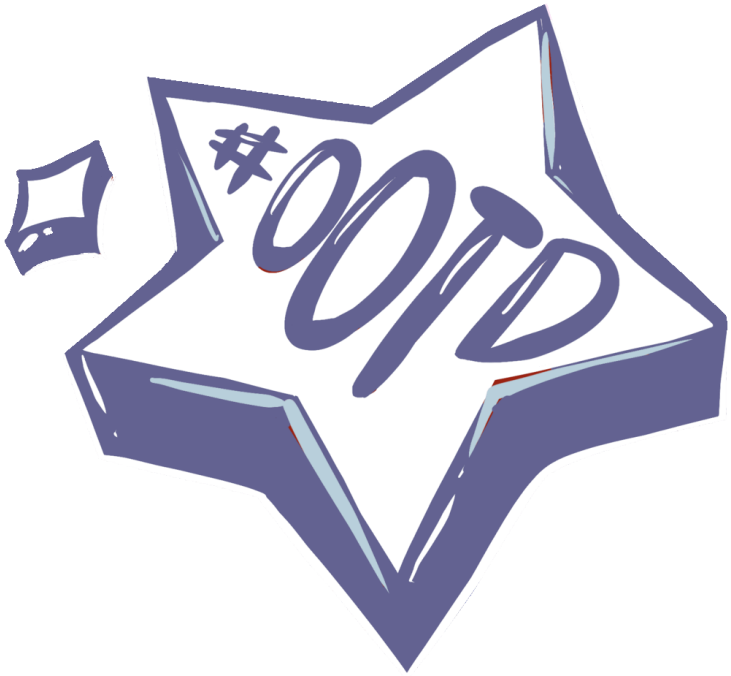


#OOTD

Final Report

Table of Contents

Project Name & Value Proposition

Project Name:

#OOTD

Value Proposition:

Impress to Dress

Team Member Names and Roles

Hannah Cha

User Researcher/UX Designer

Evan Chen

User Researcher/Mobile and Web Developer

Hana Dao

User Researcher/UX Designer

Caroline Wang

User Researcher/ UX Designer /Mobile Developer

Problem/Solution Overview

When asking any person about their morning routine, they're sure to mention the act of creating an outfit. Making an outfit every morning requires time and effort which can be especially stressful in rushed scenarios.

#OOTD is an app that helps you to digitize your closet and choose daily outfits with minimal activation energy required. It can create auto-generated outfits, or help you choose an outfit by providing information about the weather, previous outfit history, input from friends, and your daily schedule.

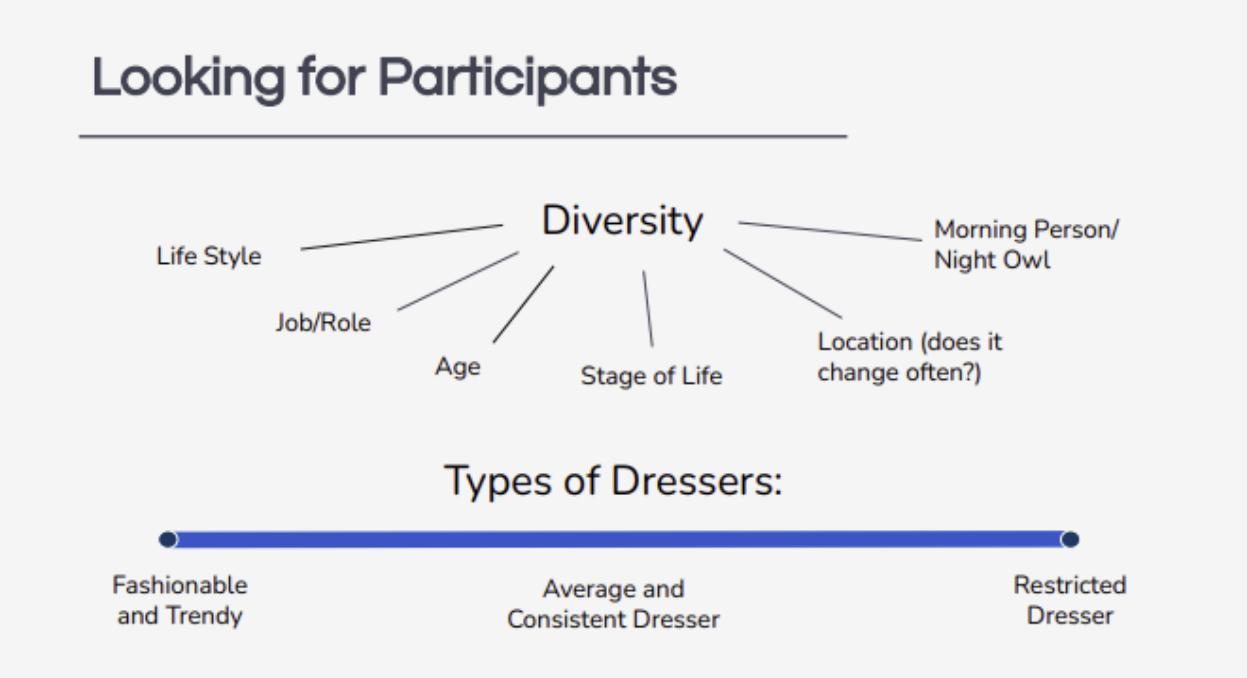
Needfinding

Interviews

Our team was interested in extracting insights about how best to improve people's morning routines. To achieve this, we asked interviewees to walk though their daily routine starting from the moment they wake up. Common questions included asking about their interactions with clothing and getting dressed as well as their schedule in general. To gain insights from a wide range of people and better understand the act of getting ready beyond a specific demographic, we recruited interviews over Zoom and in-person through a variety of sources, including friends of friends, staff & faculty on campus, and people visiting cafes around the Palo Alto area. We were able to speak with people of various ages, occupations, and lifestyles.

Our interviewees consisted of students attending university, one cadet attending the Air Force Academy, and three industry workers in the San Francisco Bay Area. We first interviewed Sarah, a first year student attending UCLA who is based in Los Angeles. Next, John Gunderson is a recent graduate and software engineer working at Roblox who is based in San Francisco. Judy is a middle-aged woman working at the Stanford Alumni Center. Logan is an Air Force Academy Cadet based in Colorado. Emily Huang is a third year English and Psychology major attending Stanford. Lastly, Ryan Finney is a cancer therapy researcher working in the Bay Area.

Our interviewees were diverse in terms of age and occupation, but importantly, they were also diverse in terms of their interactions with fashion, ranging from spending lots of time choosing outfits to almost none at all. This allowed us to gain further insight into the clothing preferences and needs of the general population.



Synthesis

To synthesize, our group had to bring together findings from each interviewee and analyze the shared similarities and differences attributed to their careers or needs. We created empathy maps for four of our interviewees, organizing what they said, did, felt, and thought. Utilizing the empathy maps we created from our interviews, we were able to consolidate key insights and also take note of conflicts or gaps in user responses such as a disconnect from a user's thoughts vs. their actual observed behavior.

We learned that everyone mentioned the act of putting on clothes or coming up with an outfit when they described their morning routine and having to get ready for the day. We already hypothesized that everyone will have a unique sense of style and preference of clothing which was reflected in our interviews but also discovered that there were some key differences in how much time people dedicated to putting on clothes or whether they wanted to explore more with fashion and their closet. For example, someone who worked from home, spent less time and also cared less about what they wore compared to when they had to come into the office. Youth, both high school and college students like Sarah

tended to be more interested in fashion and also willing to spend a lot of time curating outfits. Sarah explained to us that she was able to spend hours on Pinterest scrolling through outfits and that her outfit was a central part to defining the rest of her day as it affected her confidence.

An empathy map for Sarah, a college student from Southern California.

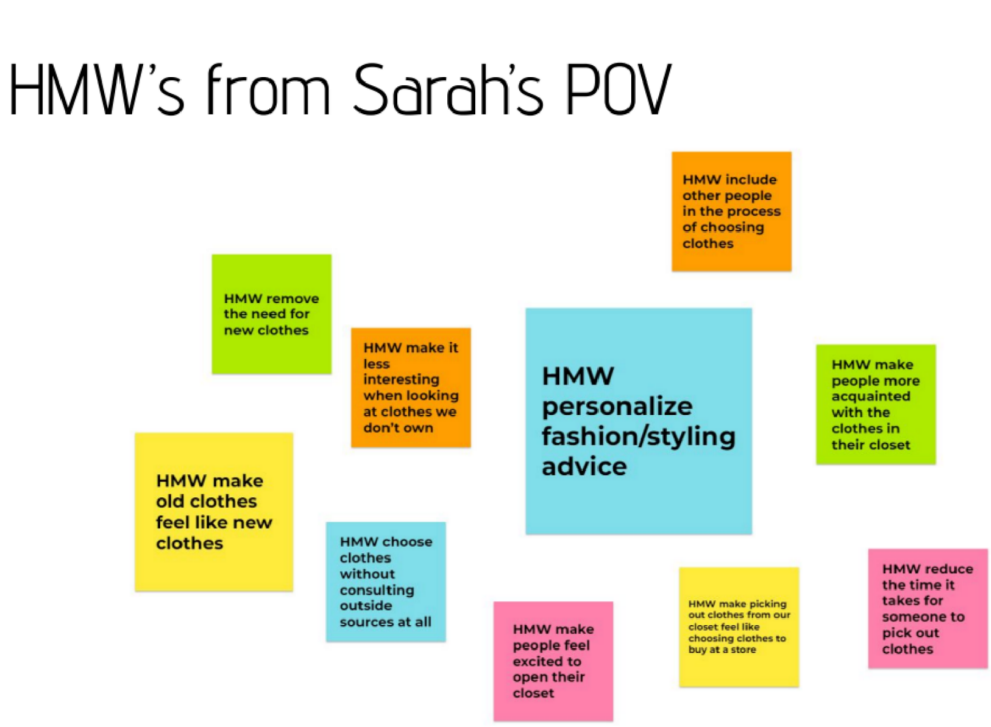
POV & Experience Prototypes

Upon completing our interview process, our team extracted the three most insightful interviews, and used their results to start brainstorming potential solutions within our problem domain. We began this process by developing Point-Of-View (POV) statements for our most engaging interviews (Sarah, Judy, and John), who represented diverse ages and backgrounds. These POV statements helped to narrow down the main takeaways from the interviews based on that user's needs and insights. For each POV statement, we defined what insight that would be game changing towards that user. Based on this game-changing insight, we brainstormed 10-15 How-Might-We statements (HMWs) to help us ideate on how the game-changing insights from our POVs could be transformed into solutions. Then, we chose the top 3 HMWs across our three users, came up with a solution that addressed each HMW, and designed an experience prototype to quickly test assumptions we made in the initial solution we came up with.

Point of View for Sarah

- **We met** Sarah, a freshman at UCLA studying psychology who is very into fashion.
- **We were surprised to notice** that she spends more time looking at Pinterest for fashion inspiration rather than her own closet when deciding what to wear.
- **We wonder if this means** it is more fun to browse clothes that are new to her and those she doesn't already wear.
- **It would be game-changing if** people are inspired by their own clothes and enjoy the experience of "shopping" the closet that they already own.

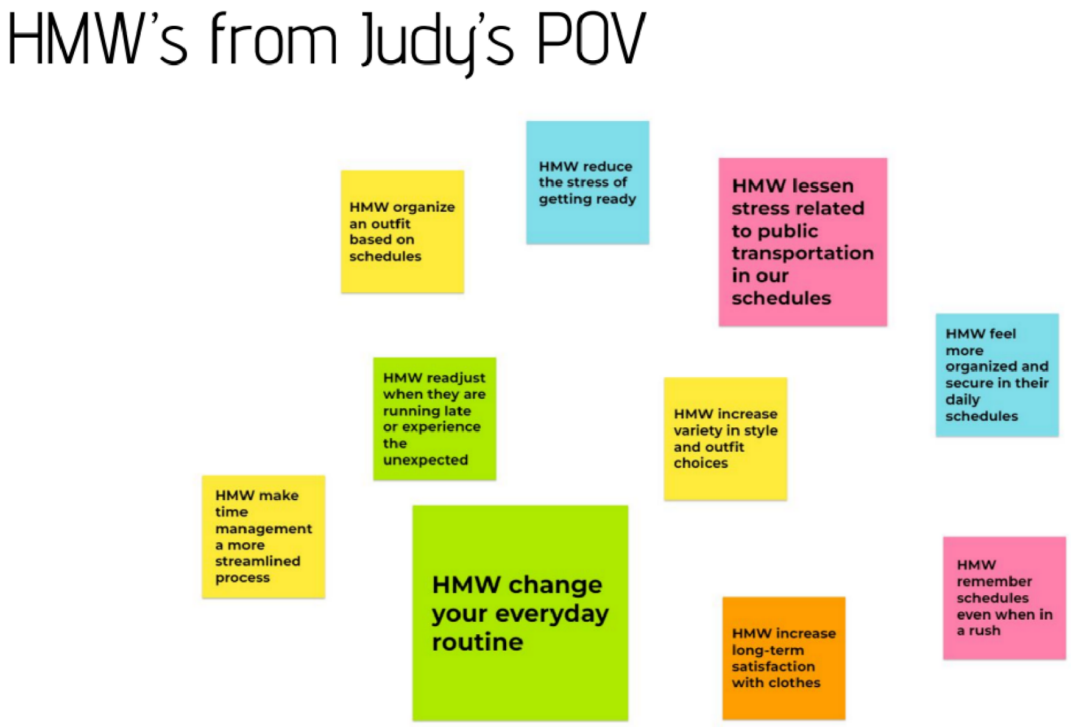
Sarah's HMW Highlights



Point of View for Judy

- **We met** Judy, a middle-aged woman working at the Stanford Alumni Center who maintains a consistent schedule and style.
- **We were surprised to notice** that she gets bored of wearing the same outfits but often sticks to consistency when making closet choices.
- **We wonder if this means** she wants to try new styles, but finds it difficult to explore or incorporate new activities or items in her routine.
- **It would be game-changing** to find a way to maintain a consistent schedule despite inevitable disruptions, while also allowing for experimentation in styles and outfits.

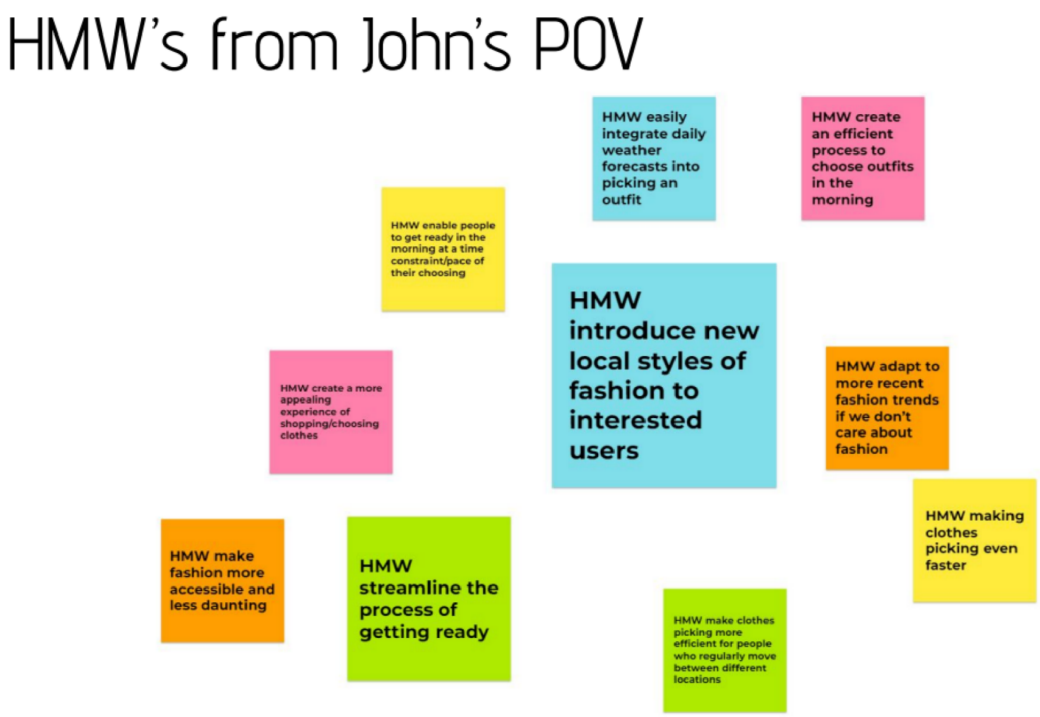
Judy's HMW Highlights



Point of View for John

- **We met** John Gunderson, a current software developer at Roblox with a dynamic living situation.
- **We were surprised to notice** that he prepares to leave the house in just 10 minutes and skips breakfast until he arrives at work.
- **We wonder if this means** he would be interested in further reducing the time it takes to get ready.
- **It would be game-changing to** further optimize his already quick preparation time.

John's HMW Highlights



Top 3 HMWs across the three interviews:

1. HMW change our routine to be more exciting and satisfying everyday?
2. HMW make it fun when someone is running late or experiencing the unexpected?
3. HMW personalize fashion/styling advice that is limited by a person's closet?

Top 3 Solutions:

1. Providing recommendations for new activities to integrate into a user's routine based on their interests
2. Find calming ways to distract from a stressful scenario and give encouragements that reduce its stress
3. Having users take outfit inspirational pictures that they can like and interact with to create outfits from your existing closet

Experience Prototypes:

1. **Recommending New Activities**

   In our proposed solution to provide recommendations for new activities to integrate in a user's routine based on their interests, our main assumptions were:

   1. Users want to change their routine
   2. People accept others changing their routine
   3. Users will follow through with the change

   In order to test these assumptions, we set up an experience prototype in which we asked participants to try new activities during their morning routine. Then, we followed up with the participants following the next morning, and asked participants whether they enjoyed incorporating new activities into their daily routine. For this experience prototype, our participant claimed that changing up her routine in terms of breakfast helped her feel less hungry, and that incorporating singing into her routine made her happier. However, since this particular participant worked from home, she didn't enjoy going outside or wearing clothes at home, and that she felt that these changes were unnecessary. This experience prototype was successful in gauging people's reactions to changes in their routine, and was able to get a nuanced perspective in terms of incorporating a diverse array of changes. However, because this was a brief experiment, we were not able to personalize recommendations for changes to the routine based on the participant's preferences; this may have led to some of the unsatisfactory results from the participant. We ultimately chose not to follow this route because many morning routines are not flexible enough to incorporate new changes into them, and our participant demonstrated that some people may be adverse to these changes.

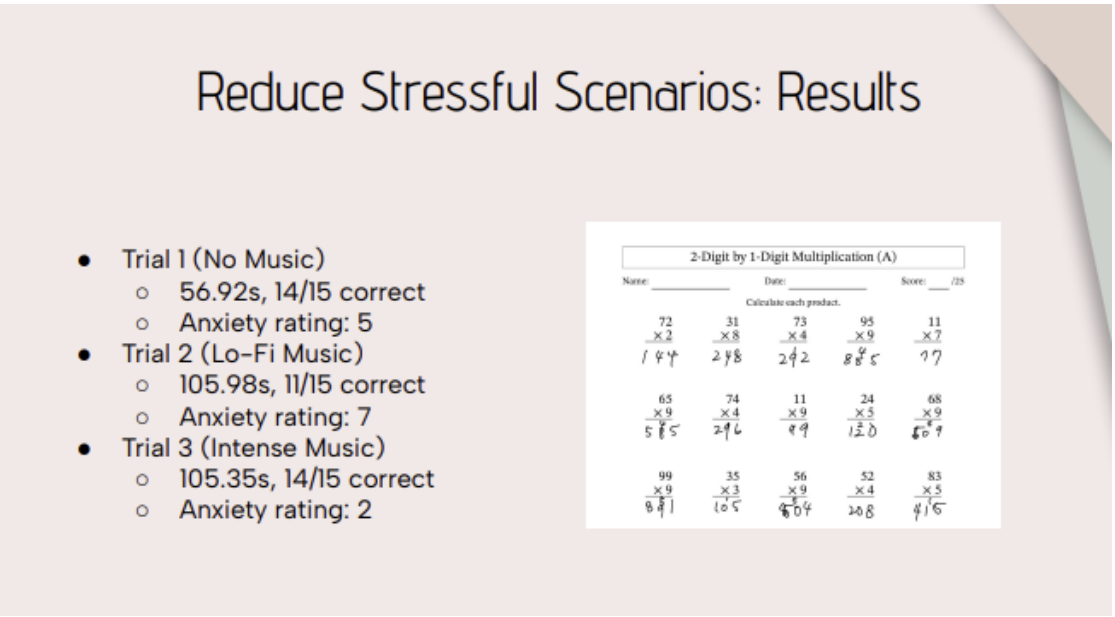
2. **Distracting from Stressful Scenarios**

   In our proposed solution of finding calming ways to distract from a stressful scenario, our main assumptions were:

   1. People want to feel more relaxed under stressful circumstances
   2. Being distracted when stressed is preferable

3. Sensory experience like music will reduce stress
4. Reducing stress will not affect performance

In order to test these assumptions, we set up an experience prototype by creating a synthetic stressful situation. Participants were asked to perform a multiplication worksheet, and their performance was both timed and scored. They were also asked to rate their anxiety following the experience and provide feedback. 3 different trials were performed: one with no music, one with calming music, and one with intense music. For this experience prototype, our participant performed best when there was no music at all; they scored a 14/15 in 56.92 seconds. For this trial, they rated their anxiety a 5/10. When there was calming music, it took them double the time and their accuracy was lower: it took them 105.98 seconds, and they got 11/15 correct. For this trial, they rated their anxiety a 7/10. In the trial with intense music, it took them a similar time to the calming music with slightly better accuracy; it took them 103.35 seconds and they got 14/15 correct. For this trial, they rated their anxiety a 2/10.



These trials were generally accurate representations of stressful, time-based scenarios. One thing that did not work with this experience prototype is that we failed to consider how a participant could improve in multiplication over time, which could've skewed the results by making their time lessen. Overall, we found

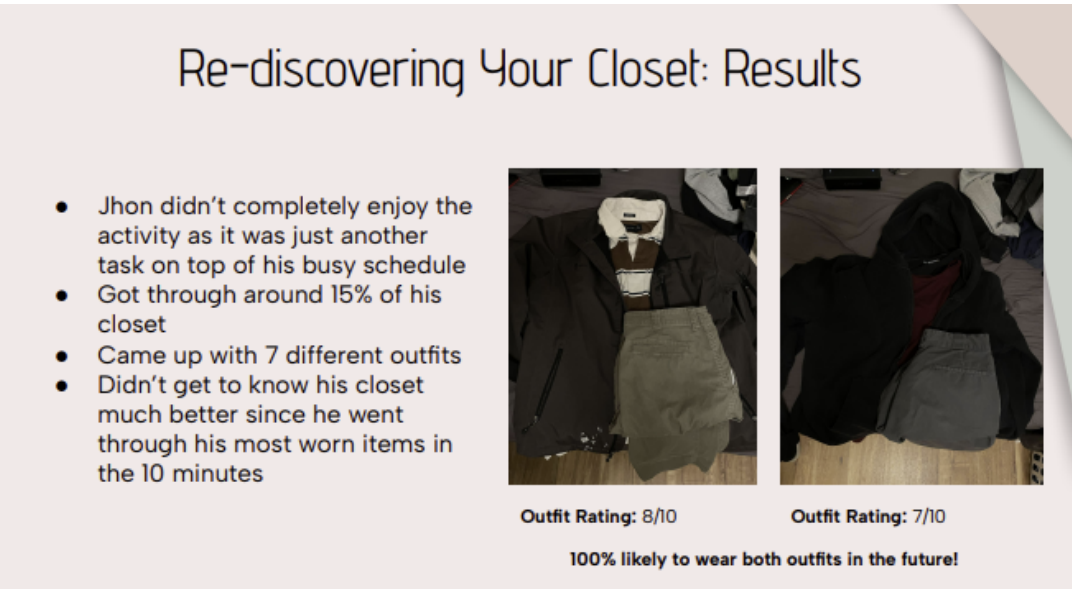
that added variables such as music in a stressful scenario did not help with their efficiency, and also did not reduce their anxiety levels to a great extent. This implied that our proposed solution of distracting from stressful scenarios could negatively affect user's efficiency and performance in the given scenario, so we chose not to pursue this idea.

3. **Re-discover User's Closets**

   In our proposed solution to have users take outfit inspirational pictures that they can like and interact with and create outfits from their existing closet, our main assumption were:

   1. People want to go through and document their entire closet
   2. People want to spend time curating their outfits
   3. People are willing to invest time in documenting outfits
   4. People want to break out of their normal fashion routine

   In order to test these assumptions, we set up an experience prototype to help the participant re-discover their closet. We tasked someone with digitizing their closet for 10 minutes, which consists of going through their closet, taking pictures of their clothing items, and documenting potential outfits. Following this activity, the participant was asked how many clothing items they got through, how many outfits they found, how they rated the outfits they found, and how enjoyable the activity was. Our participant was able to get through around 15% of their entire closet in these 10 minutes, and was able to come up with 7 different outfits. Although he didn't completely enjoy the process since he had a busy schedule, he rated two of the outfits that he found a 8/10 and a 7/10. He also said that he would be 100% likely to wear the outfits in the future.



Ultimately, this experience prototype worked well as it was able to gauge how a user could re-engage and re-discover their closet, as well as create new outfit combinations through this process. Although we didn't have completely positive results from this set-up, this feedback allowed us to identify what problems we could address if we pursued this solution. What didn't work extremely well was the timeframe that we chose of 10 minutes; this proved to be a pretty long time to just be documenting one's closet. However, most importantly, we wanted our participant to be able to re-engage with their closet, and our participant did this successfully, and found this experience useful in determining potential future outfits to wear. Overall, we found that this experience prototype was the most helpful to the user in terms of improving a very specific aspect of their morning routine, and out of our three prototypes, this solution aligned most closely to the results from our needfinding phase. Ultimately, this solution seemed the most generalizable to all users, since everyone has to choose an outfit, so we decided to pursue this solution further.

Design Evolution

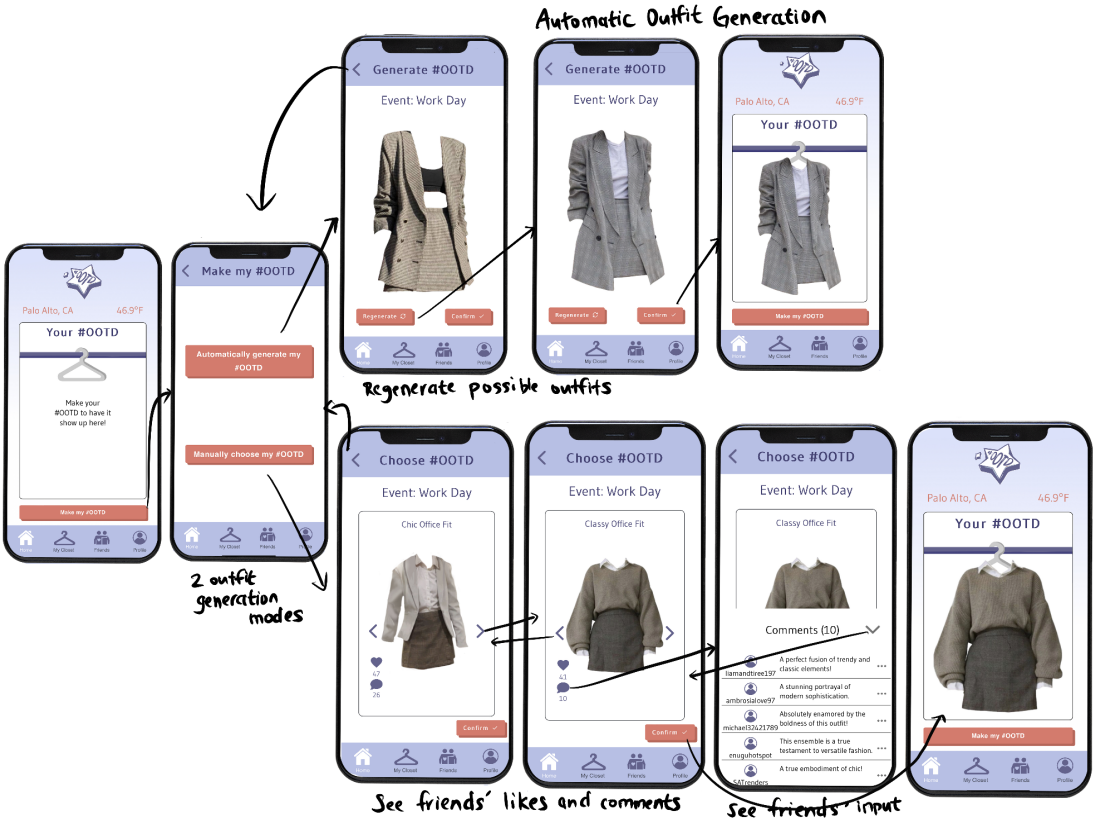
Final Solution:

We decided on a mobile app realization for our solution. The mobile format made the most sense for our app, as we found through our need-finding interviews that the majority of people look at their phones first thing in the morning. Mobile devices also already come equipped with their own cameras, which is needed during the process of uploading clothes to the app.

Tasks:

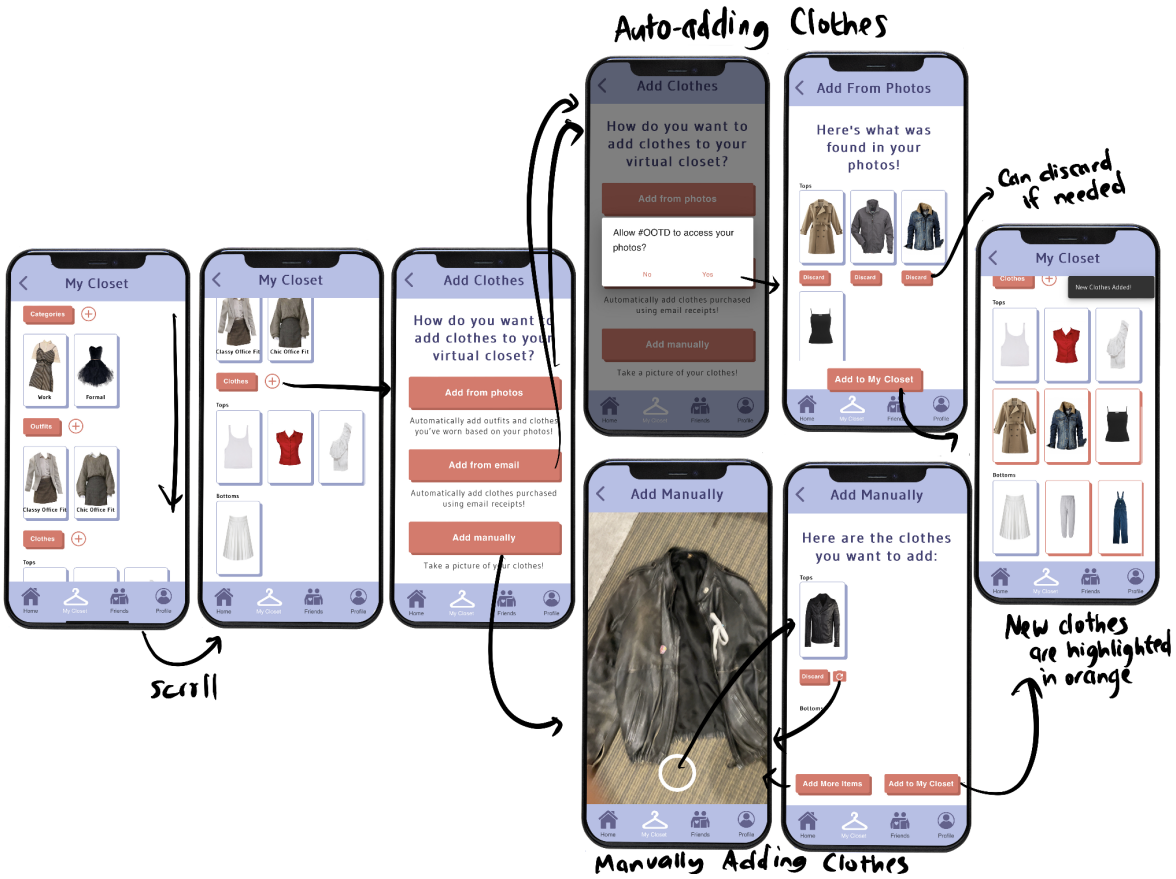
1. **Simple: Choosing an outfit to wear**

   Our app's main priority is to make the process of choosing an outfit easier, faster, and more fun. Since users need to choose an outfit to wear everyday, we found this task to be one of the most important features. Users can either ask the app to generate an outfit, or they can choose between outfits they have already put together



2. **Medium: Adding clothes to your closet**

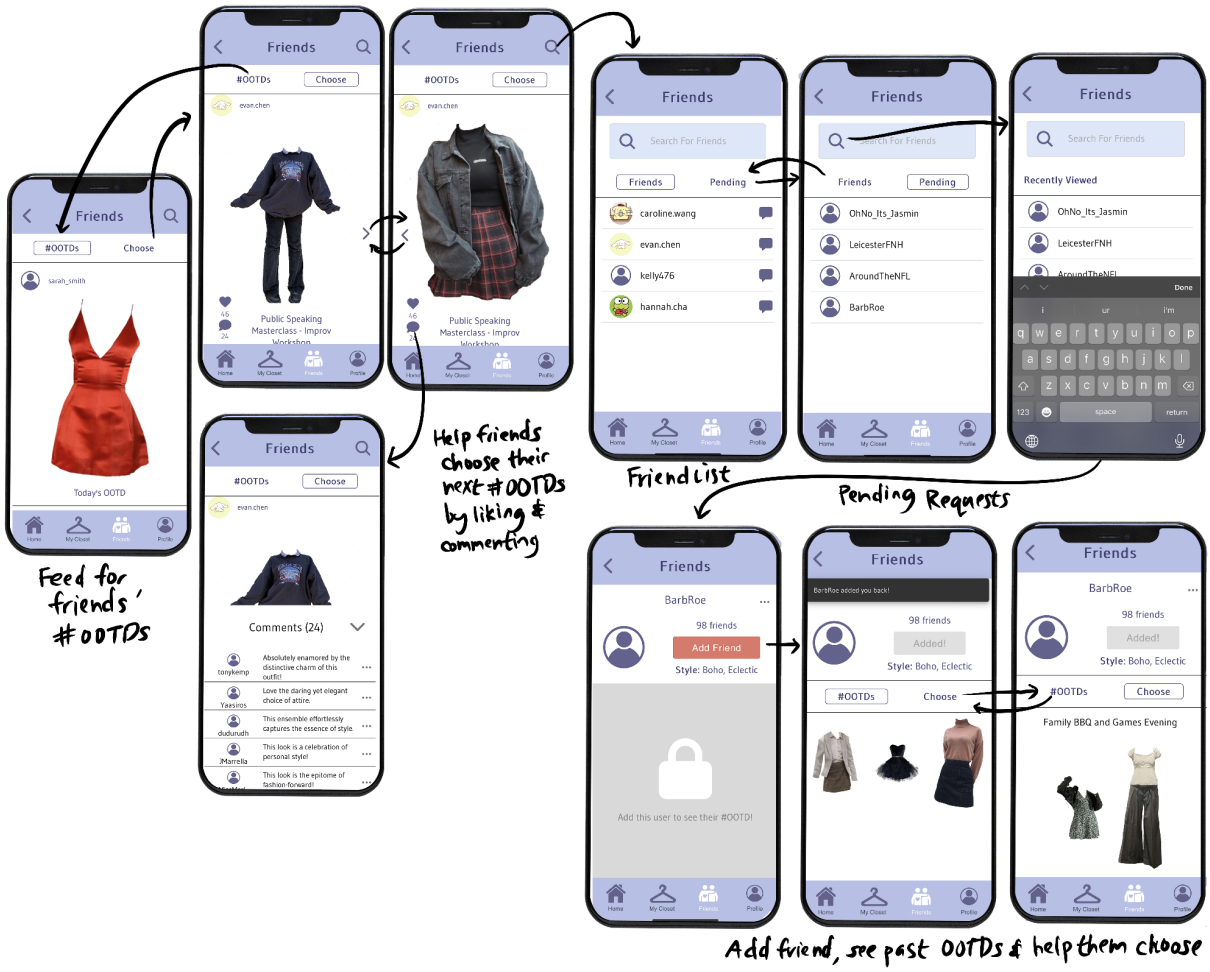
   Our app is also a way for users to digitize and organize their closet. They can do so by creating clothing categories or saving outfits. Therefore, it is important for users to be able to easily upload their clothes to the app. The simple task is also dependent on this one, as the autogenerated outfits are based on the user's virtual closet. To help users add clothes to their closet, our app connects to the user's photo album on their phone and picks out clothes that they have worn in their pictures. Additionally, it can connect to the user's email and pick out clothes that they have received an email receipt for.



3. **Complex: Sharing your outfits with friends**

   For some users, the social aspect of getting ready is very important. Our app allows users to share what they are wearing, see what their friends are wearing, and

receive or give fashion advice. This allows users to coordinate outfits and elevate their fashion.

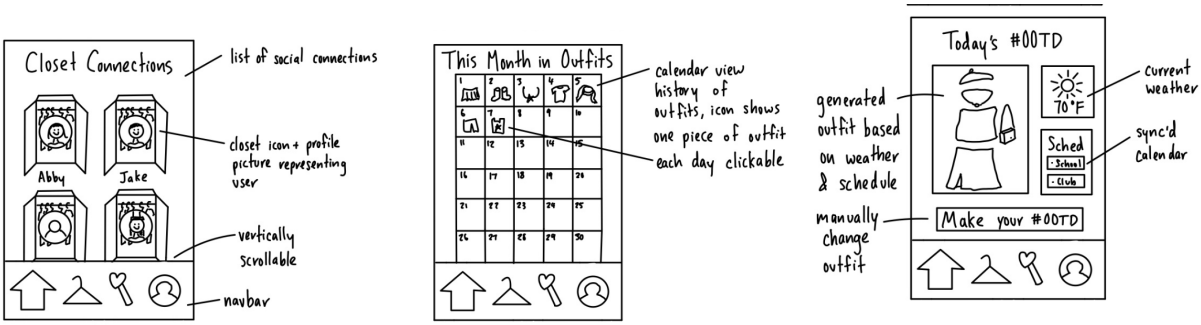


Design Evolution Visualization(s) and rationale:

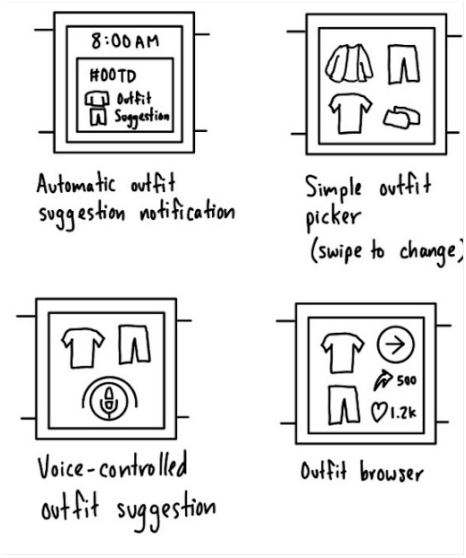
Low-Fi Prototype/Initial Sketches

Within the initial sketches stage, we thought of different possible solutions, which consisted of a chat-based application, a mobile-based application, a wearable-based application, or even an AR-based application. The two applications we decided to move forwards with were the mobile-based application and the wearable application.

1. **Mobile Application**



2. **Wearable Application**

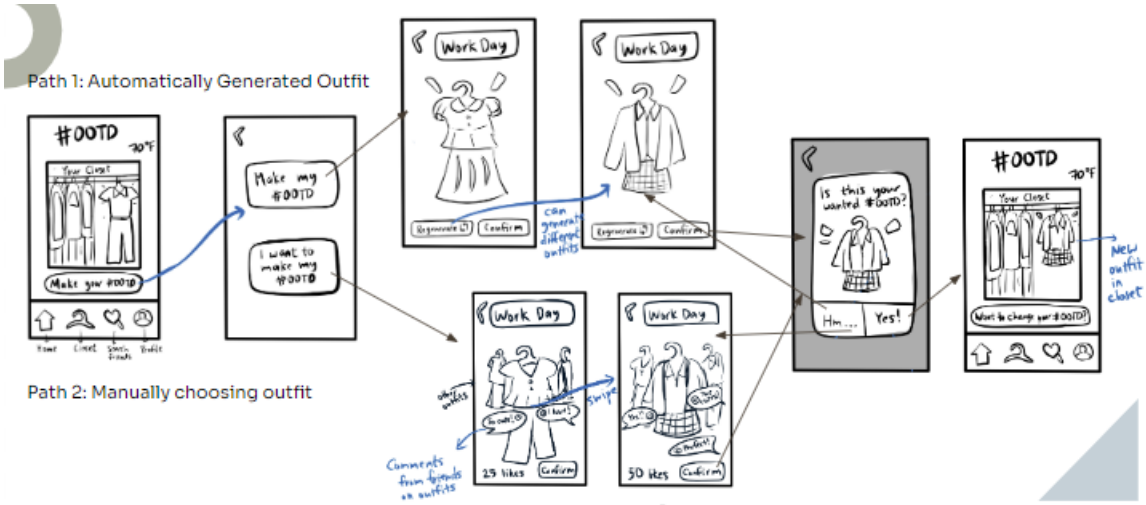


What we liked about the wearable application was that it is a very portable and lightweight solution, so people could access their closet anywhere. However, it was evident that people don't put their watch on first thing in the morning, and that larger closets would be harder to display on the small interface of a wearable. In addition, we liked that the mobile application would allow for touch screens and motions such as swiping, which could easily allow users to traverse their closet. Another positive aspect would be that phones have a built-in camera, which could take pictures of clothes. A downside that we identified was that a digital application cannot truly capture all aspects of putting together an outfit, like feeling its fabric.

After analyzing the feasibility, pros, and cons of each solution, we decided to focus on the mobile-based application, as this would be the most intuitive and easy for users for the

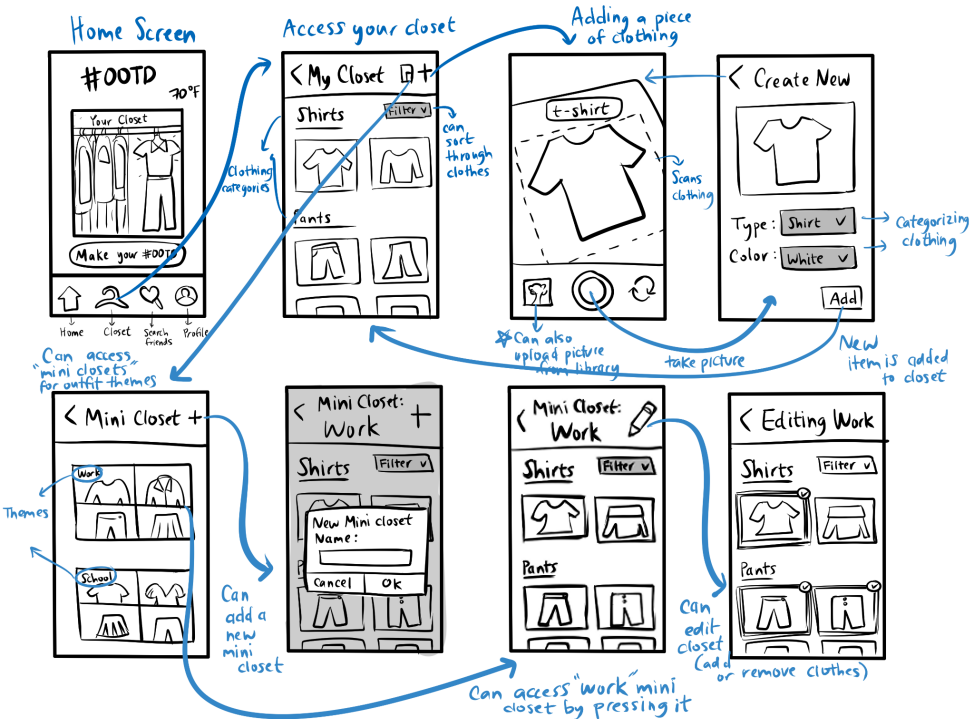
purpose of our solution. Upon choosing our solution, we decided to expand upon our chosen concept through sketching a low-fidelity prototype and 3 key task flows.

1. **Choosing an Outfit**



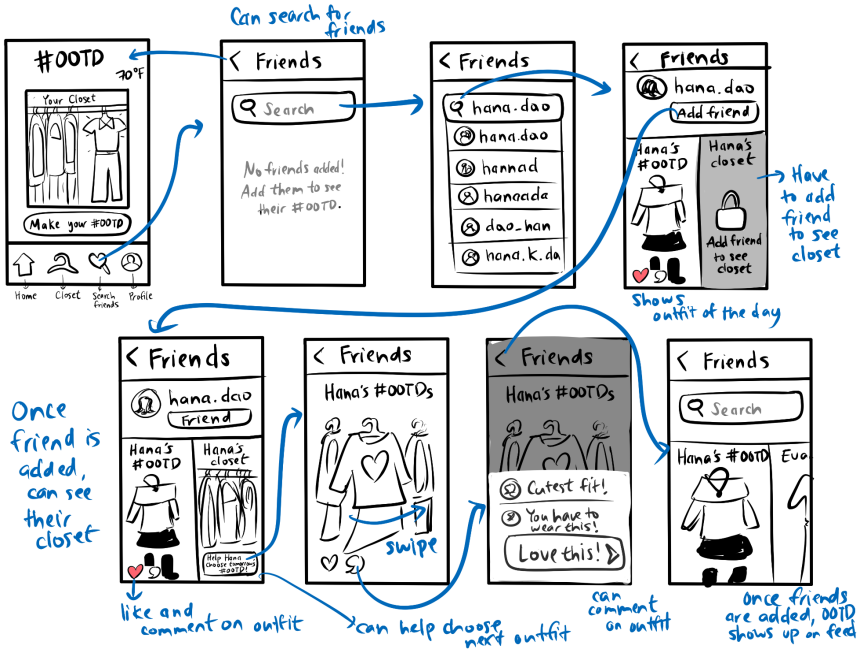
Choose an outfit based on AI suggestions or friends' input

2. **Digitizing Clothes/Adding to a Virtual Closet**



Manually add a piece of clothing to your closet, and create categories of clothes

3. Adding Friends



Add a friend to your friend list, and see their #OOTD or help them choose an outfit

Usability Testing

With these low-fi prototypes, we conducted usability testing to evaluate our prototype and get feedback. We interviewed a freelance graphic designer, a 2nd year PhD Stanford student, a student engagement coordinator at Stanford Arts, and a fashion-forward senior in high school. We aimed to find a diverse group of participants to get well-rounded feedback.

Our usability goals for this prototype were intuitiveness and effectiveness. We measured intuitiveness by directly asking participants how easy/intuitive features of the app felt on a scale of 1-10, and effectiveness by timing how long it took participants to complete the task at hand.

Overall, participants rated the intuitiveness of our interface fairly high; all participants gave it a score between 8-10. They rated our interface very intuitive, but also pointed out that the paper medium and lack of color made the app more difficult to perceive. Participants took around 3-4 minutes to complete all 3 tasks, and the profile creation took the longest, which was often over a minute. Key feedback on our interface included:

- Some participants were confused over the wording between “Create my outfit” and “I want to create my outfit for our outfit choosing task.
- There was some confusion and lack of clarity in what the navigation bar icons represented.
- Some participants were overwhelmed by the volume of the “Create your profile” initial onboarding.
- A lot of participants could not find the “add” button on the closet page, and they didn’t know which parts of that page they could interact with.

Hence, although our data generally indicates that our interface was fairly effective and intuitive, the occasional confusion with our UI icons and buttons suggest that some elements conveyed an ambiguous meaning. Although this round of testing couldn’t reveal how users would feel about using the app under a time limit and what live social interaction in the app would look like, we took the feedback we received from this usability testing and planned to implement them in our medium-fidelity prototype. Here are the major changes we wanted to implement:

- We wanted to change the wording under the outfit creation page to differentiate the two different modes of outfit choosing. More specifically, we wanted to change the first option to “Generate my #OOTD” to specify that it was a quicker and algorithmic process.
- We wanted to improve the clarity of the navigation bar icons, such as choosing a better home screen icon and changing the heart-search icon.

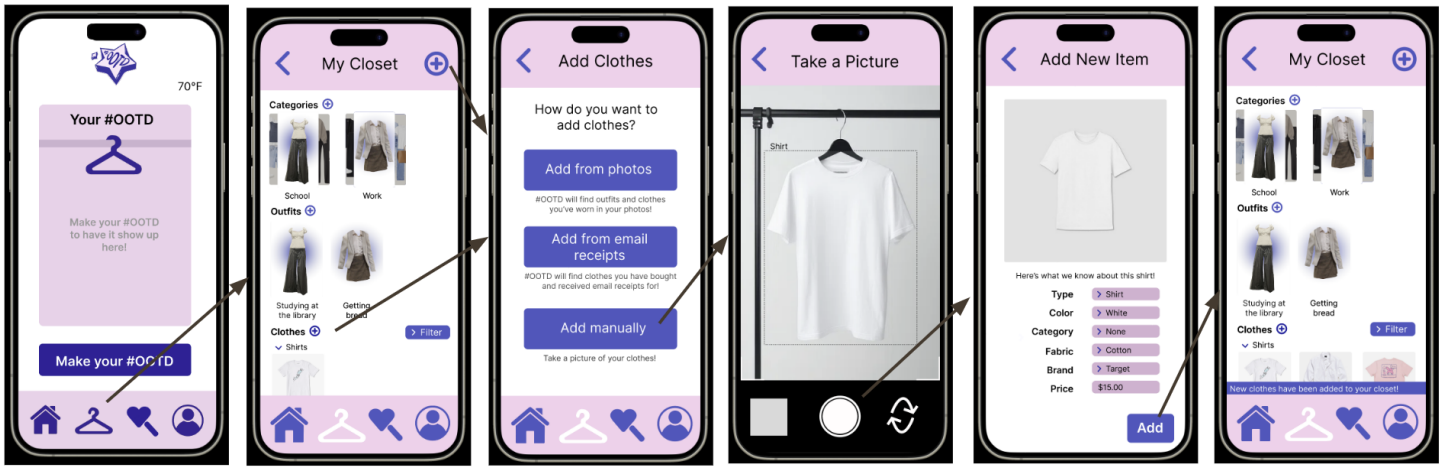
- We also wanted to improve the clarity of the add button on the closet page by adding a text label and making the button larger.

Medium-Fi Prototype

1. Choosing an Outfit

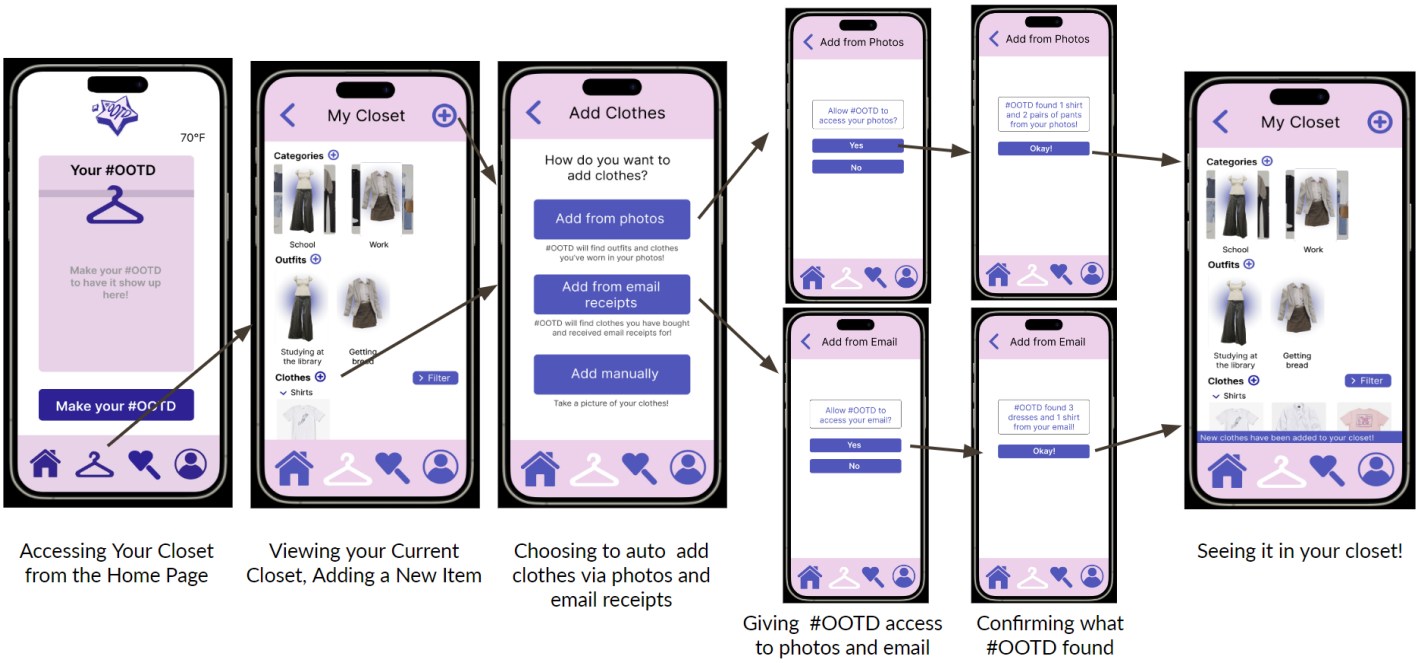
2. Adding Clothes to Virtual Closet

a. Manually Adding Clothes



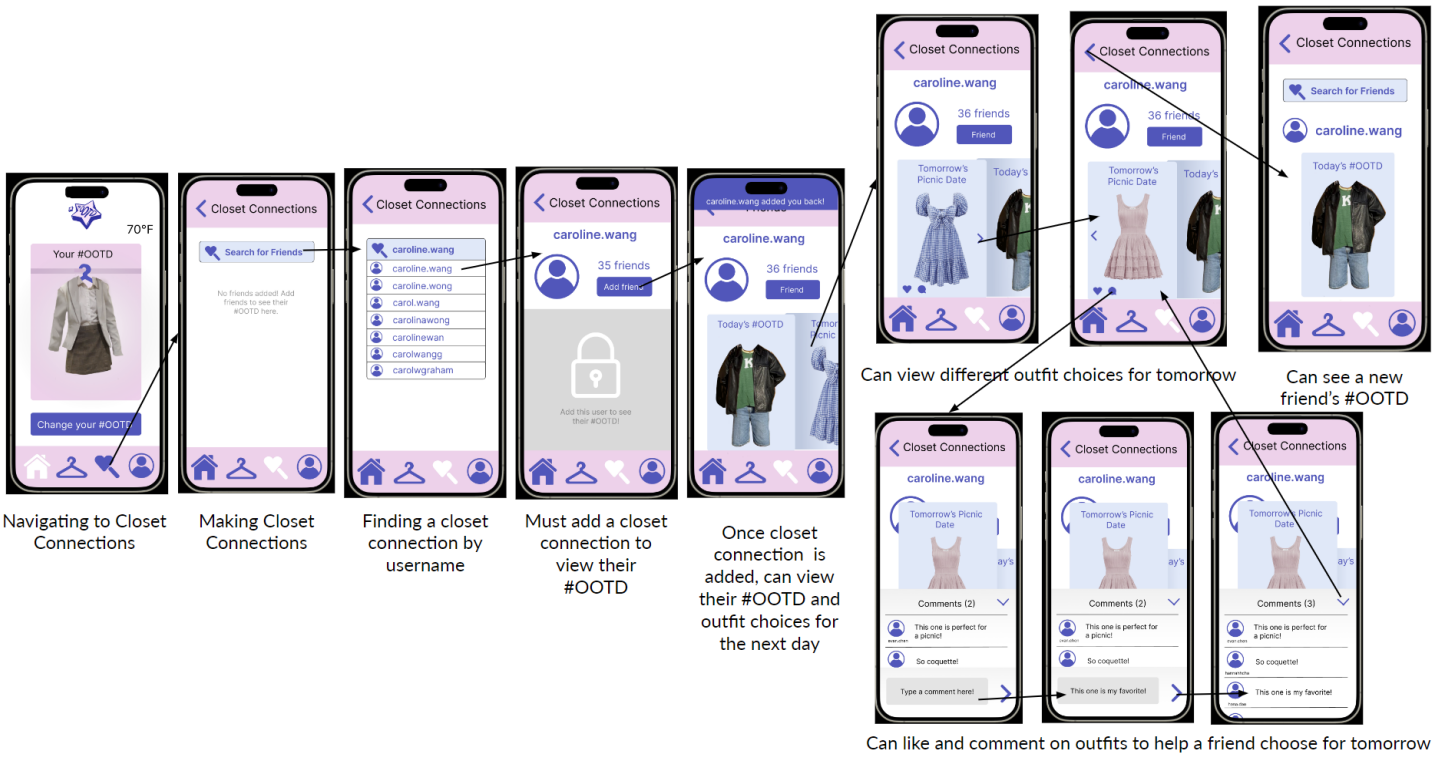
Accessing Your Closet from the Home Page | Viewing your Current Closet, Adding a New Item | Choosing to manually add clothes | Taking a Picture of Clothing Item | Auto-categorizing the Item | Seeing it in your closet!

b. Automatically Adding Clothes



Accessing Your Closet from the Home Page | Viewing your Current Closet, Adding a New Item | Choosing to auto add clothes via photos and email receipts | Giving #OOTD access to photos and email | Confirming what #OOTD found | Seeing it in your closet!

3. Adding Friends

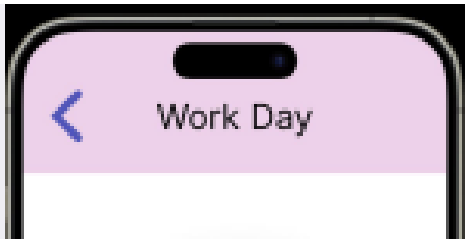


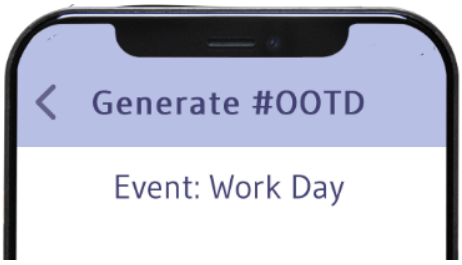
Upon creating our medium-fidelity prototype, another group in our CS 147 studio heuristically evaluated the prototype. After receiving their feedback, we decided to put our major focus into addressing the Severity 3 and 4 violations. We had a total of 90 violations, with 26 being Severity 3 and 11 being Severity 4. Due to our high number of violations, we decided to focus on only violations directly related to our three tasks; this brings our application to 29 severity 3-4 violations. We also chose not to implement violations that were due to errors in Figma, which is the platform we implemented our medium-fi prototype. Here are the violations by task flow and severity, as well as our fixes:

Task 1: Choosing an #OOTD

Severity 3:

- H5 Error Prevention: The header while either choosing from past outfits or choosing from AI generated outfits reads “Work Day”



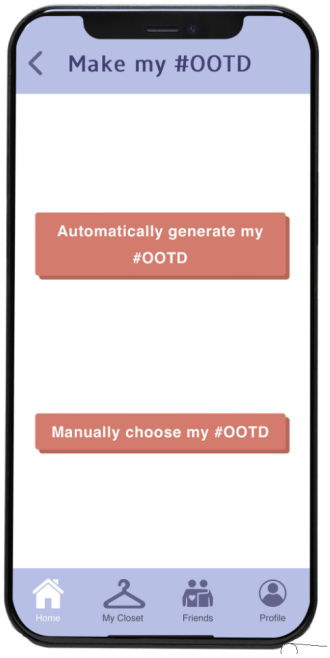


Old UI has "Work Day" as header **New UI has "Generate #OOTD" as header**

    - Fix: Changed header to "Generate #OOTD" or "Choose #OOTD" to indicate how users were choosing their outfit.
- H7: Flexibility & Efficiency of Use: Alert to confirm outfit is unnecessary.
    - Fix: We removed the extra confirmation screen.
- H4: Consistency & Standards: When you select a different outfit, the current one swaps places with it.
    - Fix: We added a profile "feed" where users can see their past outfits.

Severity 4:

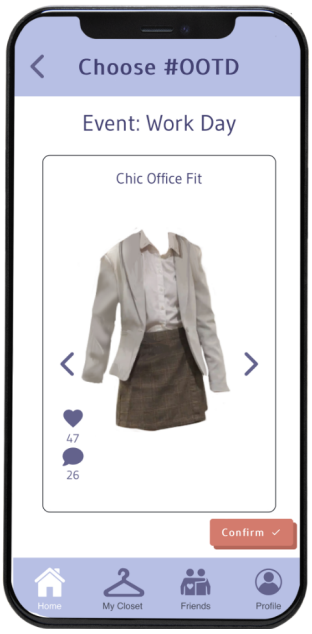
- H3 User Control and Freedom: In the AI generated tab, there's no option to modify the outfit it offers me.
    - Fix: Within the scope of our current task flows and goals, we decided that this addition would be a next step for the application rather than something urgent to be currently implemented.
- H5 Error Prevention: The two options after selecting "Make my #OOTD" are "Generate my #OOTD" and "I want to make my #OOTD." The header reads "Make your #OOTD"



Old UI **New UI**

- Fix: We further clarified the buttons by renaming them to “Automatically generate my #OOTD” and “Manually Choose my #OOTD”.

- H4 Consistency and Standards: When selecting an outfit that people can comment on or like, there’s no caption or title on it.



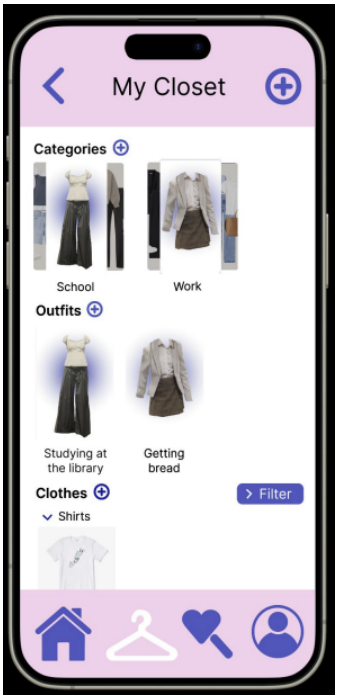
Added Title (e.g. “Chic Office Fit”) to outfits

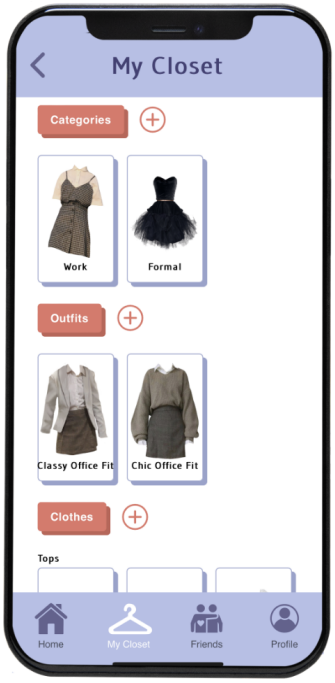
- Fix: We added titles to each outfit.

Task 2: Adding a Clothing Item to Virtual Closet

Severity 3:

- H4 Consistency and Standards: On the “My Closet” tab, there are three + buttons on the main screen--one for each of “categories” “outfits” and “clothes,” and one big plus button in the header.



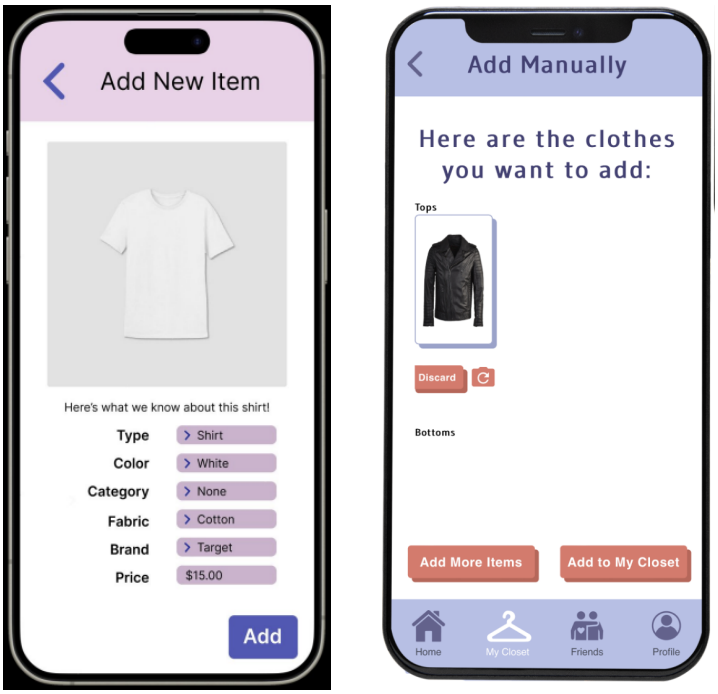


Got rid of extraneous plus button in the top right corner

- Fix: We added the plus buttons next to each title “categories”, “outfits”, and “clothes” to indicate which category users were adding to and got rid of the extra add button in the top right.

- H4 Consistency and Standards: “Filter” button next to clothes leads elsewhere.
  - Fix: This was a Figma wireframing error, which we resolved in our final prototype.

- H7 Flexibility & Efficiency of Use: To add clothes to your closet, you have to navigate through a screen after pressing the "plus" button before actually adding the clothes to choose how to add the clothes
    - Fix: We decided that having the extra screen was necessary for users to get a good sense of how each type of adding clothing functions.
- H11 Accessible Design: Many people, especially people with poor vision, will not be able to read the label, especially on a small mobile device.
    - Fix: We made the label larger.
- H11 Accessible Design: The buttons for editing the clothing type/color/category etc. are small.
    - Fix: We decided to get rid of these buttons altogether since we realize they weren't crucial to the user's experience.
- H3 User control and freedom: After taking a photo of an item, there's no obvious way to accept or reject the photo--it just takes me to the next screen and to retake the photo I have to navigate back to the camera.



Added a retake button after the photo of the item is taken

    - Fix: We added a button that allows users to retake a photo if necessary.
- H3: User Control & Freedom: After adding a piece of clothing to the closet, a notification at the bottom of the page is clickable and takes you the "Make your #OOTD" screen.
    - Fix: This was a Figma wireframing error that is not present in the final prototype.
- H9 Help users recognize, diagnose, and recover from errors: No error message or information given if the user takes a blurry photo or a photo that doesn't allow the app to identify the clothing item.
    - Fix: We decided this error was more of a next step consideration, especially since our app's manual adding of clothing is hard-coded and not functional.
- H3 User control and freedom: Unable to change the information inferred by the app on the clothing item uploaded (type, color, category, fabric, etc)
    - Fix: We got rid of this screen, so no fix was necessary.
- H2 Match between System and the Real World: The categorization of clothes is not intuitive—e.g., the outfit name 'getting bread' is ambiguous, and it is unclear why this was chosen as a label.
    - Fix: We made more descriptive labels to make it clear that it is an occasion users can add an outfit for.
- H5 Error Prevention: The system allows users to add the same item multiple times without any warning.
    - Fix: We decided this error wasn't in the current scope of our implementation.

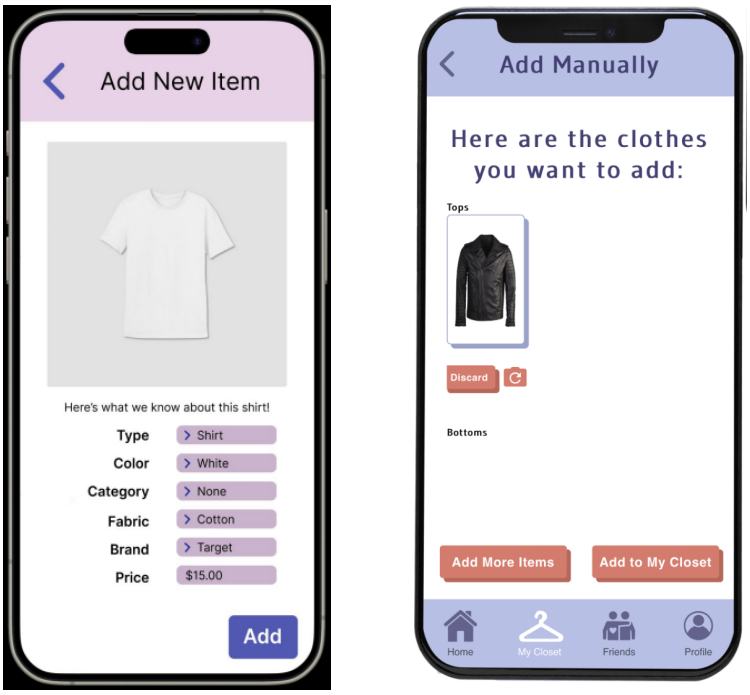
Severity 4:

- H1 Visibility of System Status: When adding clothes from photos or email, I'm told what items have been found but I can't see them.

Added pictures of clothing items to add

- Fix: We added photos of the clothing items found so users can see what was found.

- H9 Help users with errors: When adding clothes from photos or email, I can't edit what is added.
    - Fix: We allow users to discard items of clothing if they don't want to add it to their closet.
- H7 Flexibility & Efficiency of Use: Can only take one photo at a time when adding clothes to the closet. Must navigate through all screens for every photo of clothes I want to take.



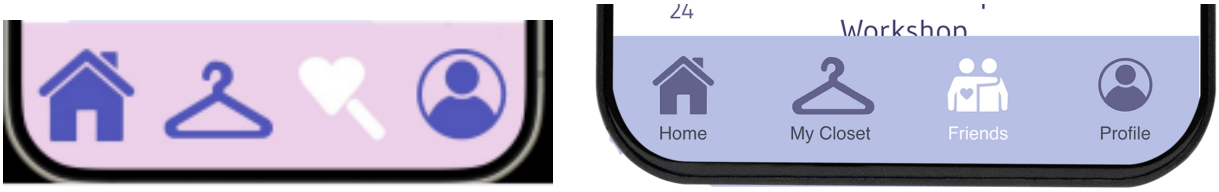
Option to "Add More Items" before adding to closet

- Fix: We enable users to take multiple photos at a time by adding a button to do so that navigates back to the camera.

Task 3: Adding a Friend

Severity 3:

- H6 Recognition not Recall: Icon for "friends" screen is a heart-shaped magnifying glass.



Added caption and clearer friends icon

- Fix: We changed the icon to an icon showing two friends to clarify that it's for the "friends" screen.

- H4: Consistency & Standards: After a person adds you back as a friend, the "add friend" button changes to say "Friend".
    - Fix: We made the button change to “Remove Friend” to indicate that it’s a clickable button.
- H6: Recognition not Recall: No indication of a friend's style when looking at their profile.

Added style description

    - Fix: We added a “bio” to a friend’s profile that lists their major styles.
- H8: Aesthetic & Minimalist Design: Outfit card with option to comment is not full screen and is off centered.
    - Fix: We got rid of the outfit cards and made a full-screen, swipeable grid.
- H4 Consistency and Standards: Unclear whether the want with the heart automatically searches for friends or whether the user needs to type a name in a text box.
    - Fix: This was a limitation due to Figma; in the final prototype, users can type to search for a friend.

Severity 4:

- H7: Flexibility & Efficiency of Use: The only way I can view a friend's clothes is to go to the friends list and then go to their profile.
    - Fix: We added a feed to view friends' #OOTDs.
- H3: User Control & Freedom: I can't find a way to actually share my outfits.
    - Fix: In the initial onboarding of the app, we will indicate to users that their #OOTD will be automatically shared with friends.
- H1 Visibility of system status: When searching for friends to add to share clothes with, clicking the search for friends button pulls down a list of friends. However, there is no explanation as to how those friends were selected, and if the user is looking for a friend that is not showing up, there is no way for the user to search for them or receive an explanation as to why their specific friend isn't showing up.
    - Fix: We added a "Friends list" where users can view their whole list of friends.

We also decided to make general changes to the UI of the app, including changing the color scheme and changing the color of boxes from blue to white to help with visual accessibility.

Old Home:

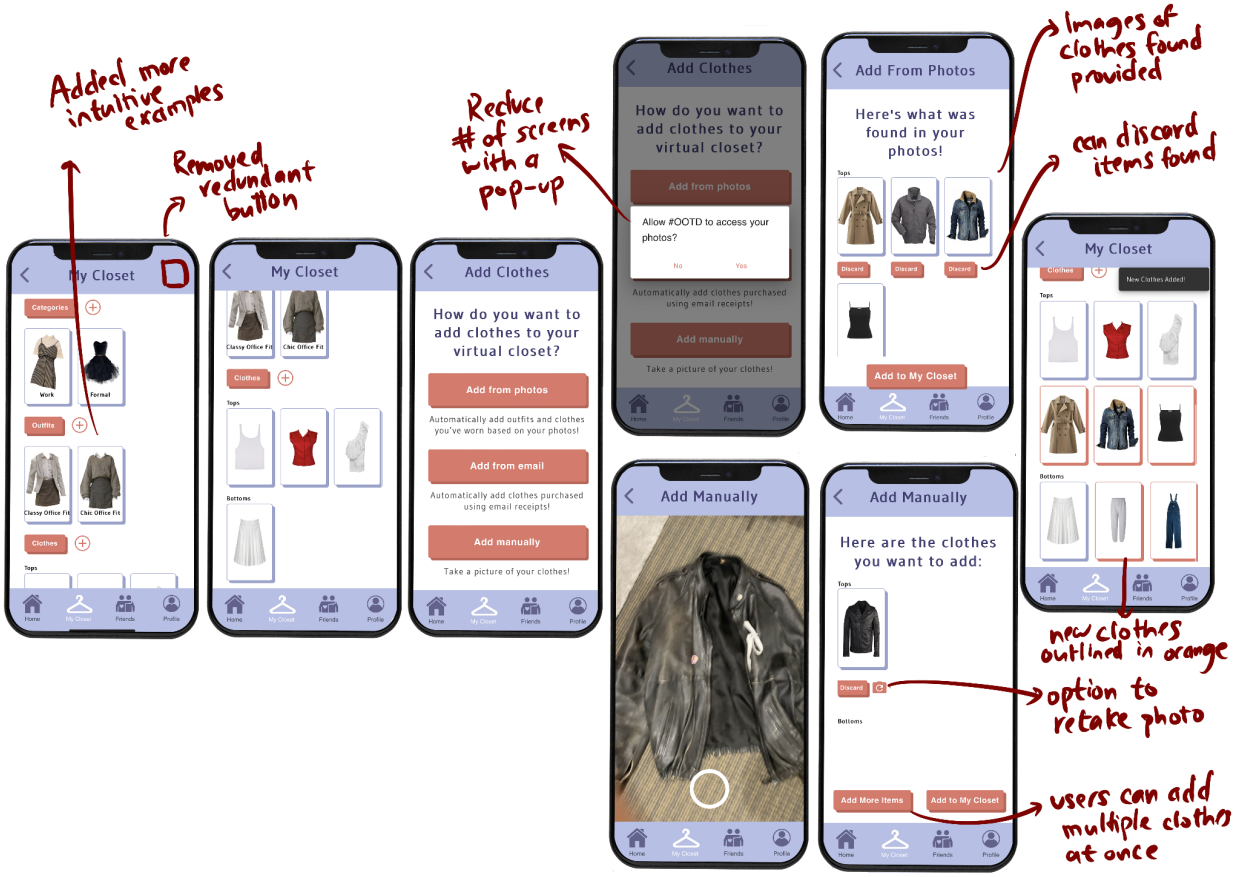
New Home:

High-Fi Prototype

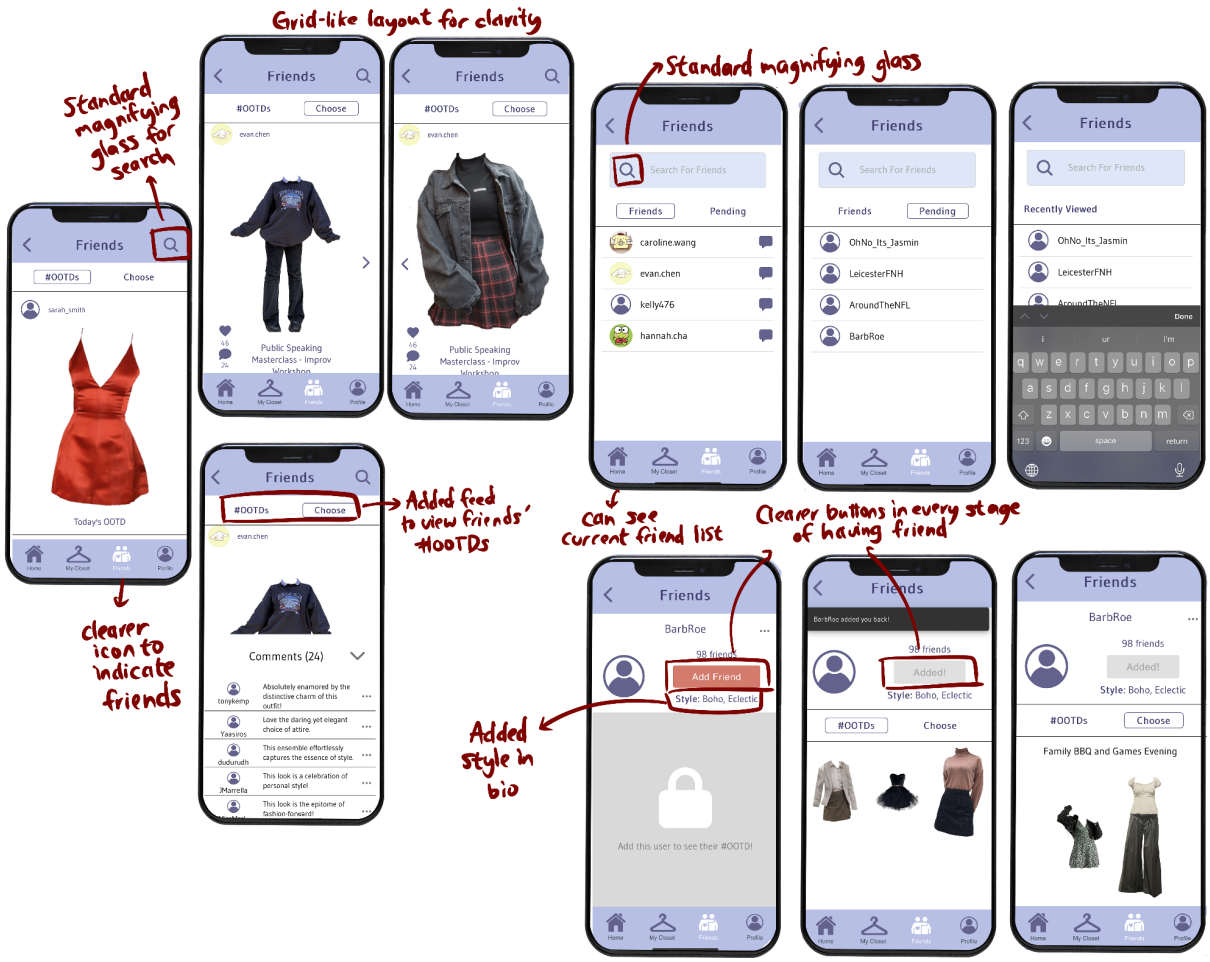
We built our high-fidelity prototype by incorporating the design changes that we have indicated above. The changes and annotations to address the heuristics above are highlighted in red.

1. Choosing an Outfit

2. Adding to Virtual Closet



3. Adding a Friend


Grid-like layout for clarity
Standard magnifying glass for search
Standard magnifying glass
Friends
#OOTDs
Choose
Today's OOTD
Public Speaking Masterclass - Improv Workshop
Search For Friends
Friends
Pending
caroline.wang
evan.chen
kelly476
hannah.cha
OhNo_Its_Jasmin
LeicesterFNH
AroundTheNFL
BarbRoe
Recently Viewed
Added feed to view friends' #OOTDs
Comments (24)
clearer icon to indicate friends
can see current friend list
Clearer buttons in every stage of having friend
Added style in bio
BarbRoe
98 friends
Add Friend
Added!
Style: Boho, Eclectic
Add this user to see their #OOTD!
Family BBQ and Games Evening

Values in Design

In our solution, we focused on centering a focus on **privacy, sustainability,** and **inclusion**. While there is a target demographic for people who are more interested in fashion, our app hopes to include users of all genders, ages, body types, and backgrounds. We believe that fashion and outfit curation should be an experience, one that can help the person embrace their unique individuality. Additionally, we were excited to incorporate the value of community by making outfit curation a more social experience where you can connect and discuss outfit plans with friends.

Our app emphasizes a community-building and sustainable approach to fashion in helping users maximize outfit combinations and feel reinspired with their existing closet. To address privacy concerns, we've emphasized the ability for user control and freedom with data sharing, allowing the user to opt-in or opt-out of providing access to their email receipts or photo roll when using the app. Users who choose not to make outfits using those mentioned are still included in our app with an option to create outfits manually by taking pictures and uploading their own image selections.

We identified that there could be value tensions with privacy because our app relies on data from the user about their clothing preferences to create outfit recommendations or their contacts to suggest friends to connect with. In addressing these tensions, we created features supporting user control and autonomy by asking the user for their consent to sharing this information as part of our best practices with privacy. Our app is also built so that closet profiles remain private as a default and the user's closet is not visible until they have added you back as a friend.

Final Prototype Implementation

Tools Used

Our final prototype was built using React with Material UI and hosted on Firebase. We chose React (as opposed to React Native) and Apple WebClip as the foundation for our app for its rapid setup time and ease of distribution among team members (users only need to refresh the app to receive new changes). Because our application was a React web app, there was a huge selection of libraries for UI and logic which helped speed up our development process. For example, Material UI provided a majority of our application's components while react-icons provided many icons for us to use. The downside of this setup is that it would not be possible to send the user notification or run processes while the user is not in the app, but this was not an obstacle for our purposes.

Firebase was chosen for our hosting service for its free hosting tier as well as custom domains which allowed us to secure https://hashtag-outfit-of-the-day.web.app/ as our domain. It also supported quick and easy deployments of our app. A potential downside would be the need to pay for this service if the number of users increased in the future.

Wizard of Oz Techniques

We utilized 'wizard-of-oz' techniques with elements of our app that were hard-coded such as the automatic generation and manual creation of outfits. These interactions would be considered 'wizard-of-oz' processes since they have static results. All methods to add clothes to the closet including scanning the user's photo library, scanning the user's email, and manual image capturing were synthetic interactions since they returned a hard-coded result.

Most social interactions in our app were 'wizard-of-oz' processes given the difficulty of implementing a functioning social network under time constraints. For data such as likes, comments, usernames, friends, styles, events, and outfits associated with users, data was

randomly chosen from a larger pool of data and locally saved on the user's device. This gave the illusion of a dynamic and functioning social network on our application.

Hard-coded Techniques

All outfits and clothing were hard-coded, including the automatically generated outfits, outfits available for manual selection, and clothing in the closet. We also hard-coded the clothes that are found through photos and email receipts, as well as the clothes that are added manually via the camera. In a final fully functioning version, images of clothing would be sourced from user and retailer photos while outfits would be manually created or generated based on a user's previous outfit history, their fashion style, the weather, the occasion, etc.

The user's location on the home page is hardcoded to Palo Alto, California, but the current temperature is fully functional. Profile pictures for the user and the user's friends are hard-coded.

Reflection & Next Steps

We were excited to see the many novel ways that the concepts of psychology of laziness can be used towards big social impact with little activation energy required as seen in the range of ideas for the apps students created within our section. In the process of developing #OOTD, we gained much insight into the whole process of app creation, starting from scratch with simply a shared interest in exploring the idea of unintentional good. Each of us learned a lot from how to do critical heuristic evaluations of our app and how many repeated iterations of various types of prototypes was key to finding errors early on as well as helping our project stay grounded in the user's needs.

With more time, we'd like to implement a feature where users can see outfits they've worn the most and also ones that have been worn the least or haven't worn in a long time. This information could be especially helpful for users who need help deciding which clothes that they can rewear or want to figure out what they should give away from their closet to thrift/second-hand stores. We'd also like to expand on our current privacy settings to allow users to choose to leave their profile and comment section to public or visible to followers & friends only. Currently our app shows the temperature for your location but a future version of the app would provide detailed information about your preferences in clothing with seasonal changes in the weather. In this future version, we would also incorporate features for it to sync with the person's calendar so you can receive specific recommendations for outfits based on what you have planned for the day. For the days where you have multiple activities scheduled and require different outfits, this information in your calendar would also be integrated in the outfit recommendations so you could receive outfit recommendations for each activity and log more than one outfit a day in your closet.