents.
- Users typically start with Spotify's freemium services before converting to its premium model.

USER PROFILE

Preferences

- Users value their user-specific playlists generated weekly based on their listening history and recent activity.
- Users tend to value Spotify's database of music over its podcasts.
- Users enjoy finding and listening to new songs, artists, and bands.
- The typical user listens to low-fi, chamber pop, indie folk, and indie rock (Iqbal 35).
- Users core taste preferences are for indie folk/rock, funk/soul, and folk/singer-songwriter (Iqbal 36).

Behavior

- Spotify users tend to be extremely loyal.
- The average user spends 148 minutes per day listening to music on Spotify 130 million of 286 million monthly active users utilize Spotify's premium features (Iqbal 3).
- Users music taste evolves quickly through age 25, before reaching "maturity" in the mid-30s (Iqbal 37).

Sources

Iqbal, Mansoor. "Spotify Usage and Revenue Statistics (2020)." Business of Apps, Soko Media, 30 Oct. 2020, www.businessofapps.com/data/spotify-statistics/.

Watson, Amy. "Spotify Users by Age in the U.S. 2018." Statista, Statista, 11 Mar. 2020, www.statista.com/statistics/475821/spotify-users-age-usa/.

ULTIMATE USER ROOT CAUSE ANALYSIS

People use Spotify to listen to music.

WHY?

They want to listen to music as they work, study and relax.

WHY?

They like the atmosphere created by music.

WHY?

Users want to find songs that fit into their current music taste and mood.

WHY?

Users want a personalized experience.

WHY?

Users want a sense of ownership with their music and what they see on the app.



USER PERSONA

Name: Joe Bruin

Age: 20

Job: Editorial intern at a publishing company

Education: Pursuing a B.A. in English

Marital Status: Single

Disabilities: Needs to wear contacts

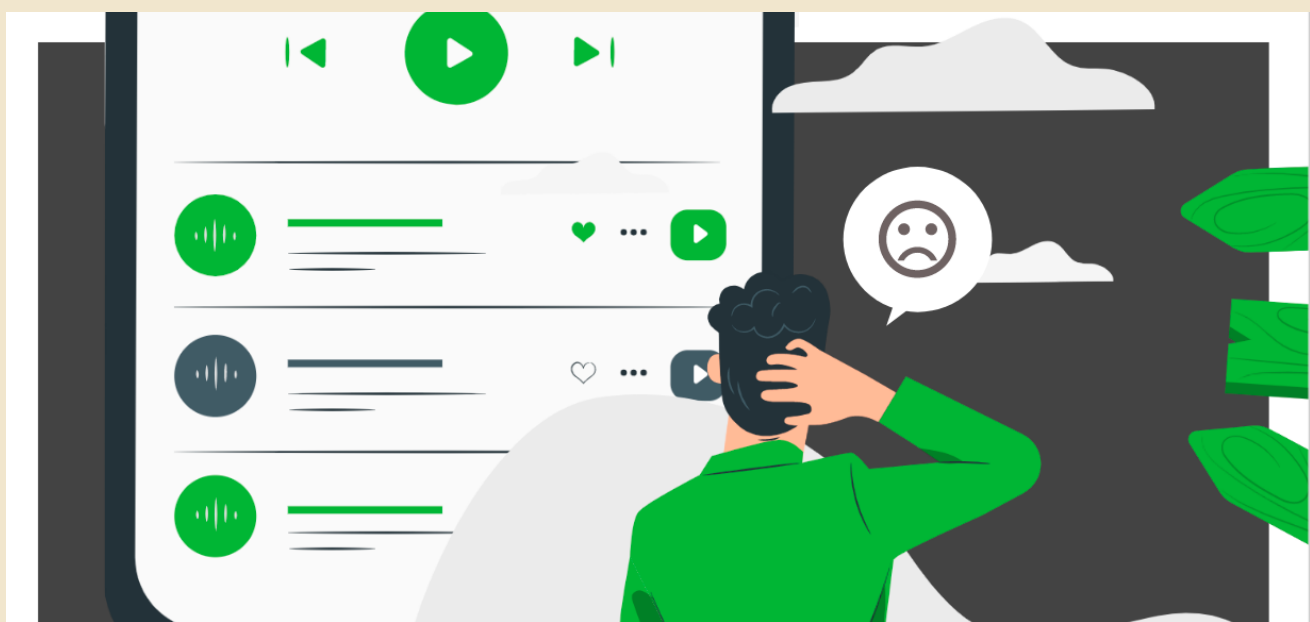
Hobby: Going to local concerts with friends

Joe Bruin is a student at the University of California, UCLA. He has been a loyal customer of Spotify since high school because Spotify offers quality music service at a student discount price. He expresses, “this is the kind of entertainment that doesn’t cost you a lot of money, but it is there for you 24/7. No joke, the only time of the day I don’t listen to music is when I am sleeping.” Spotify is there for Joe through all those difficult times at school and at work. As an English major student, Joe’s assignments have lots of writing and reading. “Spotify is the thing that lets my creative juices flow freely. I remember there was a time I needed to write a short fiction in my literature class. One of the recommended songs triggered my thoughts and I knew exactly what I wanted to write.” Besides improving his productivity at school, Joe also mentions Spotify’s diverse genres allow him to expand his music knowledge. Working as an intern at a local publishing company, Joe needs to screen and proofread a variety of submissions. “One time, my supervisor asked me how I thought of a rock-and-roll article. I wouldn’t be able to know about rock-and-roll in different ages if Spotify didn’t carry that many sources.

As a loyal fan, Joe joyfully comments, “Spotify adds a little spice in life!” Every Friday night, Joe always invites a few close friends to his apartment. They enjoy their favorite food while playing music in the background using Spotify. Joe and his friends follow similar artists, so they sometimes use Spotify to look up an artist’s performance dates in their area and go to live shows together. “There are lots of precious memories shared among me and my friends. I would say even though Spotify is not a social app, the ideal amount of social features built in really allows you to form a tight connection with your friends. Sometimes, it is just as simple as looking up concert dates or creating a collaborative playlist.”

USER SCENARIO

Before Joe Bruin moved into his off-campus apartment, he lived in UCLA's residential area. Reflecting on this experience, Joe Bruin expressed dislike, "My roommates were very nice; however, my neighbors next door were just so chatty and noisy. Sometimes I just wanted to get a good night's sleep, but they were constantly holding loud parties." To minimize the effect of noise from next door, Joe usually put on some music while studying or chilling in his dorm room. He turned up the volume so he could escape into the music world created by Spotify instead of suffering from the disturbing sound from his neighbors. However, despite the enormous help Spotify provided, he was frustrated by the inaccurate recommendations on the homepage. Joe specified, "Don't get me wrong. Recommendations are great, but it doesn't recognize what music I actually like. I put on random music just to shield out the noise, so that may mess up the algorithm. I wish there is a way for me to provide feedback." According to Joe, his frustration comes from his inability to optimize Spotify's recommendations. As a result, he has to make sure he always puts on music he actually likes to prevent himself from misleading the algorithm.



Besides inaccurate recommendations on the homepage, Joe also thinks that the organization of his homepage is too cluttered. When Joe wants to look up a recommended playlist while waiting for the red signal to turn green in his car, he finds it hard to locate within such a short time since the homepage has too many categories. When taking a first glimpse at the homepage, Joe thinks Spotify does put efforts into categorizing its recommendations, such as creating subtitles on the homepage like 'Uniquely Yours.' However, those categorizations just don't seem intuitive for him. He even found the horoscope category annoying since he doesn't believe in horoscopes at all, yet Spotify just keeps recommending. Joe is a very organized person and he has a system of organizing everything such as his closet and books. As much as he is a big fan of Spotify, he feels extremely restricted by not having the liberty to customize his homepage, such as naming categories that make sense to him, or removing categories he wouldn't listen to at all.



CARD SORTING PROPOSAL

Team Member Responsibilities

Friday 12/04

- 2:15–2:30 PM
 - Moderator: Gavin
 - Notetaker: Helen
- 2:30–2:45 PM
 - Moderator: Helen
 - Notetaker: Gavin
- 2:45–3:00 PM
 - Moderator: Helen
 - Notetaker: Jessica
- 3:15–3:30 PM
 - Moderator: Jessica
 - Notetaker: Sophie
- 3:30–3:45 PM
 - Moderator: Sophie
 - Notetaker: Jessica
- 3:45–4:00 PM
 - Moderator: Sophie
 - Notetaker: Jessica

Participants

- Students at UCLA taking class on the Fundamentals of User Experience
- Must have a mobile device that can download music apps
- Be active listeners of music on mobile applications

Product History

Spotify is a music streaming platform that offers digital copyright restricted recorded music and podcasts to its users. The key features for this app include:

- Searching for music based on parameters such as genre, artist, album, and playlist
- Creating, editing, and sharing playlists
- Following favorite artists and friends

Receiving recommendations based on your listening history

Research Questions

- What is your overall experience with listening to music on your mobile device?
- Which features of the Spotify homepage do users prioritize?
- What elements of Spotify's homepage do users consider to be redundant or nonsensical?
- Can the homepage be made more intuitive through the organization of features into user-made categories?

CARD SORTING PROPOSAL

Proposed Methods

Our moderators will be leading a card sorting activity to research Spotify's homepage and social features.

Questions on Card Sorting

- Can you tell me why you made each of these groups?
- Which card is the best example of each group?
- Which groups were easiest to assemble? Which category was the hardest? Why?
- Are there any items you would like to group them under two categories or more?
- Why do you add in [item]?
- Why do you delete [item]?
- Why do you rename [item]?

Procedure

- Moderator and team introductions followed by participants' introduction.
 - For returning participants, introduction can be kept short
 - For new participants, make sure to provide enough information about our redesign
- Go over the procedure and rules that will be enforced for the duration of the experiment: do not edit yourself and all questions and frustrations matter.
- Provide instructions on the card sorting activity and ask any questions participants have.
- Participants begin to sort cards while notetakers keep track of their questions, movements, and facial expressions.
- Once participants are done with card sorts, moderators ask analytical questions to figure out the rationale behind each sorting decision.
- Wrap up by summarizing the results of the card sorts and ask for feedback and final suggestions.

CARD SORTING PROTOCOL

Before Participants Arrive

Technology

- Team members who will be joining the study group are familiar with basic Zoom functions, such as chat, recording, hand-raise, and reactions.
- Different versions of slides containing card sort tasks are ready to be edited.
- Enable the waiting room on Zoom to make sure participants can join without interrupting the previous session.
- Allow participants to “share screen”.

Communications

- The team has prepared a general outline for the card sorting study group.
- All team members are familiar with the outline and understand the main purpose of the study group.

Instructions

- Team members know how to instruct participants to do card sorting via the powerpoint slides.

As Participants Arrive

- Meet and greet the participants as they join the Zoom meeting.
- Create a welcoming atmosphere so that participants are more comfortable with sharing their opinions later in the focus group (music).
- Answer any questions they have
- Ask participants to keep their cameras on if possible

Warmup

Let us start off by getting to know a little bit more about each other (send Google form to collect demographic information. Please tell us your name, year, pronouns? What is your overall experience with listening to music on your mobile device?

Introductions

Hello, thank you for taking the time to join our study! Today, you are here to help us improve the interface of its mobile app. You will be guided to sort cards with phrases about different features of Spotify on them into groups. This study will take about 15 minutes, and you will get credits for PSYCH 188.

Before we get started, I would like to introduce ourselves. My name is __, and I will be the moderator for this study. My colleague __ will be taking some notes throughout the session. There might be some time when my colleague is not looking at the screen and is typing, but we want to assure you that we are always listening and paying close attention to your answer. We are recording this session and the recording will be only available for our group members to review, and it would be great if you could share your screen while doing the card sort. [PAUSED FOR A FEW SECONDS].

I just sent out a link in the chat, so you can access the powerpoint slides containing our cards and categories. Here we are conducting a closed sorting, so all categories were predetermined, and you may place the cards into those pre-existing categories. You are welcome to add, delete, and rename the item whenever you feel it's needed. Please also note that you are allowed to sort a card into multiple categories. Please feel free to add new boxes by creating new text boxes if needed. Our goal is to understand the conceptual model in your own mind, so please do not refer to the app even if you are not sure about some of the features -- Just follow your gut feeling.



Topic Discussion Guide

Topic	Example Statements	Duration	Goal
Introduction	Today's study will take around 15 minutes. We will be focusing on redesigning the information architecture of the Spotify homepage.	30 seconds	Researchers introduce the flow of today's focus group. Estimate a time for participants and clarify any confusions they have.
Warm up	If new, please share your name, year, and major. What is your overall experience with listening to music on your mobile device?	30 seconds	Let participants get comfortable with sharing.
Card Sorting	Please organize these subcategories into categories. Please feel free to delete, add, or rename any of them.	5 minutes	Expose participant to two of the processes enumerated in the research questions
Questions	Tell us more about your decisions? Why did you choose the layout you did?	8.5 mins	Recap and let participants validate/refuse the process.
Summary/What's missing?	What are some things you would like to mention that we haven't covered today?	30 seconds	Participants can share their additional ideas freely.

Goal Reminder

- Enable users to create a more intuitive information architecture for Spotify home page
- Identify features that could be renamed to better convey their meaning
- Determine what features users value and do not

Notetaking Reminder

- Keep track of the participant's movement of the cards, especially those that are sorted quickly or paused on/hesitated
- Write down the participants' answers to the prepared questions after the sorting
- Record the participants' final sorting results

SUMMARY OF FINDINGS

[Card Sorting]

General recommendation and homepage organization

- All participants categorized “popular playlist,” “genre-based activity playlist,” “mood-based activity playlist,” and “activity-based playlist” into General Recommendations. 1 out of 6 participants wished to make “activity-based playlist” more personal.
- 4 out of 6 participants expressed a dislike towards the horoscope playlist.
- All participants in the study hoped to delete some categories from the General Recommendations since they were not applicable to their interest. Although not all of them made the move to actually delete those unwanted categories, all of them showed explicit interest in having more concise general recommendations.
- All participants agreed that playlists grouped under General Recommendations category should appeal to most users to some degrees. One participant specified that fitting everyone’s taste was hard, but Spotify could provide some freedom for users to move things from general to personal, or vice versa.

Listening history and personal recommendation

- All participants put “like a playlist,” “create a playlist,” “download a playlist,” and “recently played” under Listening History.
- Participants showed high consensus in what they thought should go under Listening History.
- Participants showed distinct personal preferences in various degrees when categorizing items into Personal Recommendations.
 - “I listened to radio a lot so I want to see personal recs about radio”
 - “I don’t think I like radio or podcasts. I think if I see it consistently under my recommendations, it will annoy me eventually. Spotify shouldn’t push too hard.”

SUMMARY OF FINDINGS

[Card Sorting]

Social features

- All participants grouped “follow a friend,” “collaborate on a playlist,” “search for friends,” and “see other’s listening activities” under Social Features.
- 1 out of 6 participants thought “for fans of an artist” belonged to Social Features since they hoped to interact with the artist’s updates or re-post updates from an artist with other friends.
- All participants thought Spotify shouldn’t introduce too many social features since they mainly utilize it as a music app.
 - “The story feature on Spotify is weird.”
 - “I am content right now. I think a one-way interaction with information in Spotify is enough.”



HEURISTIC EVALUATION PROPOSAL

Team Member Responsibilities

Monday 12/07

- 6:30–6:45 PM
 - Moderator: Ziqian
 - Notetaker: Helen
- 6:45–7:00 PM
 - Moderator: Ziqian
 - Notetaker: Gavin
- 7:00–7:15 PM
 - Moderator: Gavin
 - Notetaker: Ziqian
- 7:15–7:30 PM
 - Moderator: Gavin
 - Notetaker: Ziqian
- 7:30–7:45 PM
 - Moderator: Sophie
 - Notetaker: Gavin
- 7:45–8:00 PM
 - Moderator: Sophie
 - Notetaker: Gavin

Research Questions

- Do users appreciate the addition of customization features to Spotify to allow for a more personalized design?
- Is the process for customizing the homepage intuitive for users?
- Do users value being able individually download songs in a playlist in addition to having an entire playlist download functionality?
- Do users appreciate being given feedback that prevents them from making errors?
- Does our redesign violate any heuristics?

Proposed Methods

Our moderators will be leading a heuristic evaluation to collect feedback on our Spotify redesign prototype from 6 UX experts. Specifically, we would like to ask participants to interact with our prototype and see if there is any confusion in customizing the homepage and downloading.

Procedure

- Moderator and team introductions followed by participants' introduction.
 - For returning participants, introduction can be kept short
 - For new participants, make sure to provide enough information about our redesign
- Go over the procedure and rules that will be enforced for the duration of the experiment: do not edit yourself and all questions and frustrations matter.
- Provide instructions on the card sorting activity and ask any questions participants have.
- Participants begin to sort cards while notetakers keep track of their questions, movements, and facial expressions.
- Once participants are done with card sorts, moderators ask analytical questions to figure out the rationale behind each sorting decision.
- Wrap up by summarizing the results of the card sorts and ask for feedback and final suggestions.

HEURISITC EVALUATION PROPOSAL

Questions on Heuristics

Visibility of system status

- Is there any confusion with which mode you are currently in?

Match between system and the real world

- Is there a match between the system and the real world in the symbols?

Recognition rather than recall

- Is there any part in the prototype that is not intuitive, and you would need to rely on your memory to finish the task?

Consistency and standards

- Is the design of the interface consistent across this prototype?
- When you perform an action, is the feedback always consistent?

Flexibility and efficiency of use

- Did you appreciate the degree of freedom offered to you in customizing your homepage?

Aesthetic and minimalist design

- Is there any irrelevant information on the interface that distracts you?
- Do you think the interface is an aesthetically pleasing one or not?

Error prevention

- Is there a way to prevent you from making an error?
- Is it necessary to have a way to prevent you from making an error?

Help users recognize, diagnose, and recover from errors

- If you make an error, is there any way to recover from making an error?
- Do you think it is necessary to have any mechanisms in place that prevent you from making an error?

Help and documentation

- Do you think you will need help and documentation?

User control and freedom

- Do you think you have control over the system?
- Are you able to enter a new state and return to a previous state?

HEURISITC EVALUATION PROTOCOL

Before Participants Arrive

Technology

- Team members who will be joining the study group are familiar with basic Zoom functions, such as chat, recording, hand-raise, and reactions.
- Enable the waiting room on Zoom to make sure participants can join without interrupting the previous session.
- Allow participants to “share screen”.

Communications

- The team has prepared a general outline for the heuristic evaluation group.
- All team members are familiar with the outline and understand the main purpose of the study group.

Instructions

- Team members know how to instruct participants to interact with the prototype
- Team members know how to instruct participants to share their screen as they begin to interact.

As Participants Arrive

- Meet and greet the participants as they join the Zoom meeting.
- Create a welcoming atmosphere so that participants are more comfortable with sharing their opinions later in the focus group (music).
- Answer any questions they have
- Ask participants to keep their cameras on if possible

Introductions

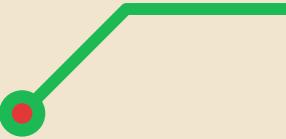
Hello, thank you for taking the time to join our study! We are a group of students who like listening to music and are interested in making some improvement on one of the most popular music apps, Spotify. Today, you are here to help us improve the interface of its mobile app. You will be guided to interact with our current version of prototype and give out feedback from the perspective of a UX expert. This study will take about 15 minutes, and you will get credits for PSYCH 188B.

Before we get started, I would like to introduce ourselves. My name is __, and I will be the moderator for this study. My colleague __ will be taking some notes throughout the session. There might be some time when my colleague is not looking at the screen and is typing, but we want to assure you that we are always listening and paying close attention to your answer. We are recording this session and the recording will be only available for our group members to review, and it would be great if you could share your screen while interacting with our prototype. [PAUSED FOR A FEW SECONDS]

I just sent out a link in the chat, so you can access the webpage containing the prototype. Please first click on the “options” button on the upper right corner, and if you see that there is a tick under the bar “Show Hotspot Hints on Click”, please click the bar again to see the tick disappears. Please note that this is not the final and complete version of our redesigned prototype, so your interactions with it might be constrained to those that are currently available.

Warmup

Let us start off by getting to know a little bit more about each other (send Google form to collect demographic information. Please tell us your name, year, pronouns? What is your overall experience with listening to music on your mobile device?)



Topic Discussion Guide

Topic	Example Statements	Duration	Goal
Introduction	Today's study will take around 15 minutes. We will be focusing on redesigning the information architecture of the Spotify homepage.	30 seconds	Researchers introduce the flow of today's focus group. Estimate a time for participants and clarify any confusions they have.
Warm up	If new, please share your name, year, and major. What is your overall experience with listening to music on your mobile device?	30 seconds	Let participants get comfortable with sharing.
Tasks 1 & 2	Interact with the prototype based upon the sequences presented to you by the moderator. Please reflect after the completion of each task of any immediate issues or concerns.	5 minutes	Have participants interact and familiarize themselves with our prototype.
Heuristic Evaluation Questions	Does the design violate any heuristics will ask about.	8.5 mins	Recap and let participants identify any larger scale issues in our design.
Summary/What's missing?	What are some things you would like to mention that we haven't covered today?	30 seconds	Participants can share their additional ideas freely.

Goal Reminder

- Let participants try the prototype we designed.
- Guide the participants to explore the homepage customization feature and the like and download feature.
- Collect feedback from participants about their overall experience with the new features.
- Ask specific questions on how our prototype meets the 10 heuristics.

Notetaking Reminder

- Keep track of the participant's movement while they interact with the prototype, especially where/when they hesitate or ask clarifying questions
- Take notes on participant's answers to the heuristic questions and write down possible improvements for our final prototype
- Record participant's shared screen

SUMMARY OF FINDINGS

[Heuristic Evaluation]

Homepage customization

- All participants appreciated being able to customize their homepage through an edit mode
 - “It can take me a while in Spotify to find something I am looking for because there is too much information I do not care about.”
- Not all of the modules on the homepage should be customizable (E.g., should not be able to edit “Recently Played” songs but should be able to edit something such as “Shows to Try”)
- Although most participants were able to easily identify the edit mode, 1 out of our 6 participants was unable to immediately identify it because of its deviation from what is currently afforded by Spotify’s design. Either the edit button should be made more visible or be included in an onboarding tutorial to make clear to users what they are able to do with the design.

Liking and downloading music

- 5/6 participants appreciated being able to utilize the feature
- One participant felt that the like and download options were located too close together

Feedback and error prevention systems

- Need to incorporate a back space button in edit mode so that users are able to revert back to the earlier version of their homepage in the event they choose to not save the changes they made to their homepage
- Although all participants appreciated the pop-up messages when unliking or undownloading a song, one participant mentioned that they would like to be able to be given the option of whether or not to have the pop-ups“
- I think it was a little redundant but may be a preference. Should give users the option to show up everytime or not.”

INSIGHTS HIGHLIGHT

Key findings from **Focus Group Study**

- Users like the personalized experience when they are using Spotify.
- Users like having song recommendations, but would like to have more control over the playlists and what shows on the homepage.
- There is a confusion between the “like” and the “download” feature.
- Quotations:
 - “I like that Spotify has recommendations based on genre and similar artists. It helps me to find my niche.”
 - “It would be nice if I can personalize the homepage. I never listen to podcasts, but it always shows on top.”
 - “My downloaded music is really unreflective of what I have on my device right now. It gives that feeling that I’m just accessing this music; I don’t actually own it.”

Key findings from **Process Analysis Study**

- Users can find some good recommendations as they navigate through the homepage, but can feel lost and overwhelmed as well.
- Users may feel frustrated when they keep getting the recommendation of songs that they do not like.
- The “search for friends” feature is hard to find and difficult to use.
- Users have trouble downloading the songs that they want.
- Quotations:
 - “Most of the sections (on the homepage) are tailored to my taste. I’m surprised to see the ‘friends’ listenings’ section since I’ve never scrolled all the way down. I wish the ‘uniquely for you’ section can be more on top.”
 - “Sometime I just play songs for other occasions, but I keep getting the artist’s songs as recommendations. I don’t like these songs.”
 - “I cannot find your username.”
 - “Every time I download the album, it automatically likes every song. There is no way to download an individual song.”

Key findings from Semi-structured Interview:

- Users find the homepage overwhelming. Many sections on the homepage are not useful.
- Users would like to have the option to provide feedback on the recommended songs.
- Users find the search bar not intuitive to use.
- The downloading feature sometimes is not working as expected.
- Some users want to have more social features.
- Quotations:
 - “I hope the homepage can be less cluttered. Right now it is too long and has way too many options.”
 - “I wish the recommendations could be more diverse. I want songs in both Spanish and English.”
 - “Searching for friends is annoying. Artists always come up before my friends.”
 - “I think there is no way to download a single song.”

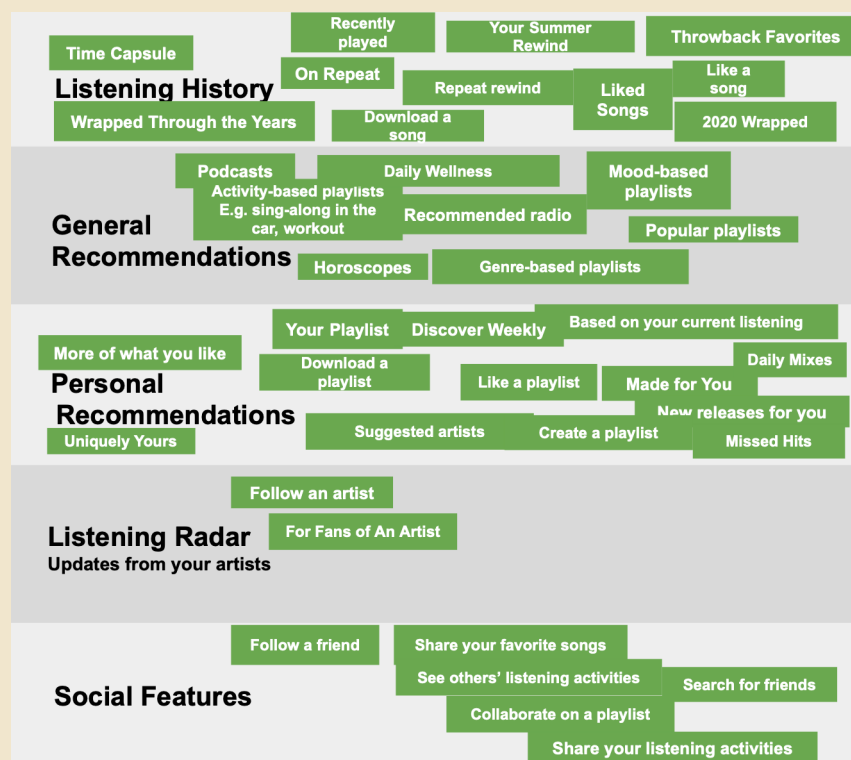
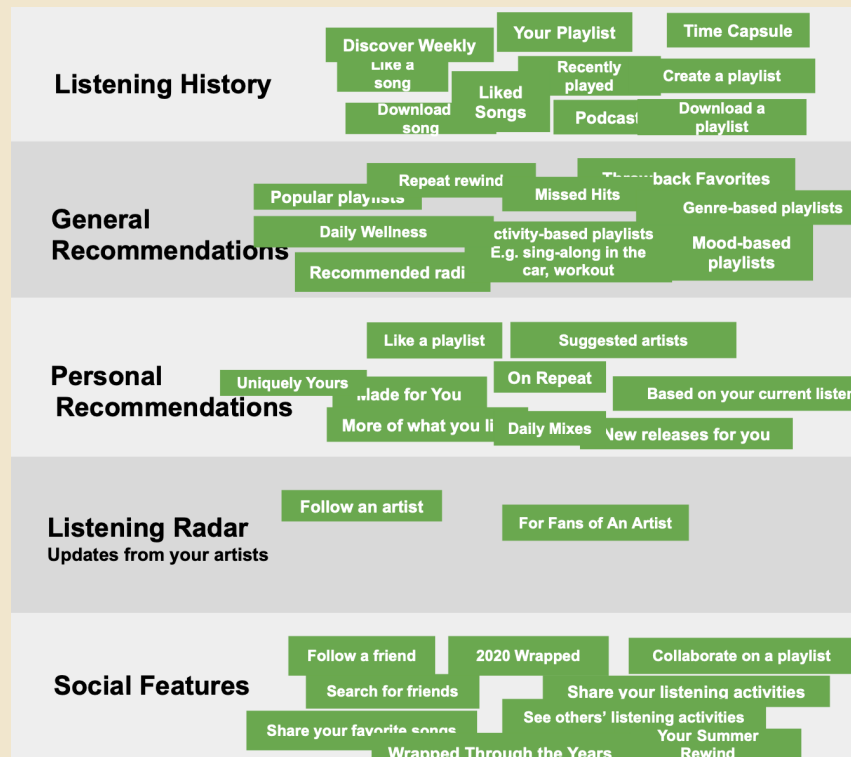
Key findings from Heuristic Evaluation Study:

- All participants appreciated the new feature of being able to customize their homepage through the edit mode.
- Most participants like having the like and download features separated.
- An error prevention feature needs to be added so that users can undo their changes on the homepage.
- Quotations:
 - “It can take me a while in Spotify to find something I am looking for because there is too much information I do not care about.”
 - “The like and downloading icons are easy to understand. I love the fact that it pops up a window to confirm your action.”
 - “I would wonder what to do if I want the section that I just deleted back.”

Key findings from Card Sorting Study:

- Users want to customize some categories under general recommendations.
- Users have very different preferences in how to improve the personal recommendations.
- Users do not expect too many social features since Spotify is a music app.
- Quotation:
 - “I listened to radio a lot so I want to see personal recs about radio.”
 - “I don’t think I like radio or podcasts. I think if I see it consistently under my recommendations, it will annoy me eventually. Spotify shouldn’t push too hard.”
 - “I am content right now. I think a one-way interaction with information in Spotify is enough.”

Unfortunately, since we do not have permission from participants to post their recordings, we cannot release videos from all five studies. Please see below for some results of card sorts from two of the participants.





INTRODUCING OUR PROTOTYPE

[Click here to interact with the prototype](#)

REQUIREMENTS

Homepage customization

- Motivation: Many of our participants have indicated that there is lots of information on the homepage. The cluttered information overwhelms users as they don't actually need that much of it. Based on such feedback, we think users may need more freedom in customizing the homepage by filtering what they actually like.
- Goal: The homepage will only contain playlists one truly likes to improve the sense of personalization and ownership for all Spotify users.
- Solution: We added the homepage customization button on the upper right corner of the homepage. By clicking that, the user can customize their own homepage by removing recommended playlists they do not like to see on the homepage.

Downloading

- Motivation: Our study results show that there is a great gap between songs the users like and songs they want to download. Users may assume if they liked a song, then they've downloaded a song, which is inaccurate. In addition, Spotify does not include the downloading feature for individual songs, which makes it hard for users to select what they want to store at their local library.
- Goal: We aim to develop a clearer conceptual model for downloading, so users won't mix up downloading and liking. We also want to provide users with the freedom to download an individual song to optimize their local library storage.
- Solution: We added the downloading feature inside the user's own created playlists, next to the like feature in the user's own playlist to clarify the difference between liking and downloading. A download icon can also be found next to each song individually.

REQUIREMENTS

Dislike button to improve recommendations

- Motivation: Many of our participants reflected that they don't always like Spotify's recommendations, but there was no way to tell Spotify about their dislike and prevent those same songs from appearing.
- Goal: We aim to design a way for users to provide feedback on the recommended songs.
- Solution: We added the "dislike feature" next to the like feature to remove unwanted recommendations. We did not include the downloading feature in the recommendation list because according to our study's result, users do not intuitively think of downloading a song when they are browsing a recommendation list from Spotify. More intuitive features may be liking or disliking the recommended songs. To reduce crowdedness, we moved the individual downloading feature to the drop down menu under the "..." icon.

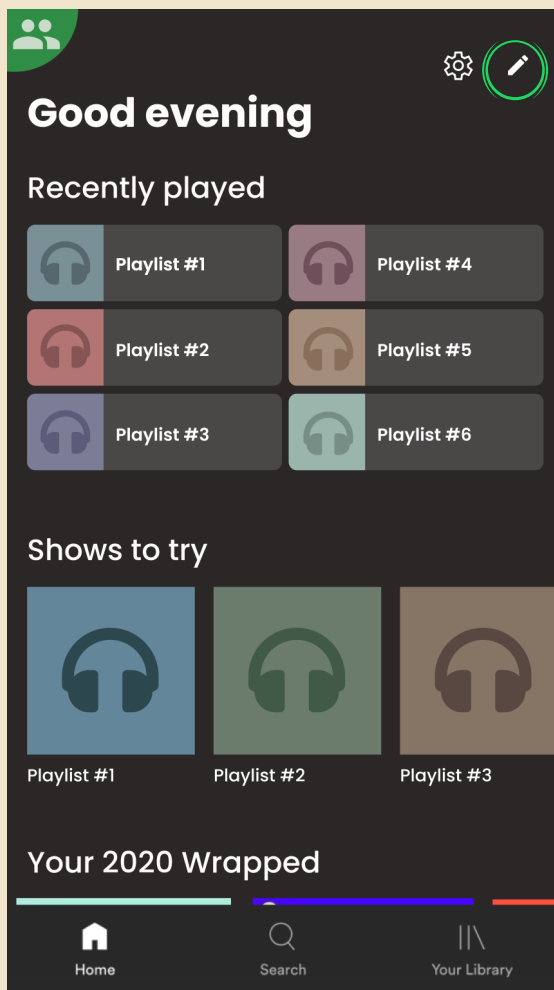
Social page

- Motivation: According to our study results, users would like to share their favorite songs with friends and to receive sharing updates from their connections at the same time. Also, the majority of our participants complained about how difficult it is to look up for a friend's profile while searching on the general search bar.
- Goal: The social page will be accessible from the homepage, but it shouldn't take up a majority of the space since users like Spotify as a music app. We also aim to provide a better search function under the social page, so users don't need to go through the general search when looking up a friend.
- Solution: We added a new button on the homepage that redirects users to the social page. There is a search bar at the top of the page through which users can search for their friends. The search result will contain user profiles only, excluding other information in the general search such as artists, songs, and playlists. Under the search bar, users can view updates from their connected friends. The new updates are distinguished from the already checked sharing activities, and users will be able to reload the new message part by clicking on "refresh".

PROTOTYPE HIGHLIGHT

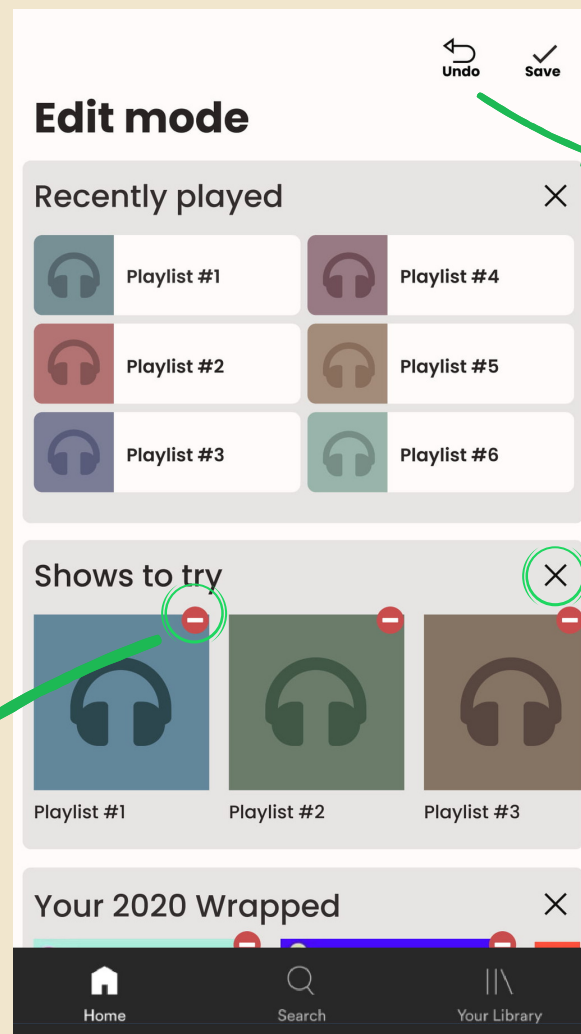
[Homepage Customization]

This newly added feature allows users to organize their homepage according to their preferences. They can enjoy more liberty in deleting uninterested categories to avoid cluttering.



Edit the homepage

A white interface signals that edit mode is on



Undo the changes

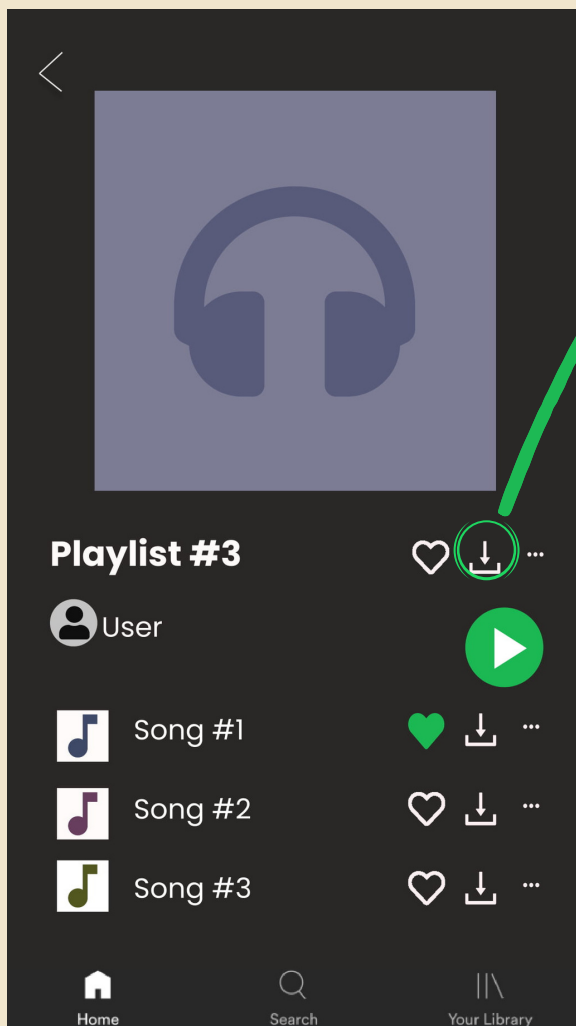
Remove an unwanted section

Remove an unwanted playlist

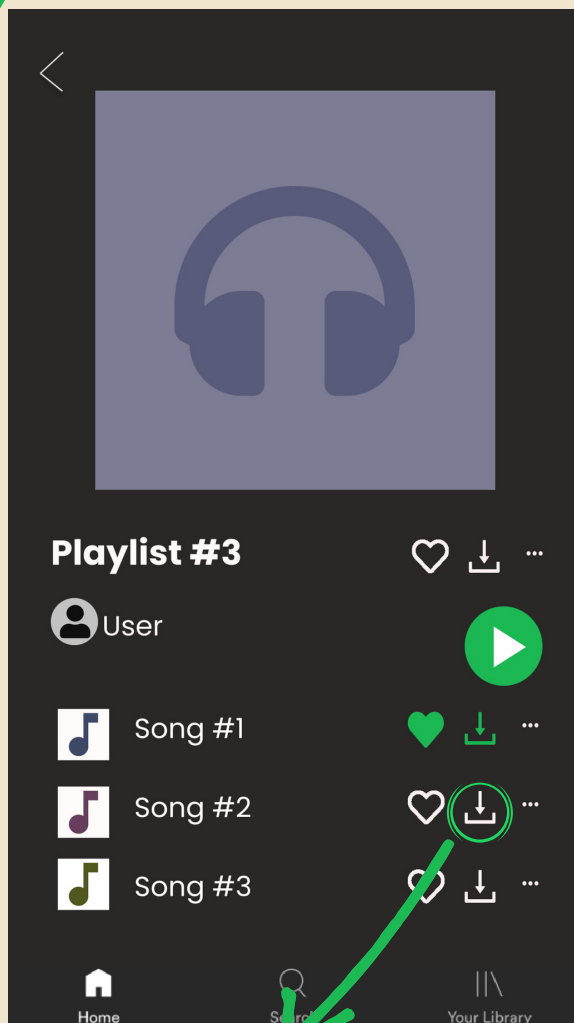
PROTOTYPE HIGHLIGHT

[Downloading]

The redesigned downloading feature provides users with more freedom to select individual songs.



Download the whole playlist

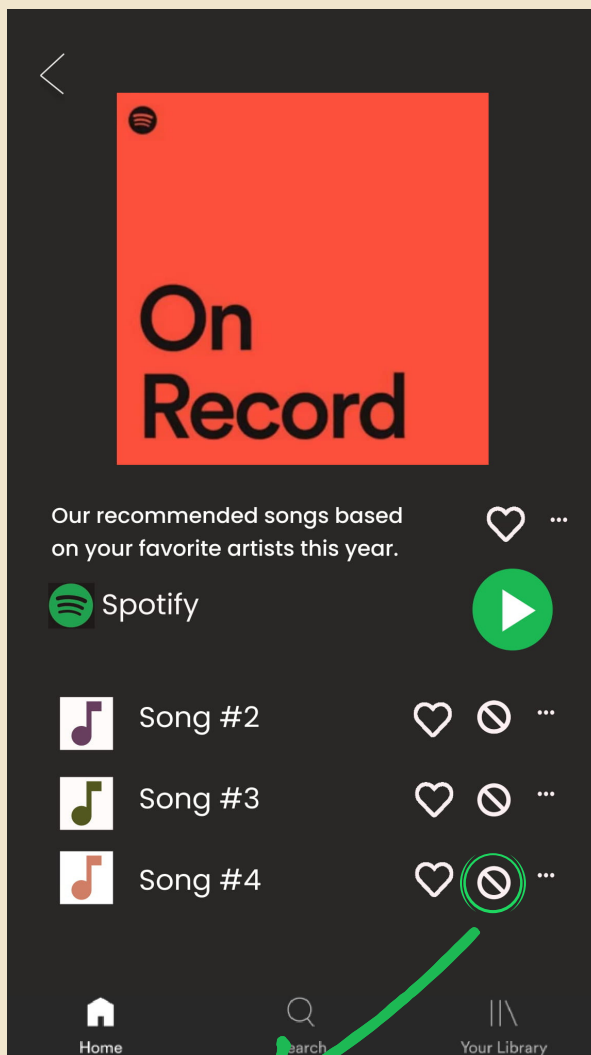


Download an individual song

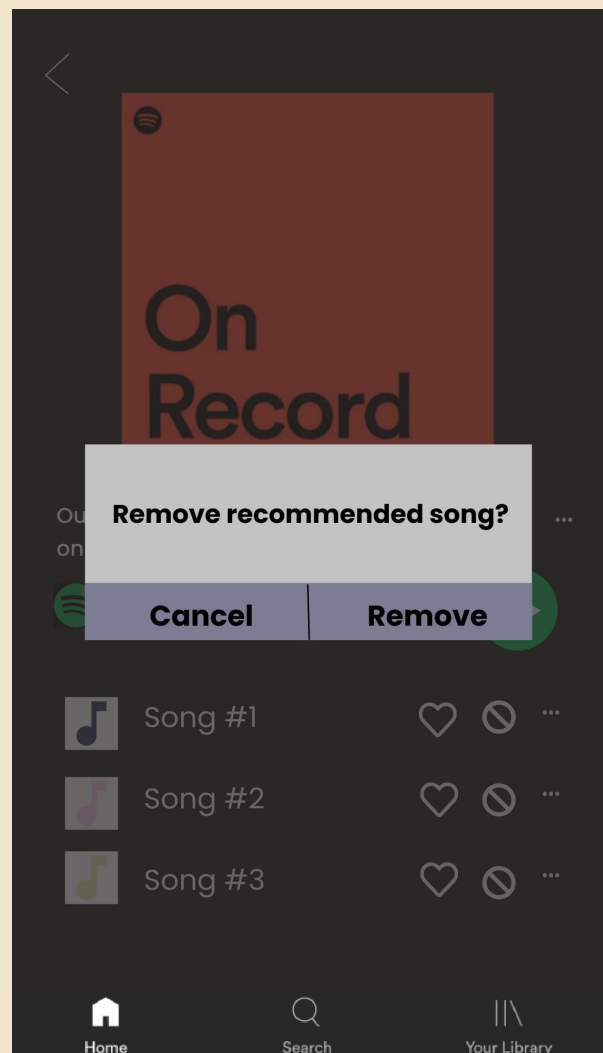
PROTOTYPE HIGHLIGHT

[Remove Disliked Recommendations]

The dislike feature allows users to provide feedback to Spotify, thus optimizing the recommendation algorithm.



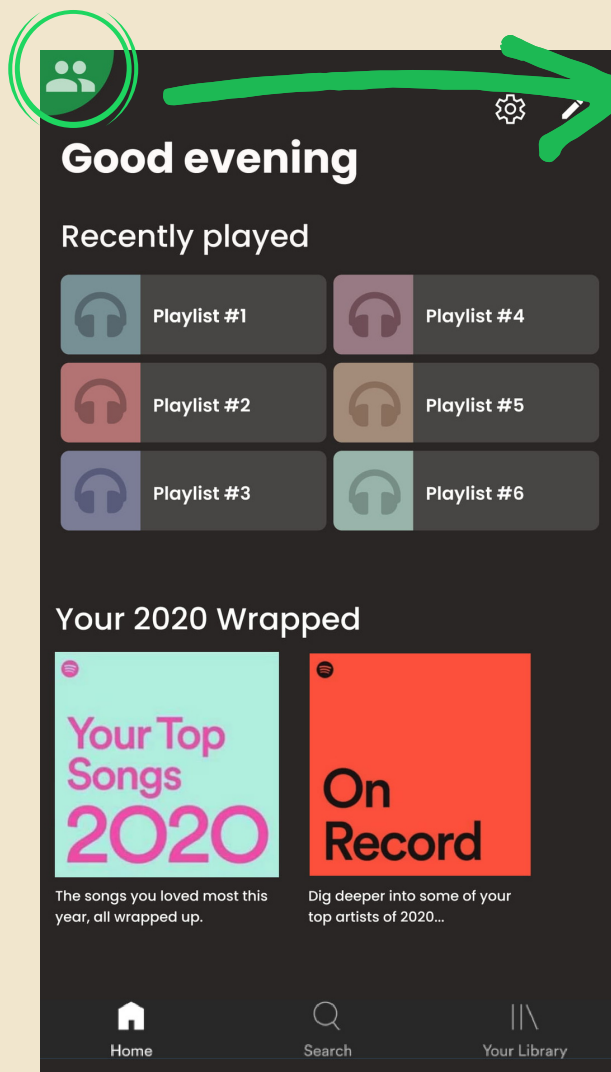
Dislike a recommended song.
Spotify would recommend it on
your page again.



PROTOTYPE HIGHLIGHT

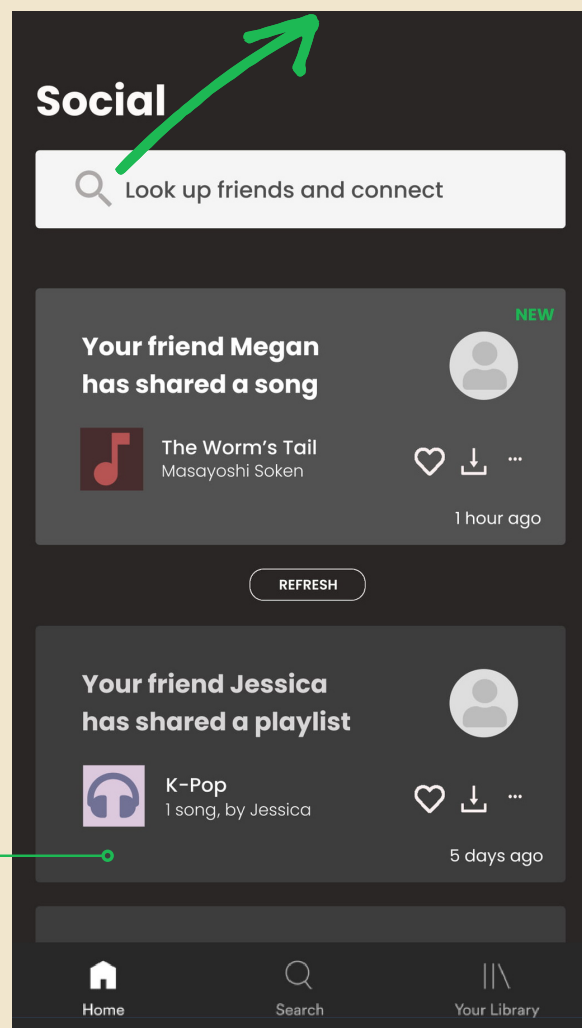
[Social Page]

A concise, accessible social page for users to interact with friends. All features are music-centered, and are not meant to replicate a social media platform.



Enter the social page. Collapse if you don't feel like to social today.

Search for friends here.



Updates from friends