A9: High-Fi Prototype

WAYN: together, even when you're not

OUR TEAM

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You're thought of, wherever you are.

Problem

Young adults (24-30) need a way to maintain fulfilling social connections amidst **geographical distance** and **busy, misaligned schedules**.

Solution

WAYN

A location-based gift-giving app: friends see each others' locations and send gifts (gift cards, audio, playlists, notes) that unlock when the recipient is in a specific place.

Presentation Outline

1 HE Debrief

2 UI Revisions

3 High-Fi Update

4 High-Fi Demo

Heuristic Evaluation Results

Usability Goals of Current Stage

[New]

Learnability
Can users come to learn WAYN's unique concepts through usage over time?

Interpretability
Can users develop the correct mental model of our gift-sending feature?
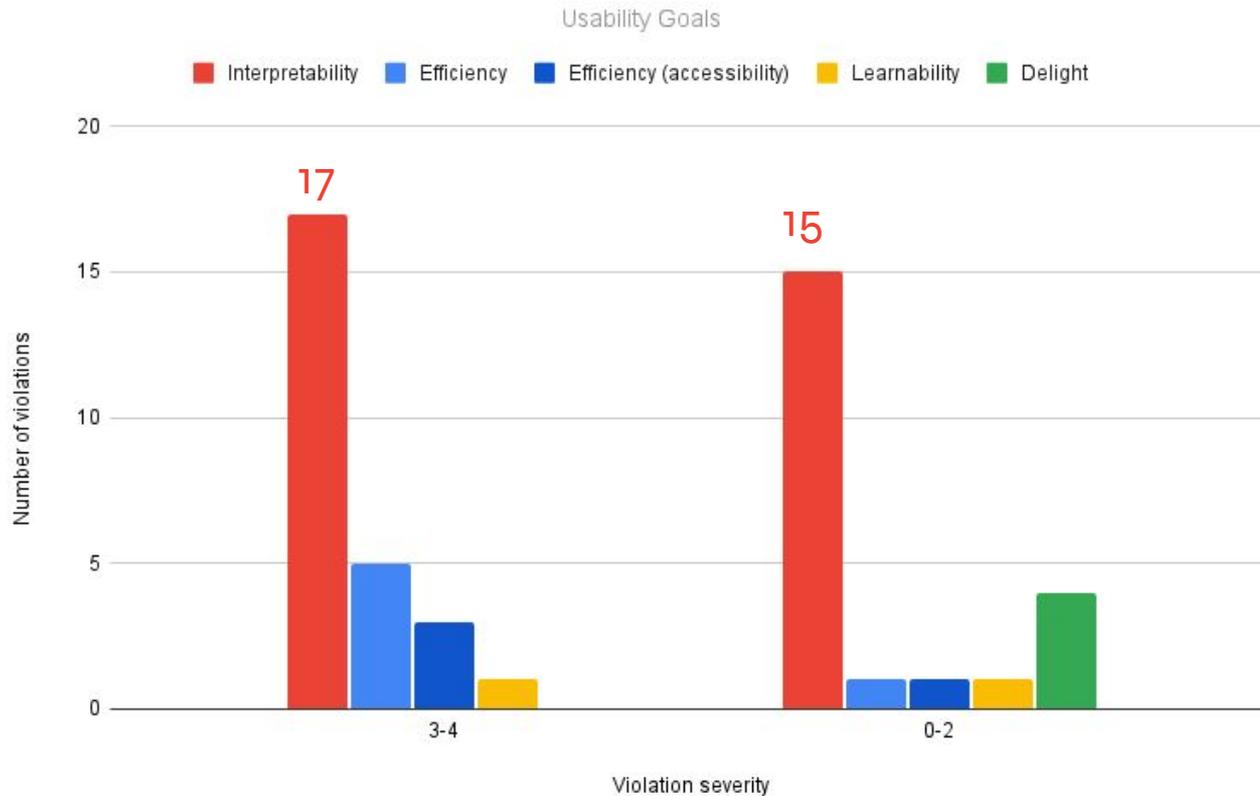
[New]

Delight
Do users enjoy using WAYN?

Efficiency
Can all users quickly and effortlessly interact with WAYN?

Nice to have →

Need to have

What violations were there?

Violation counts:
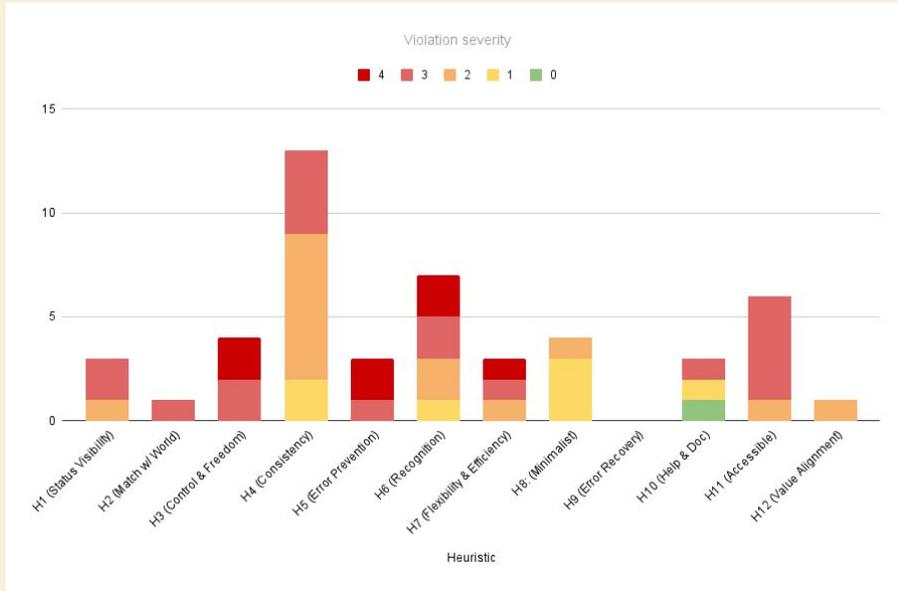
Interpretability: 32
(H1, H4, H6)

Efficiency: 10
(H3, H11)

Learnability: 2
(H7, H10)
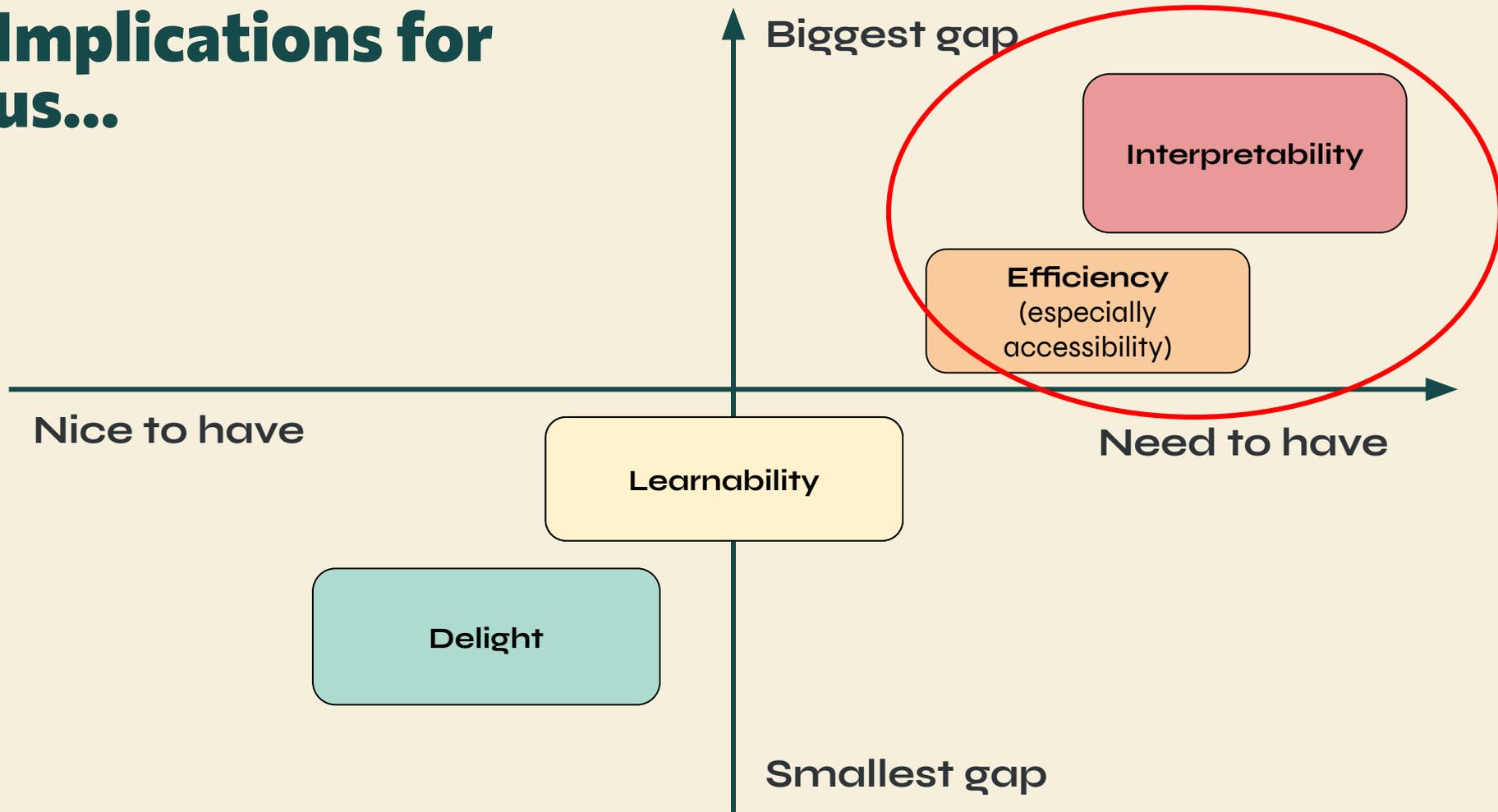
Delight: 4
(H8, H12)

Total: 48

Violation by Heuristics

Violation severity

Majority of level 3 & 4 violations stem from:

- H1: status visibility
- H3: control & freedom
- H4: consistency
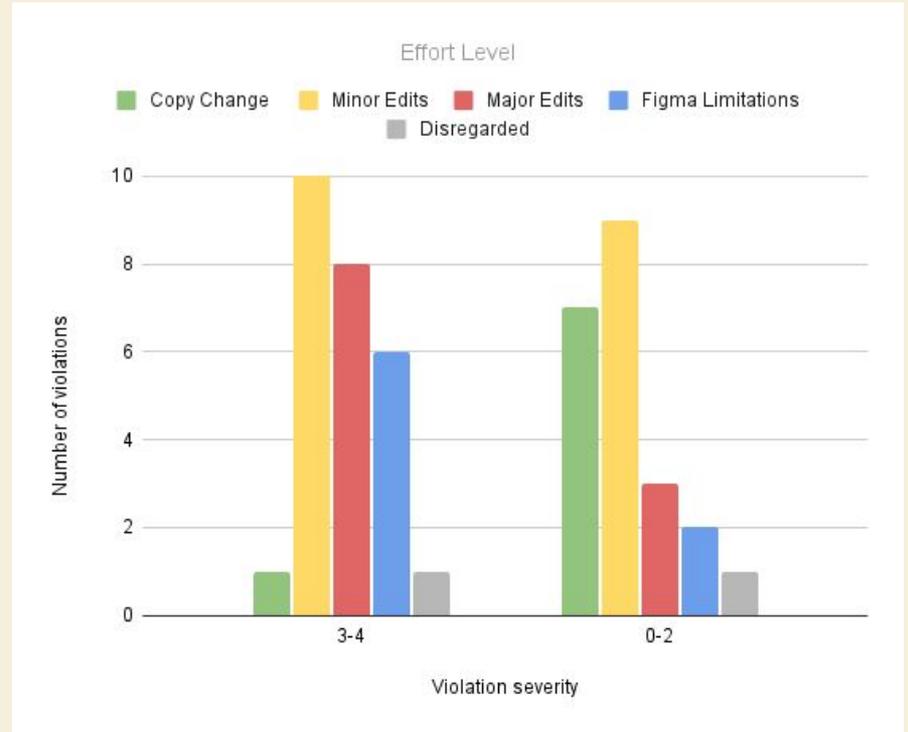- H6: recognition over recall
- H11: accessibility

Implications for us...

Prioritization Criteria

1. **Severity** (4, 3) > (2, 1, 0)

2. **Usability goal** (interpretability & efficiency > delight & learnability)

3. **Effort** (copy change > minor > major)

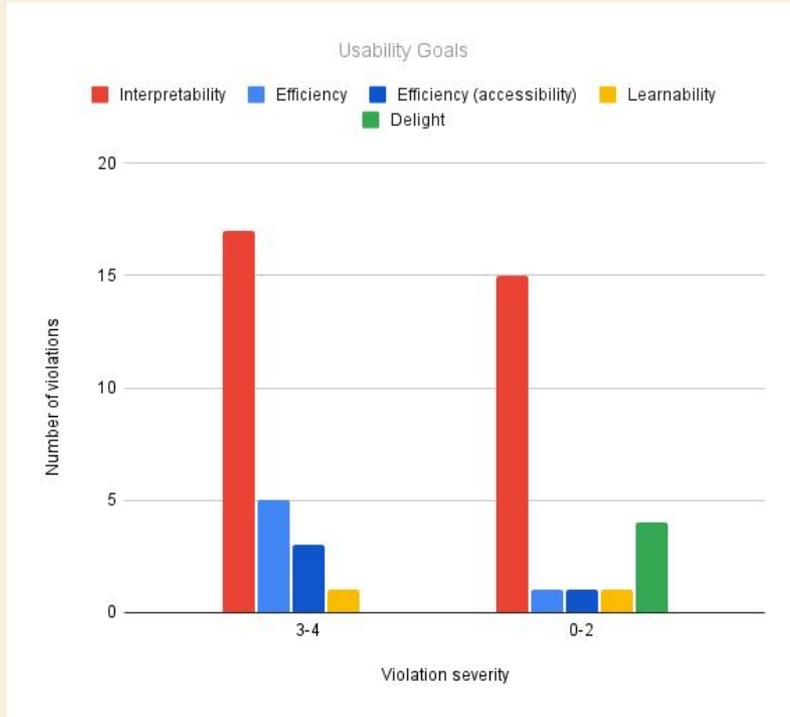We prioritize our revisions accordingly.

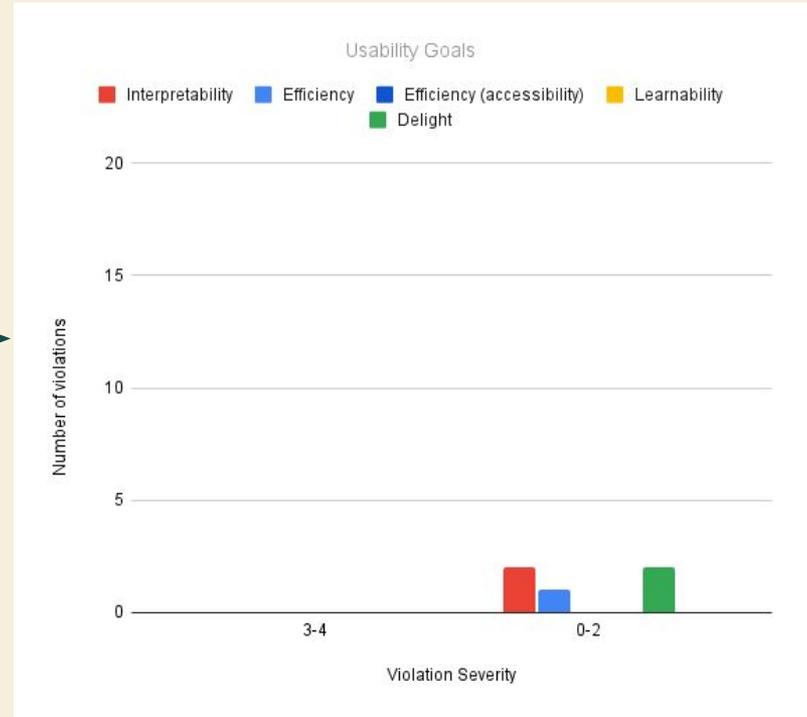We only go over the most significant revisions in the presentation; see slides for complete list

UI Revisions

Revision Results

Before Revisions

After Revisions

Revision Results

Severity	Addressed	Unaddressed	Figma Errors/Limitations	Not Incorporated
3-4	16	0	5	5
0-2	13	5	2	2
Total	29	5	7	7

Deprioritized due to high effort and low impact

Violations purely caused by Figma wiring errors and functionality limitations

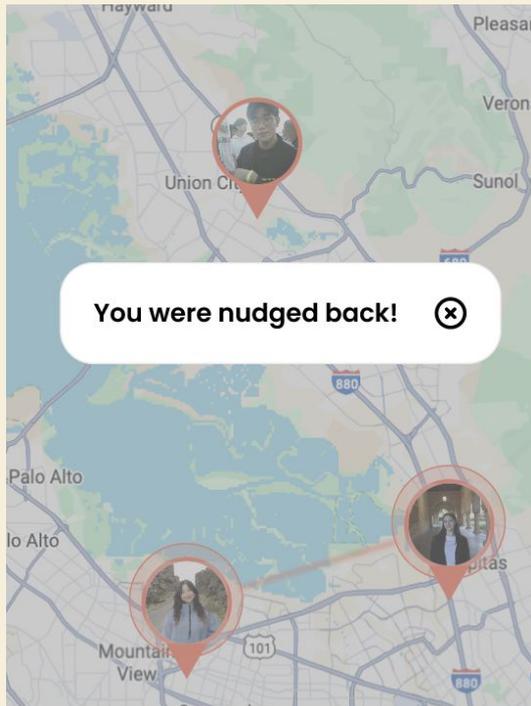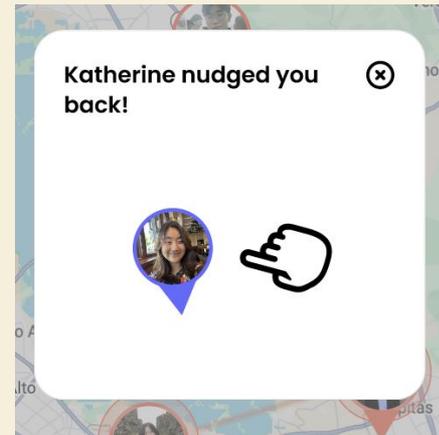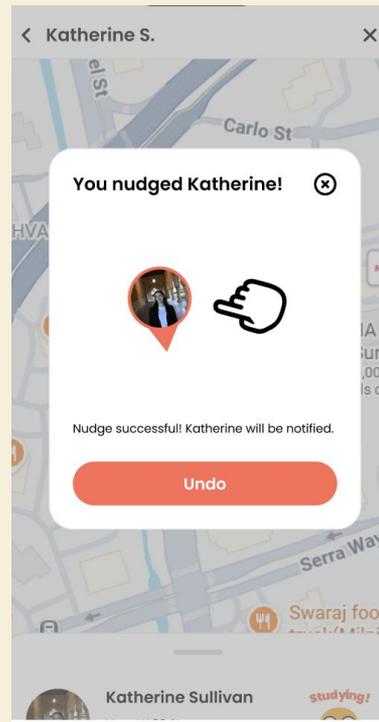See rationale for not addressing these violations

Simple Task Revisions
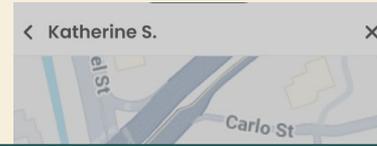
Violation 6: nudge back notification immediately shows up after sending nudge, unsure what app state is before user is nudged back.

Before

After

Violation 6: nudge back notification immediately shows up after sending nudge, unsure what app state is before user is nudged back.

Before

After

Rationale: original design obscures app state after sending a nudge. Now, WAYN explicitly surfaces success message and routes the user to resume using the app normally. When nudged back, WAYN surfaces a separate popup message indicating who nudged user back (recognition over recall).

Progress towards usability goals: improves *interpretability* by clearly communicating app state after nudge; this in turn enhances *learnability* by making the nudge flow more intuitive.
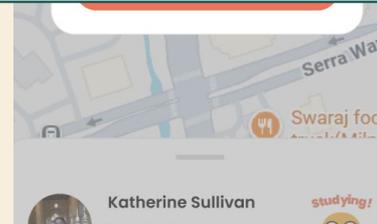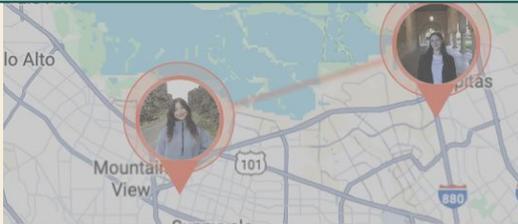
Violation 10: user cannot undo a nudge
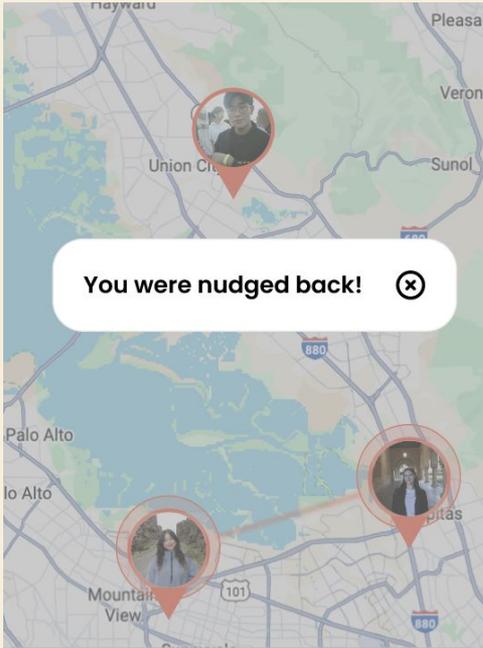
Before

No way for user to undo nudge

After
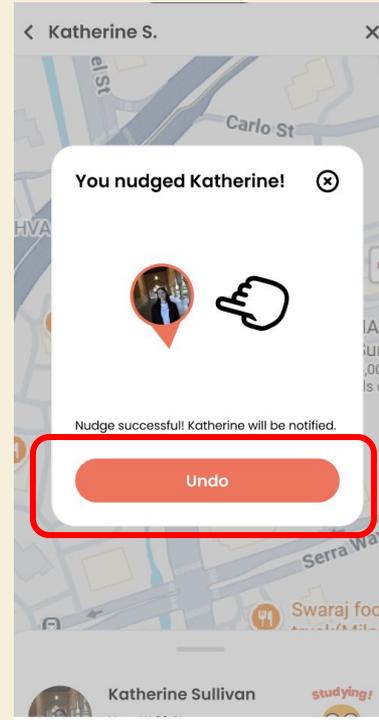
User has the option to undo the nudge

Violation 10: user cannot undo a nudge

Before

No way
for user

After
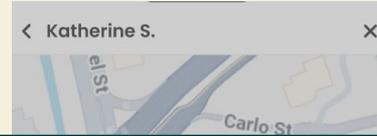
User has the
option to

Rationale: not being able to undo a nudge limits user freedom and error correction; new change gives user an opportunity to recover from an unintentional action. Even though this introduces more tracking on the backend for us, we believe it's a necessary change to improve user freedom and error recovery.

Progress towards usability goals: improves *efficiency* by enabling error correction, which in turn makes the app more *delightful*.

Moderate Task Revisions

Violation 28: address and recipient's name is not surfaced; requires sender to recall these information

Before

After

Violation 28: address and recipient's name is not surfaced; requires sender to recall these information

Before

After

Create a Gift

Collaborate

Create a Gift

Gift to Katherine

Collaborate

Rationale: Information on the selected location and friend is critical for personalized, location-centered gifts. Therefore, we included the recipients name as the header of the gift selection page and the location as the subheader, with a button to change the location without restarting the flow. This change would have drastic improvement in usability, while just requiring a minor change to the UI.

Progress towards usability goals: improves *interpretability* by reminding user who and where they are sending gift to, improves *efficiency* by making it convenient to change location (i.e. reducing the number of clicks a user would need to make)

Playlist

Send a playlist for their vibe — mood, moment, or place.

Choose

Gift Card

Gift them a favorite place — or somewhere new.

Choose
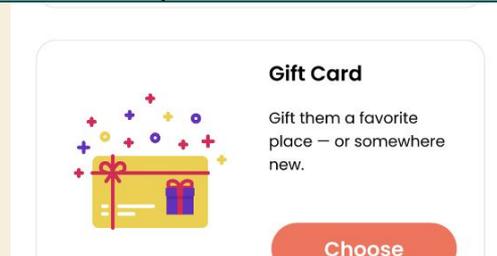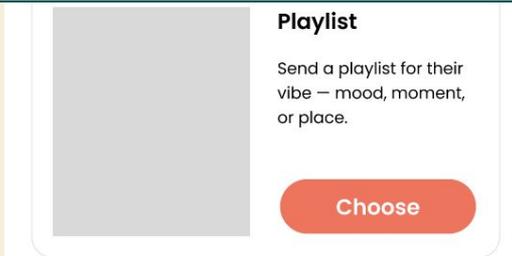
Violation 7: gift card vendors' store offerings not explicitly explained

Before

Gift Card for Where?

🔍 Search text...

Recommended

Starbucks
Your Selected Destination
📍 Visited 12 times this month

HeyTea
Katherine's a frequent visitor
📍 Visited 10 times this month

Joe & The Juice
Similar to Katherine's favorites
📍 Popular among users

After

Select Merchant

🔍 Search text...

Recommended

Starbucks
Your Selected Destination
📍 Visited 12 times this month

Location Name
Katherine's a frequent visitor
📍 Visited 10 times this month

Location Name
Similar to Katherine's favorites
📍 Popular among users

Added icon indicating type of merchant (e.g. food & beverage, clothing, jewelry, etc)

Violation 7: gift card vendors' store offerings not explicitly explained

Before

After

Gift Card for Where?

Select Merchant

Rationale: we needed to balance the tradeoff between providing helpful information about merchants and not overwhelming the page with too much information (since the multimodal gift selection options already brings significant mental load). We chose to surface merchant information via iconography system that succinctly communicates the *kind* of items a merchant sells, which also maps nicely to users' existing experience navigating mall maps / street signs using icons.

Progress towards usability goals: improves *interpretability* by providing info about recommended merchants a user may be unfamiliar with while preserving *efficiency* by not overwhelming the screen with loads of information.

⦿ Visited 10 times this month

⦿ Visited 10 times this month

Joe & The Juice

Similar to Katherine's favorites

⦿ Popular among users

Location Name

Similar to Katherine's favorites

⦿ Popular among users

Violation 23: inconsistent wording on friend's favorite spots page

Before

After

Inconsistency in wording

Wording is now uniform

Violation 23: inconsistent wording on friend's favorite spots page

Before

Katherine Sullivan
Near W 32 St
Since 4:52 PM

studying!

📍 0.4 mi from Katherine

Milpitas Library
160 N Main St
📍 0.6 mi from friend

After

Katherine Sullivan
Near W 32 St
Since 4:52 PM

studying!

📍 0.4 mi from Katherine

Location Name
160 N Main St
📍 0.6 mi from Katherine
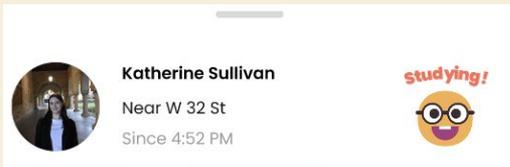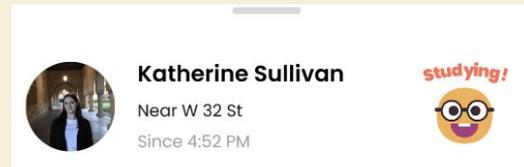
Rationale: this inconsistency confuses users; it also only requires a copy fix.

Progress towards usability goals: improves *interpretability* by clarifying what the distance information for each location refers to (i.e. distance from the selected friend).
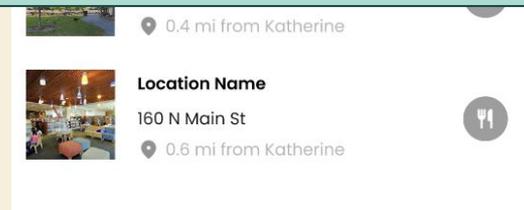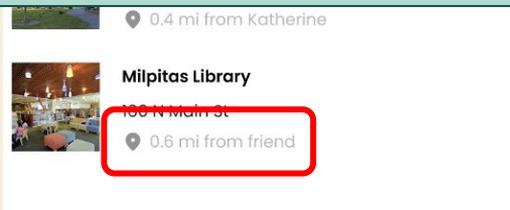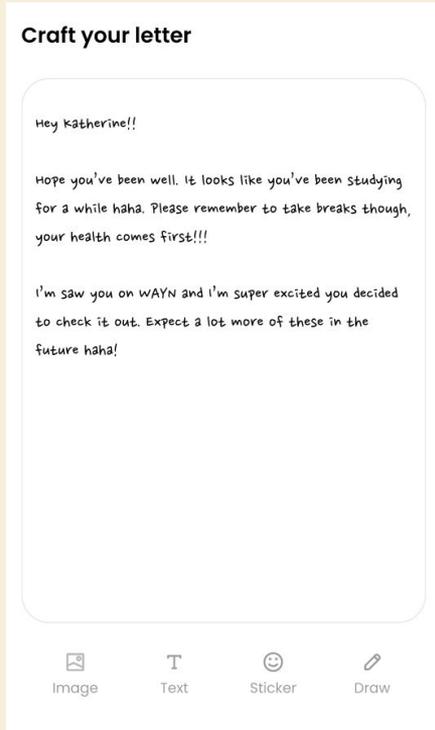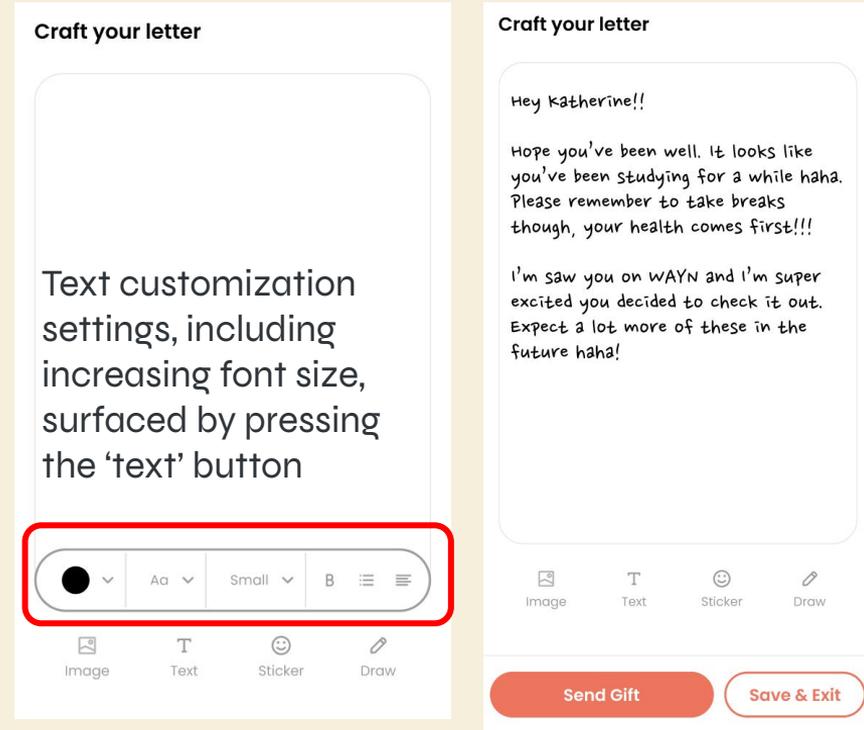
Violation 49: small font size makes message hard to read when crafting a letter

Before

Craft your letter

Hey Katherine!!

Hope you've been well. It looks like you've been studying for a while haha. Please remember to take breaks though, your health comes first!!!

I'm saw you on WAYN and I'm super excited you decided to check it out. Expect a lot more of these in the future haha!

Image   Text   Sticker   Draw

After

Craft your letter

Text customization settings, including increasing font size, surfaced by pressing the 'text' button

Aa   Small   B

Image   Text   Sticker   Draw

Craft your letter

Hey Katherine!!

Hope you've been well. It looks like you've been studying for a while haha. Please remember to take breaks though, your health comes first!!!

I'm saw you on WAYN and I'm super excited you decided to check it out. Expect a lot more of these in the future haha!

Image   Text   Sticker   Draw

Send Gift   Save & Exit

Violation 49: small font size makes message hard to read when crafting a letter

Before

After

Rationale: Letters should be personalizable but also accessible. Therefore, we added a text customization bar that allows font size and styling changes. Text styles and font sizes are limited to a few pre-set options that are distinct yet readable to allow customization while sacrificing accessibility. Even though this change requires implementing new functionalities and UI changes, we deemed it necessary.

Progress towards usability goals: improves *efficiency* by making our app more usable for users of all capability level.

Violation 8: there is no emergency exit out of a gift creation flow, must press back button multiple times to cancel

Before

< Create a Gift

Collaborate 👥

Gift Card
Gift them a favorite place — or somewhere new.

Choose

Playlist
Send a playlist for their vibe — mood, moment, or place.

Choose

< Message

Craft your letter

Image   Text   Sticker   Draw

Finish

After

< Create a Gift   ✕

Gift to Katherine   Collaborate 👥

Unlocks near **Starbucks**

3628 Maple Ave   **Change**

Letter
Send a personalized, thoughtful message.

Choose

Gift Card
Gift them a favorite place — or somewhere new.

Choose

Added emergency exit button

< Message   ✕
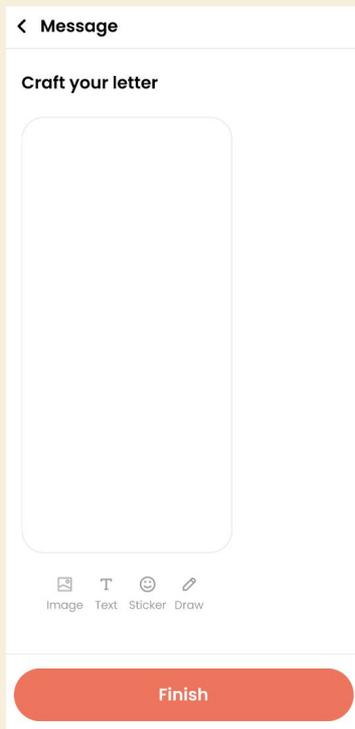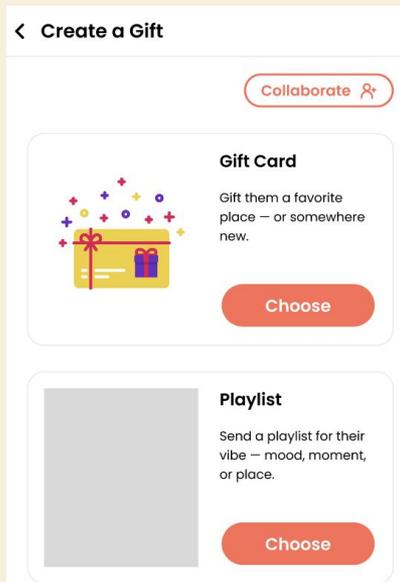
Craft your letter

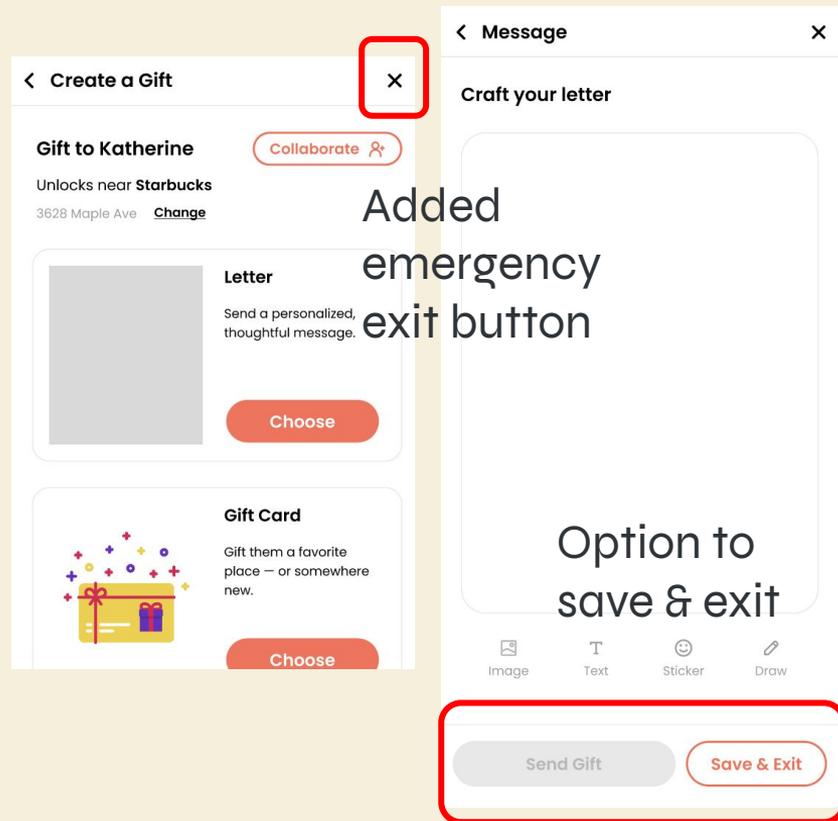Option to save & exit

Image   Text   Sticker   Draw

Send Gift   Save & Exit

Violation 8: there is emergency exit out of a gift creation flow, must press back button multiple times to cancel

Before

After

Message

Craft your letter

< Create a Gift

< Create a Gift   ✕

Message   ✕

Craft your letter

Choose

Rationale: Because the gift sending flow is lengthy, we felt having an easy exit back to the map screen was crucial. We added a "Save and Exit" button to the bottom bar as well as an "x" button at the top to close without saving. Saved gift drafts now appear in a drafts page that can be accessed through a button on the map.

Progress towards usability goals: improves *efficiency* by making it easier to exit a gift flow; also gives user the option to preserve prior gifts they want to return to, instead of forcing them to always create and send a gift from start to finish
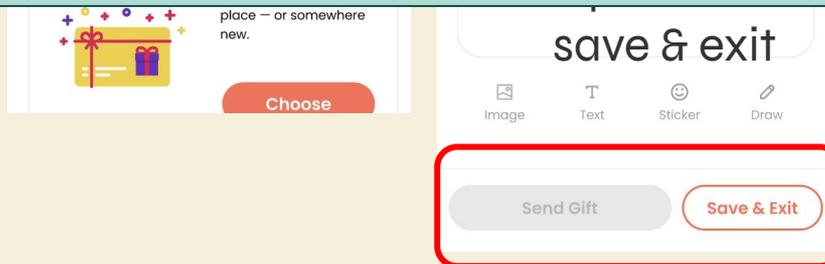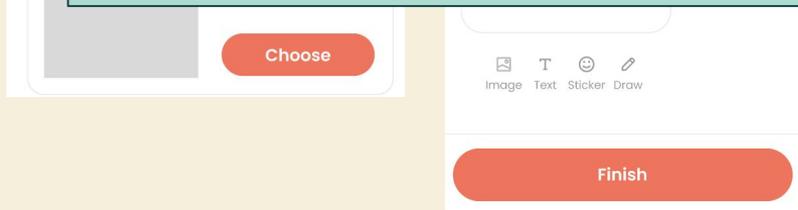
place — or somewhere new.

Choose

save & exit

Image   Text   Sticker   Draw

Finish

Image   Text   Sticker   Draw

Send Gift   Save & Exit

Violation 29: sent-gift icon on map has no indicator who receiver is
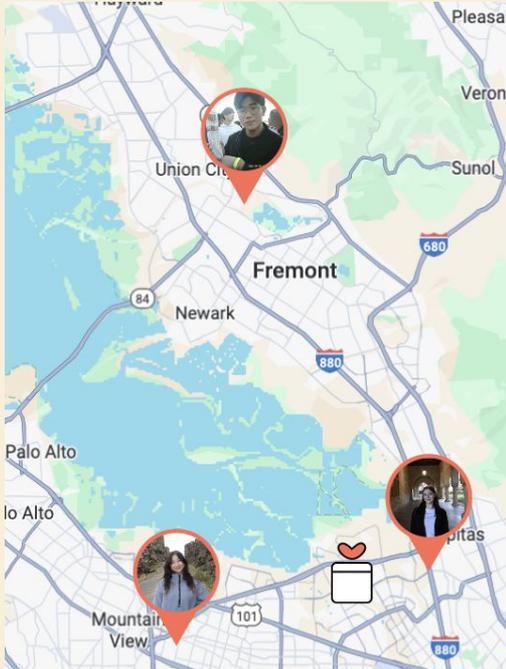
Before

After

Gift sent to Katherine has no indicator on map; requires user to recall who they sent that gift to.

Gift icon has profile photo of recipient

Violation 29: sent-gift icon on map has no indicator who receiver is

Before
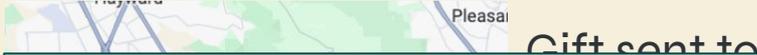
After

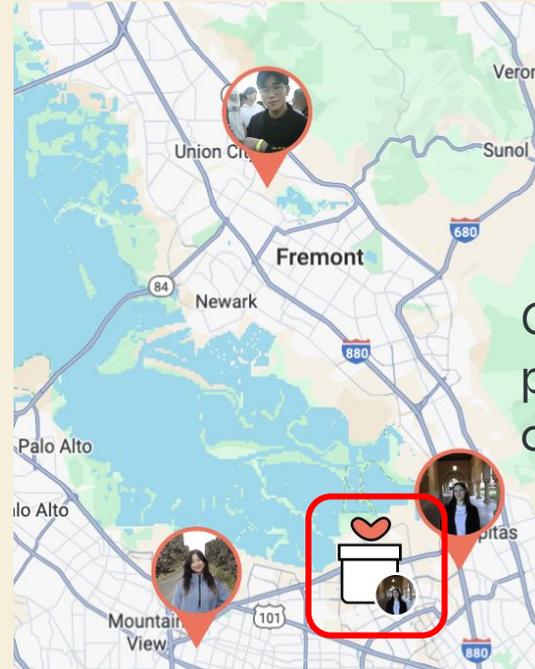**Rationale:** We want to balance between allowing users to keep track of who they've sent gifts to with minimalist, efficient design. Instead of implementing a way to search for sent gifts on the map for simplicity, we undecided to leverage gift icons on map to surface who user has sent gifts to. Adding this visual profile of recipient to the gift icon helps user to recognize rather than recall. Tapping on the gift icon also opens a slide up menu with additional information on gift type, location, and send date, as well as the option to unsend / change gift location.

Progress towards usability goals: improves *interpretability* by helping users recognize who they sent gifts to, as well as additional information about the contents of the gift.
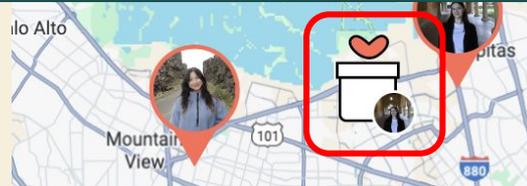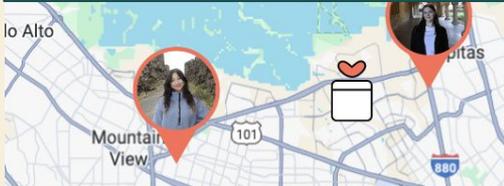
Violation 25: send gift button labeled as "finish" cause user to misinterpret there's additional screens after
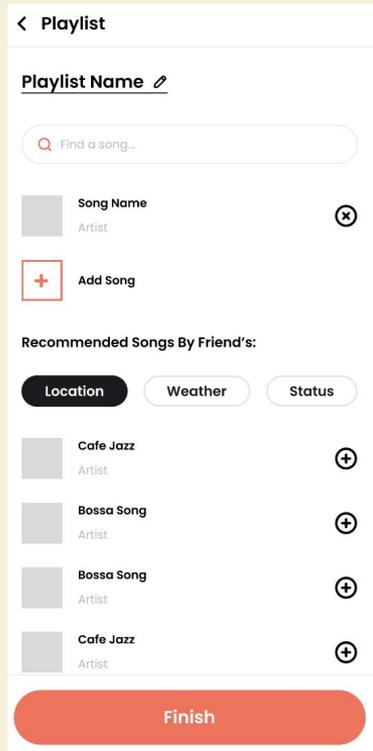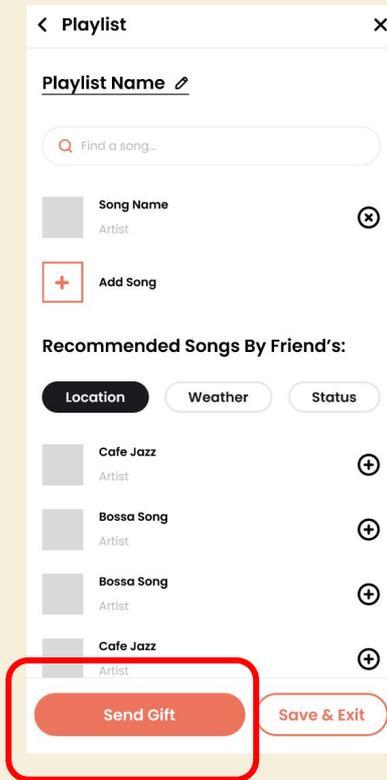
Before

After

Violation 25: send gift button labeled as "finish" cause user to misinterpret there's additional screens after

Before
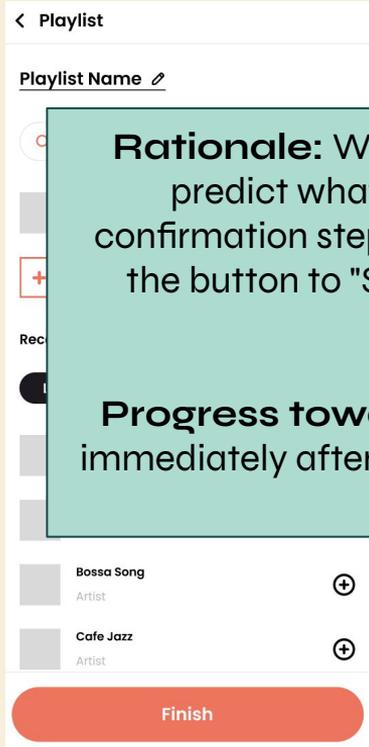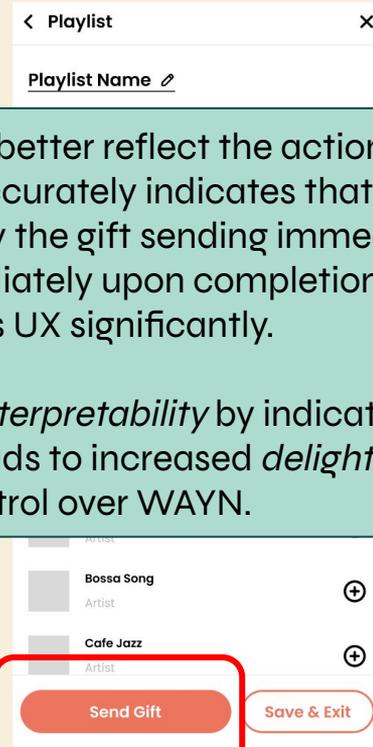
After

Rationale: We recognized that the button should better reflect the action; users should be able to predict what the next screen will be. "Finish" inaccurately indicates that there may be further confirmation steps after, and users are jumpscared by the gift sending immediately after. We changed the button to "Send Gift" since the gift sends immediately upon completion. This is also only a copy change that improves UX significantly.

Progress towards usability goals: improves *interpretability* by indicating to user that gift sends immediately after; this boost in interpretability also leads to increased *delight* and trust as users feel like they have more control over WAYN.

Complex task

Violation 27: invitees SHOULD NOT be able to add / remove collaborators

Before

We did not consider what the UI looks like form an invitee's perspective and to include functionality preventing them from adding / removing collaborators

A single view
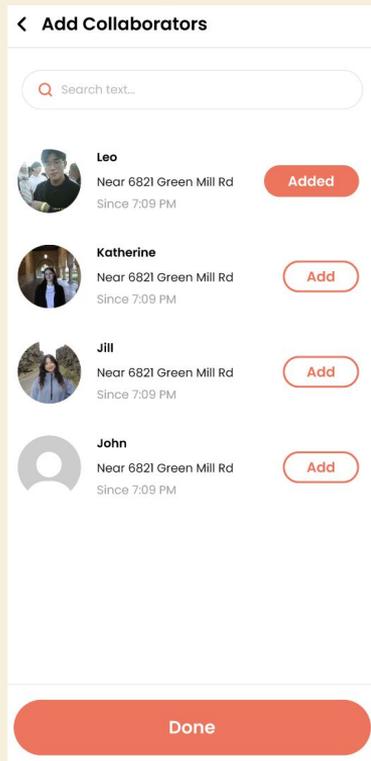
After

Host view
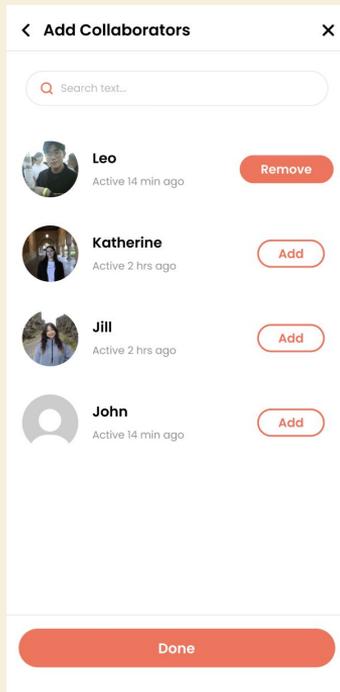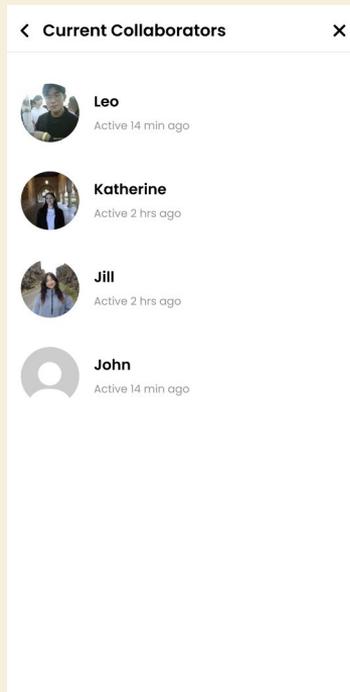
Invitee view

Violation 27: invitees SHOULD NOT be able to add / remove collaborators

Before

A single view

We did not

< **Add Collaborators**

from adding / removing collaborators

Done

After

Host view

Invitee view

Active 14 min ago

Done

Done

Rationale: even though this was a major change, we deemed it necessary to consider both host and invitee views in order to preserve functionality and order. By explicitly indicating that invitees cannot modify the list of collaborators, we avoid unintended behaviors, such as invitees accidentally removing or adding unwanted collaborators.

Progress towards usability goals: improves *interpretability* by explicitly surfacing to invitees that they cannot modify collaborators, and improves *delight* for hosts by avoiding intended modifications to the collaborator lists.

Violation 11: host must wait for invitees to finish adding gifts in order to send gift, for send was the only exit

Before

No way to save and exit the gift before all invitees finished adding. Also lacked invitee view.

After
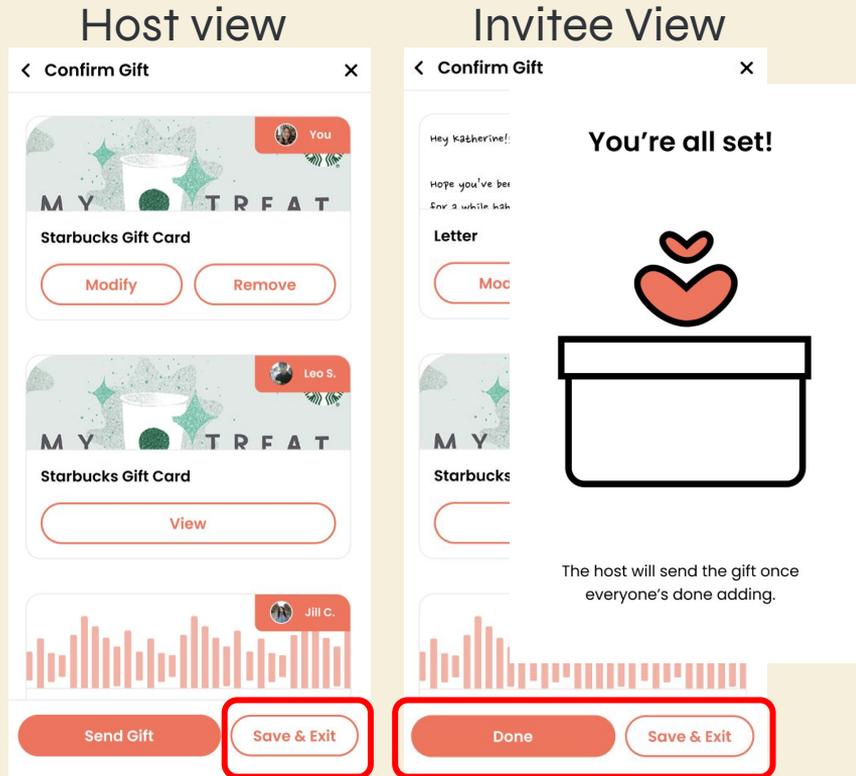
Host view

Invitee View

Violation 11: host must wait for invitees to finish adding gifts in order to send gift, for send was the only exit

Before

After

Host view

Invitee View

Confirm Gift

Confirm Gift ✕

Confirm Gift ✕

No way to

Jill C.

Jill C.

The host will send the gift once everyone's done adding.

Send Gift

Send Gift   Save & Exit

Done   Save & Exit

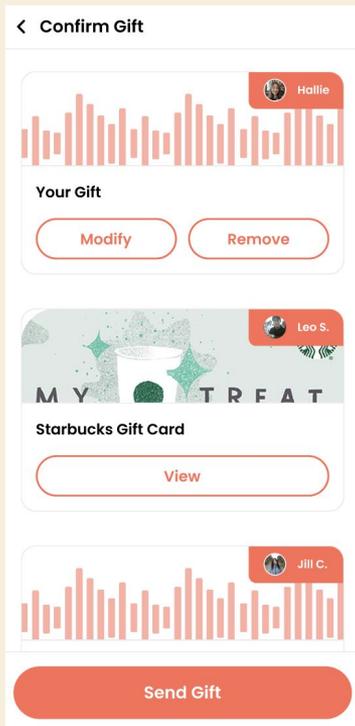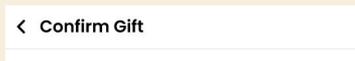**Rationale:** it's unrealistic to hope that collaborators would coordinate a time to work on the gift, so enabling users to exit the gift and come back to it was a critical fix. Both hosts and invitees have the ability to save and exit out of the gift-making process, and resume their progress through a drafts page that can be accessed from the map. We also implemented a invitee view that once an invitee has signaled they're done adding gifts, WAYN shows a success notification explaining that host will send the gift later.

Progress towards usability goals: improves *interpretability* by explicitly surfacing system status and enhances *efficiency* by allowing users to save and come back to collaborative gifts.
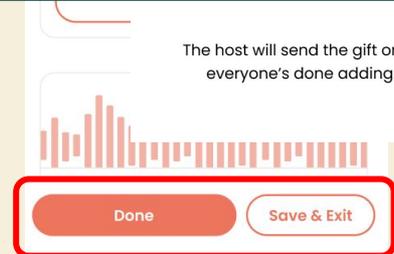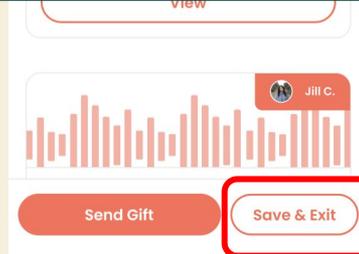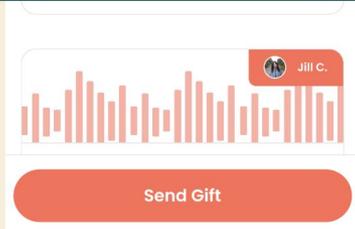
Violation 9: Host cannot remove invitee once added
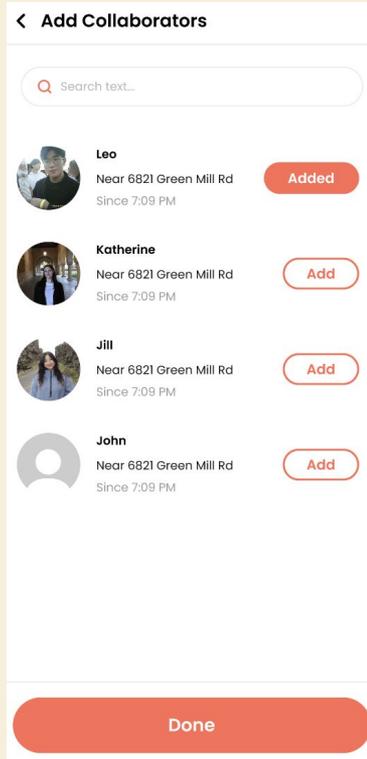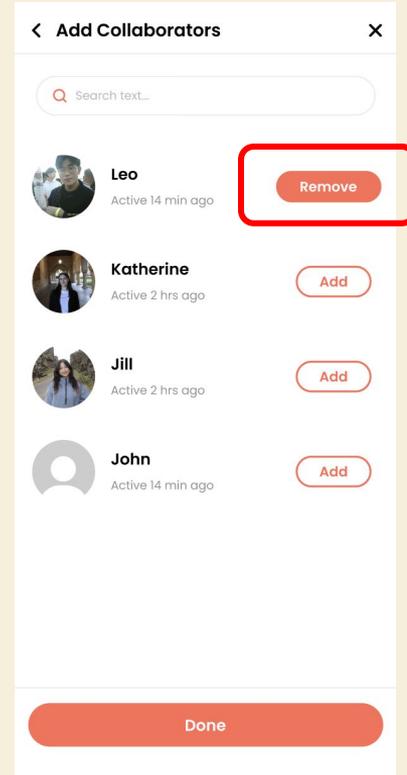
Before

Add Collaborators

Search text...

Leo
Near 6821 Green Mill Rd
Since 7:09 PM
`Added`

Katherine
Near 6821 Green Mill Rd
Since 7:09 PM
`Add`

Jill
Near 6821 Green Mill Rd
Since 7:09 PM
`Add`

John
Near 6821 Green Mill Rd
Since 7:09 PM
`Add`

Done

After

Add Collaborators

Search text...

Leo
Active 14 min ago
`Remove`

Katherine
Active 2 hrs ago
`Add`

Jill
Active 2 hrs ago
`Add`

John
Active 14 min ago
`Add`

Done

Violation 9: Host cannot remove invitee once added

Before

< Add Collaborators

Search text

Done

After

< Add Collaborators ×

Done
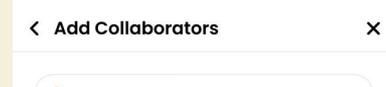
Rationale: even though this change introduces additional complexity in backend implementation, we believe it was a necessary flexibility to offer to the user; this way, they can easily recover from misclicking a friend or not wanting to allow a friend to collaborate.

Progress towards usability goals: improves *efficiency* by enabling users to easily remove collaborators, instead of being forced to restart a collaboration just because they want to modify collaborators.
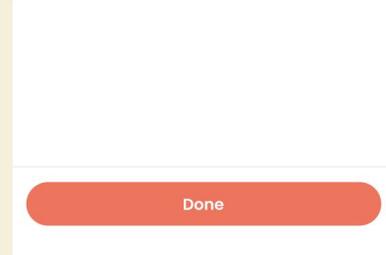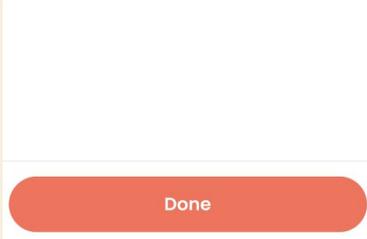
Other App Component Revisions

Violation 46: friend icons on map are purely visual, not accessible to visually impaired users / screen readers
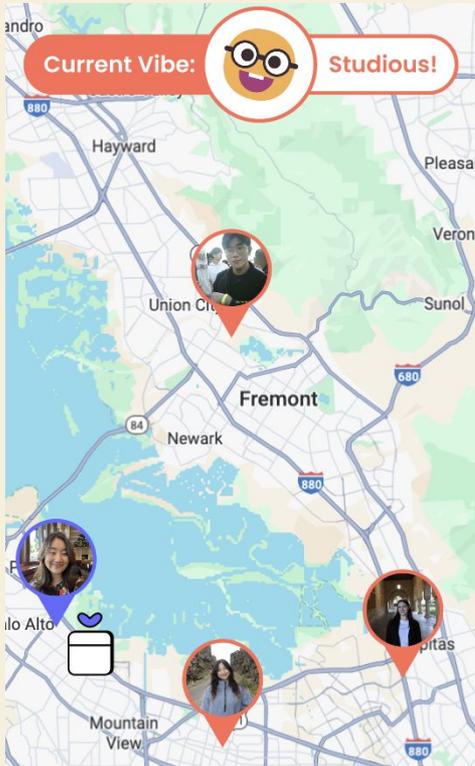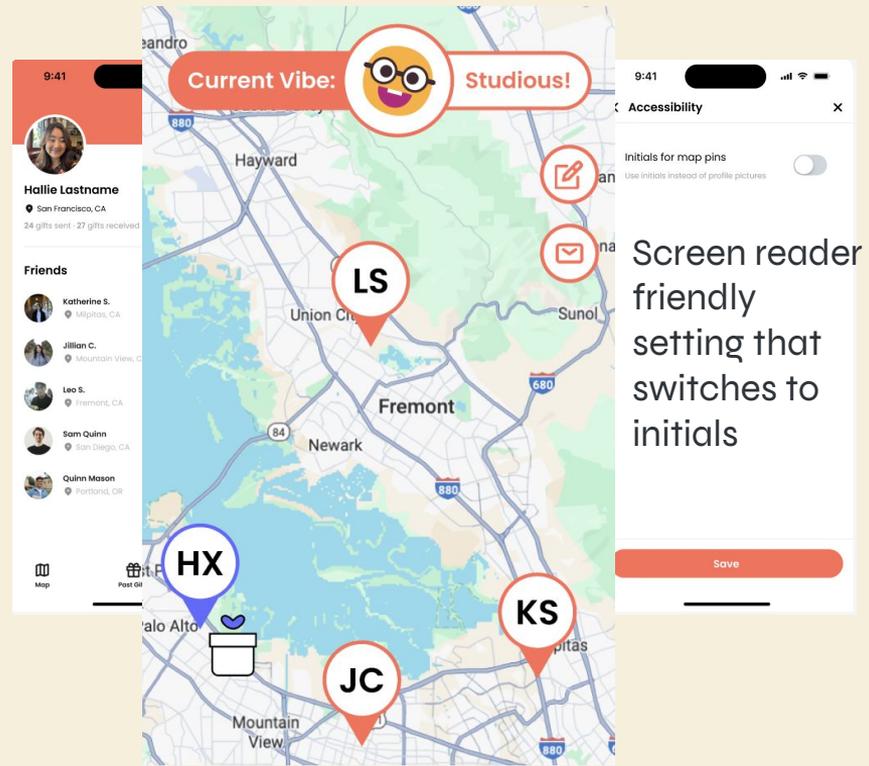
Before

After

Screen reader friendly setting that switches to initials

Violation 46: friend icons on map are purely visual, not accessible to visually impaired users / screen readers

Before

After

Rationale: Since every task starts with tapping on a friends map icon, it is critical that finding an icon on the map is accessible for all ability levels. We added a settings section to the profile page that allows users to toggle initials instead of profile pictures on the map icons.

Progress towards usability goals: improves *efficiency* by making the map page more accessible for users with low vision and use screen readers
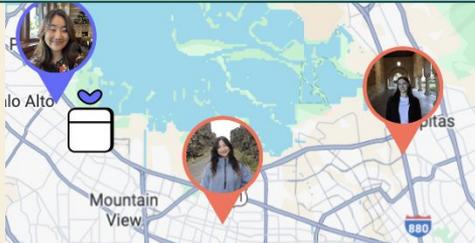
Violation 47: text is too small when user accesses gift they received (letter)
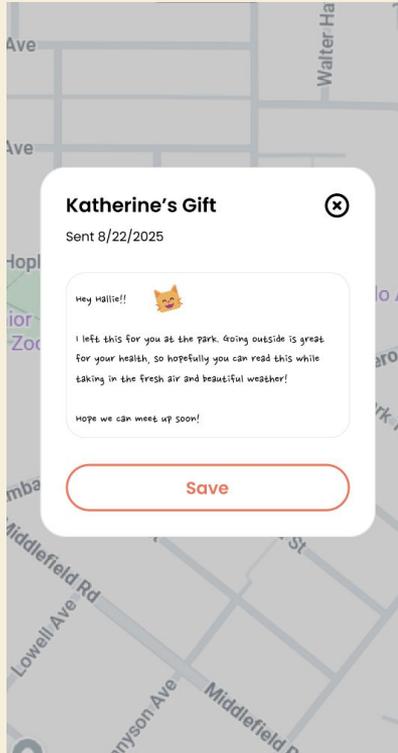
Before

Small visual display window is hard to see

After

Increased the size of display window and font

Violation 47: text is too small when user accesses gift they received (letter)

Before

After

Small visual

Increased the

Rationale: The current font size of 12 does not meet visibility standards. We increased the font size of the letter to 18 to ensure readability.

Progress towards usability goals: improves *efficiency* by making received letter window more readable for all users

Katherine's Gift

Sent 8/22/2025

Hey Hallie!!

Save
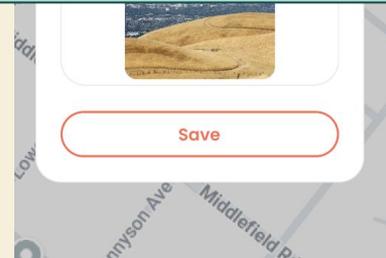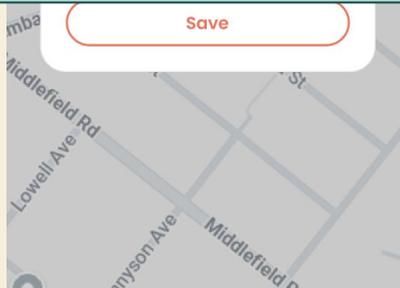
Violation 42: no distinction between sent and received gifts
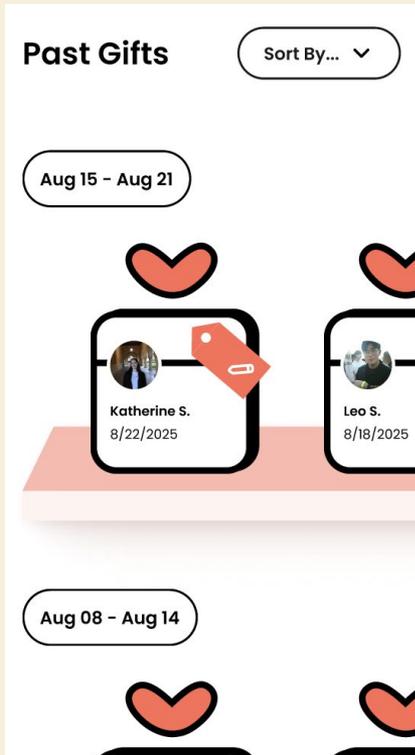
Before

No visual distinction between sent and received gifts in "Past Gifts" tab

After
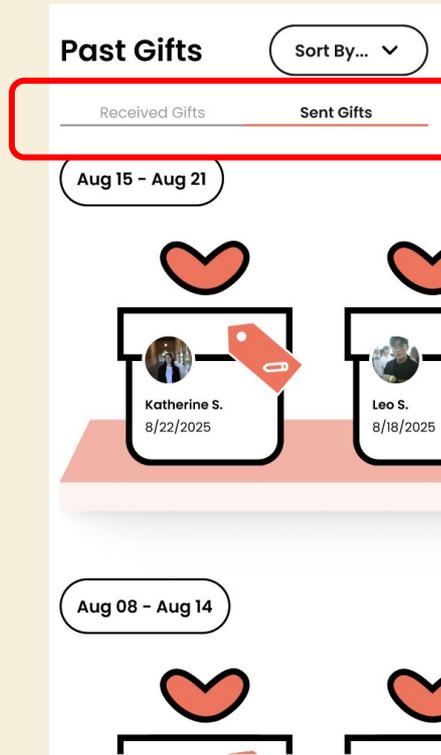
Sent and received gifts organized using tab navigator

Violation 42: no distinction between sent and received gifts

Before

Past Gifts [Sort By... ⌄]

No visual distinction

Aug 08 - Aug 14

After

Past Gifts [Sort By... ⌄]

Received Gifts   **Sent Gifts**

Sent and received gifts

Aug 08 - Aug 14
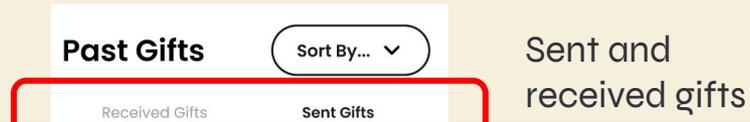
Rationale: Past sent gifts likely also hold sentimental value and memories, so they are also important for the user to access alongside past received gifts. Therefore, we added a tab navigator at the top of the past gifts page that allows the user to toggle between seeing sent and received gifts.

Progress towards usability goals: this better organizes the list of gifts relevant to the user, increasing efficiency by reducing the work required to search for a specific gift. This in turn increase *delight* in using WAYN.
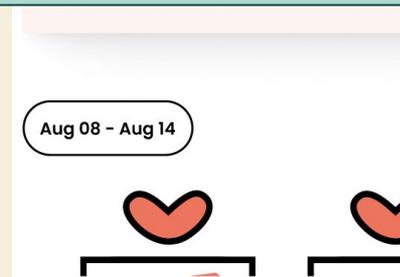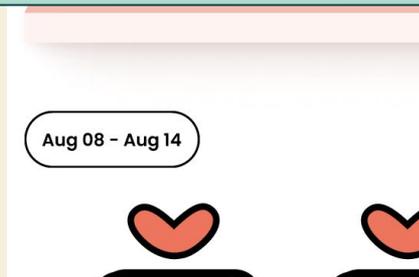
Figma Errors / Limitations

26: prototype becomes static after user completes moderate/complex task
Rationale: we did not wire additional screens after these tasks were completed. Will not be an issue for high-fi prototype

4: gift box doesn't accurately reflect the number of gifts user has added (shows 3 even though only added 1); states not preserved when pressing back
Rationale: we had the skip from 1 to 3 to convey how other collaborators have added gifts, but that wasn't conveyed well. State loss also a product of Figma wiring error that won't be relevant for high-fi prototype.

15: pressing back button sends user to the wrong page
Rationale: this is a Figma wiring error

19: unadded collaborators have also added gifts
Rationale: this is not supposed to happen. Figma editing error. Our bad.

Figma Limitations (cont.)

34: when nudging, multiple users are highlighted, requiring the user to remember who they were nudging
Rationale: this was a Figma wiring error.

Not Incorporated Violations

3 tradeoffs we thought about:

1. **Value level:** Efficiency (usability goal) vs App Ethos / Value

2. **Functionality level:** Absolute vs Necessary Accessibility Features

3. **UI level:** Recognition > Recall vs Minimalist Design

Not Incorporated

Tradeoff: Usability vs App Value/Ethos

36: user can only send one gift at a time, makes it strenuous if users want to send multiple items
Rationale: this is actually intentional! Users can individually only send one item, and we hope users will come to learn this quirk as they use our app over time. This design choice originated from tackling information overflow (expert feedback), but it also encourages users to be more *thoughtful* and *intentional* with their gifts.

37: There are many clicks involved for sending a gift; power users may end up getting fatigued when trying to send the same kind of gift
Rationale: one reason why it feels strenuous is because many of our swiping gestures require clicking on Figma (i.e. swiping up to bring up bottomsheet). In addition, we believe sending the *exact same* kind of gift multiple times is not a popular use case of our app. Finally, requiring an effortful process of curating a gift makes the gift more meaningful.

44: "nudge" may be a colloquial term that's universally understood by new users
Rationale: the feeling of nudging someone in real life well capture the playful feeling we want to capture. We hope users can come to learn what it does through usage.

Not Incorporated (cont.)

Tradeoff: Absolute vs Necessary Accessibility

45: audio recording has no textual transcription, making it not accessible for auditorily impaired individuals
Rationale: if the sender/receiver is auditorily impaired, it's unlikely that they would send/receive an audio gift in the first place. In terms of accessibility, we believe our other modality options (e.g. letters, giftcards) still make the app accessible for these users.

50: visual gifts like letters and gift cards are not accessible for users with impaired sight
Rationale: similar as 45, we believe the multimodal options of gifts supported by our app creates different options for users of varying abilities. The lack of alt text may actually nudge senders to utilize the audio gift options (voice memo and playlist): Instead of sending a written letter with images that are robotically narrated via alt text, senders can instead send an audio clip that better that encapsulates the background ambiance of their real-time setting.

Incorporated (cont.)

Tradeoff: Recognition over recall vs minimalist design

30: when creating a collaborative gift, users can't see who collaborators are and what gifts have been added on the gift adding page

Rationale: these information are easily accessible by clicking on the "collaborator" and "gift" icons. While this is more work for the user, we avoid cluttering the gift-adding page with not immediately-relevant information.

High-Fi Status

Timeline

Finished / Implemented
Implementation TODOs
Other deliverable TODOS

led by team member

11/21

Expo

Week 9

Thanksgiving

Week 10

HX

Figma revisions | Implement gift card | LS | Implement collaboration

LS

Implement nudge | Implement audio | HX

Implement app architecture | Implement letter | KS JC

JC LS HX KS

Refine app UI layout and cohesion

KS

Poster, pitch, demo video

JC

Final report checkpoint | Final report
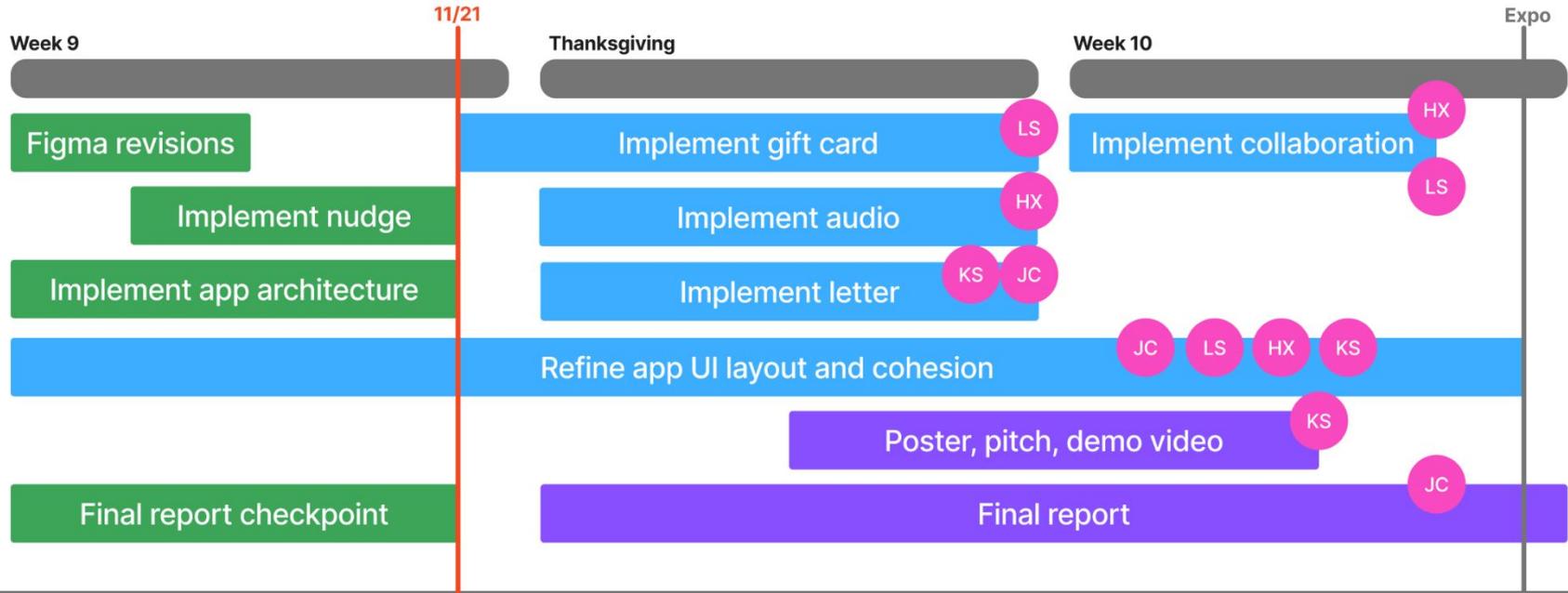
Frameworks / Tools Used
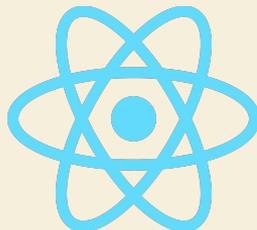
React Native

Figma Dev

External LIbraries & APIs
- Google Maps
- Gemini
- Expo-av

Generative AI (ChatGPT, Claude)

Expo AV

GitHub   Changelog   npm   Ask AI

A universal library that provides separate APIs for Audio and Video playback.

Android   iOS   tvOS   Web

Bundled version: ~16.0.7   Copy page
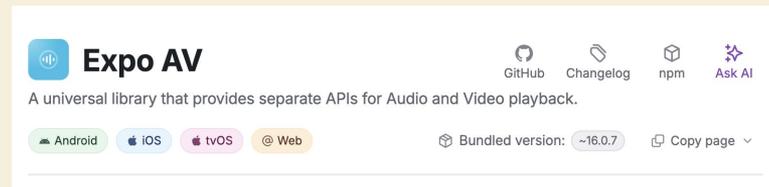
Frameworks / Tools Used

React Native: ideal for cross-platform mobile programming; basis for app implementation

Figma Dev: converts design element into CSS styling to be easily integrated into code

Supabse: database to store friend and gift information

External Libraries & APIs: supports app functionalities
- Map View & Location Fetching: Google Maps
- Gift recommendation: Gemini
- Audio recording: expo-av

Generative AI (ChatGPT, Claude)
- Generating a baseline for UI layout that we build on top of (alleviates burdensome work of creating UI layout while not completely outsourcing the work to AI – we ultimately revise generated code to ensure our UI follows good practices and avoids violations)
- Learning how to integrate external libraries and APIs (accelerates our development speed, especially given the time crunch)
- Debugging (receiving personalized help when we're truly stuck)

More functional than Med-Fi

Implemented:
Static map -> real map & fetching of your current location

To-Be Implemented:
Hard-coded gift recommendations -> LLM-generated gift recommendations given location, queried and surfaced in real time

Fake audio-recording feature -> real audio-recording feature

(hopefully) Hard-coded gift destination recommendation -> surfacing real, relevant destination recommendations using Google Maps API

High-Fi Hard Coded Components

List of friends & their locations: currently, instead of having our app support multiple user accounts concurrently, we hard code a list of friends for a single user at a time.

- The complexity of creating authentication and storing the data of multiple users might be beyond our bandwidth given CS 147's timeline. This single-user experience still sufficiently replicates a realistic user journey with WAYN.
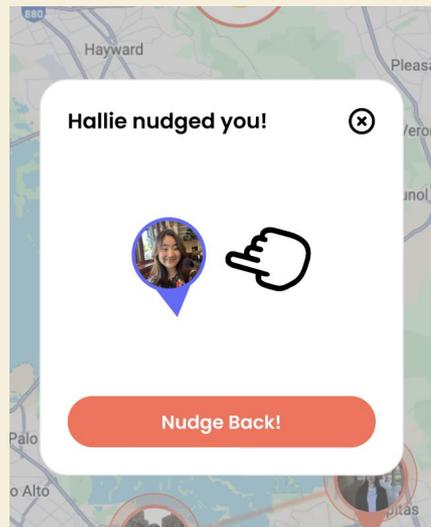
However, we really want multiple users!

Question: what would be a feasible way to implement or even WOZ multiple users (without production app)?
I.e. How do we get two mobile simulators to respond to each other?
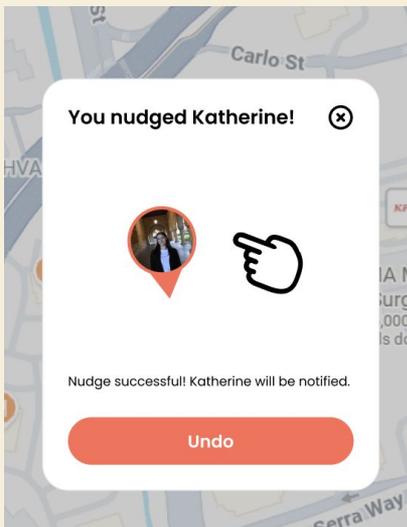
User A

User B

High-Fi Wizard of Oz Techniques

Spotify playlist: users won't actually be able to access their Spotify and construct a real playlist.
- This functionality is not essential for a user to experience the essence of our app and introduces a lot of technical and authentication complexity that we cannot realistically tackle given the time constraints.

Real merchants: list of merchants user sees will be hard-coded, and there will be no real payment integration / money involved in sending gift card.
- It's not realistic to onboard real business onto our platform for this version of our prototype. Integrating users' real payment data is also too risky and not essential to experience the essence of WAYN.

Real-time Notifications: since we do not plan on supporting real-time multi-user experiences, the notifications a user receives from friends are pre-built
- WOZing this functionality is enough to simulate a realistic user experience without introducing the added complexity of supporting multiple users

High-Fi Demo!

Downloading 94.12%