

Welcome to Traverse

Explore. Connect. Create.

Start

Assignment 8: High-Fi Prototype Checkpoint

Problem

As digital spaces for arts engagement prioritize consumption over emotional depth, casual creatives struggle to find:

- Trust in new communities
- Fulfillment and wonder when exploring the artistic world



Solution

An AI-powered platform for users to explore the connections between artworks and add their reflections – deepening artistic engagement and jumpstarting curiosity

Team Members



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2d



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B.A. Economics

1w

Agenda



Heuristic
Evaluation
Results



UI
Revisions



Prototype
Implementation



Demo

A painting of a pond with water lilies and reflections. The water is a deep blue, and the lilies are in various stages of bloom, with some showing vibrant colors like yellow, purple, and pink. The reflections of the lilies and the sky are visible in the water.

Heuristic Evaluation Results

Summary of Violations

Heuristic	# Viol. (sev 0)	# Viol. (sev 1)	# Viol. (sev 2)	# Viol. (sev 3)	# Viol. (sev 4)	# Viol. (total)
H1: Visibility of System Status	0	0	6	1	0	7
H2: Match b/w System & World	0	1	2	3	0	6
H3: User Control & Freedom	0	0	0	3	1	4
H4: Consistency & Standards	1	3	4	1	0	9
H5: Error Prevention	0	0	2	3	0	5
H6: Recognition not Recall	0	1	3	1	0	5
H7: Flexibility & Efficiency of Use	0	0	2	1	0	3
H8: Aesthetic & Minimalist Design	0	1	1	3	0	5
H9: Help Users with Errors	0	0	0	0	0	0
H10: Help & Documentation	0	0	0	2	0	2
H11: Accessible Design	0	0	2	2	0	4
H12: Value Alignment & Inclusion	0	0	0	0	3	3
Total Violations	1	6	22	20	4	53

Breakdown

→ Severity

Heuristic	# Viol. (sev 0)	# Viol. (sev 1)	# Viol. (sev 2)	# Viol. (sev 3)	# Viol. (sev 4)	# Viol. (total)
Total Violations	1	6	22	20	4	53

→ Most Common Violations

Heuristic	# Viol. (sev 0)	# Viol. (sev 1)	# Viol. (sev 2)	# Viol. (sev 3)	# Viol. (sev 4)	# Viol. (total)
H1: Visibility of System Status	0	0	6	1	0	7
H2: Match b/w System & World	0	1	2	3	0	6
H4: Consistency & Standards	1	3	4	1	0	9

Revisions

53
violations

29
sev 0-2

24
sev 3-4



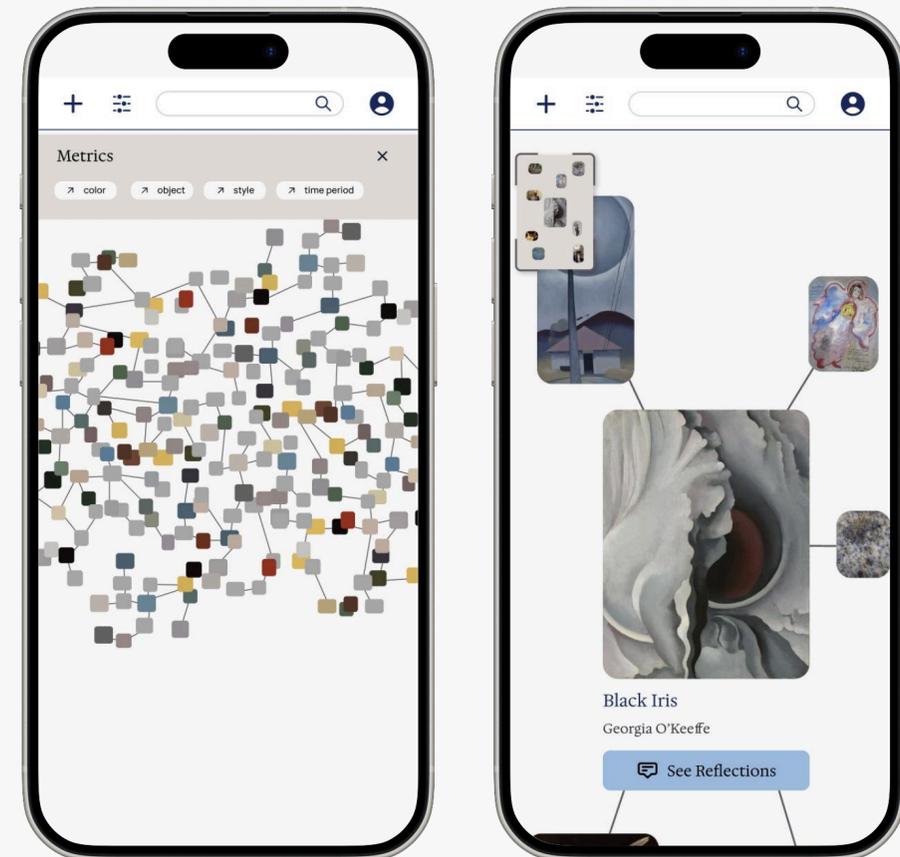
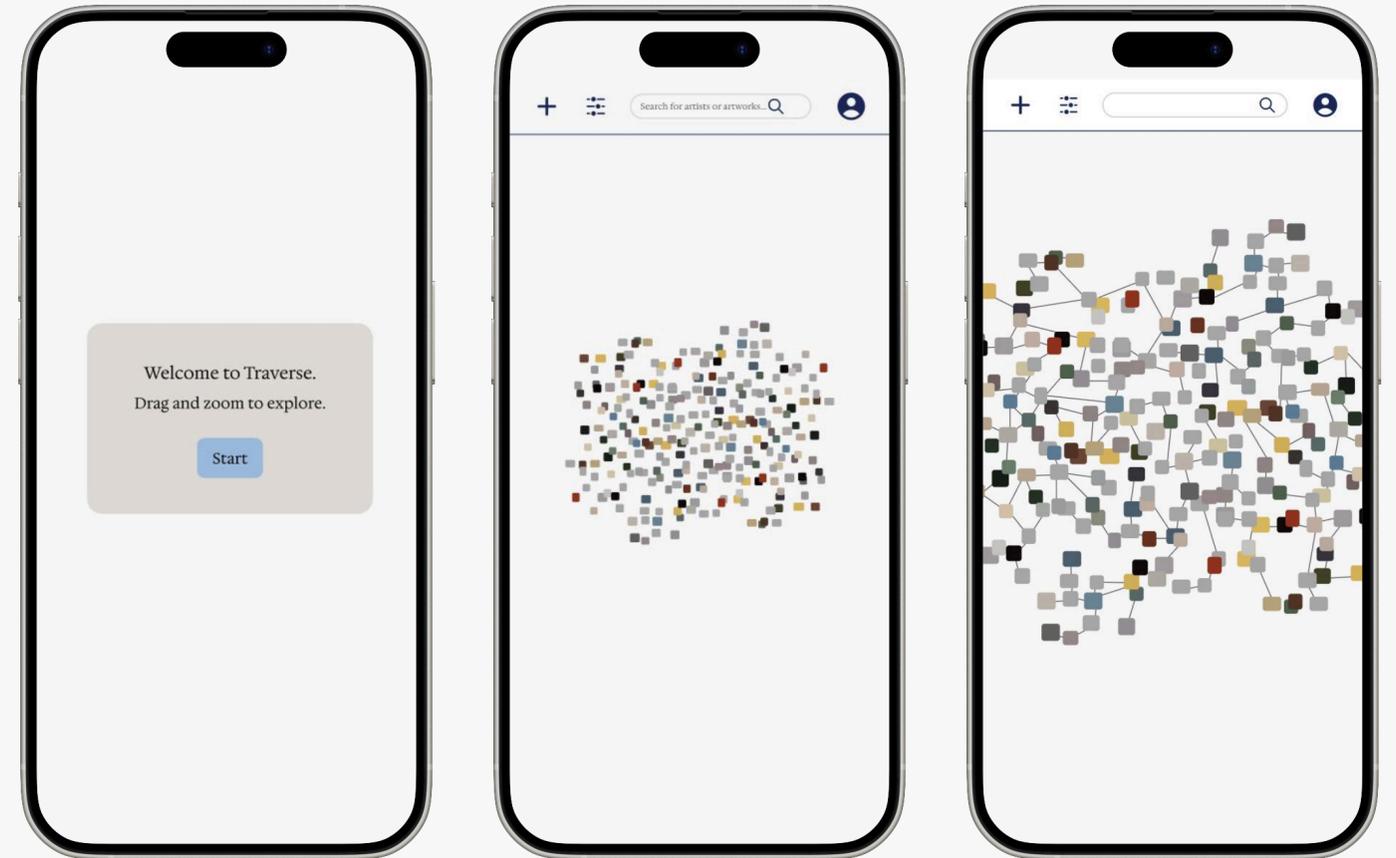
33
revisions

16
revisions

17
revisions

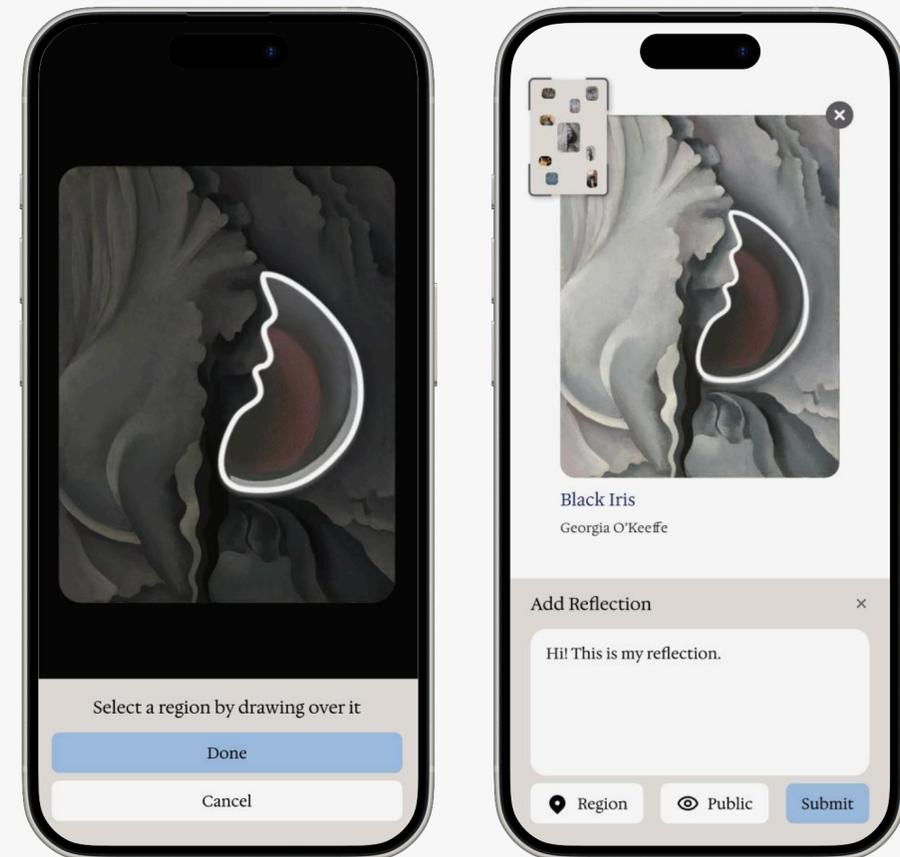
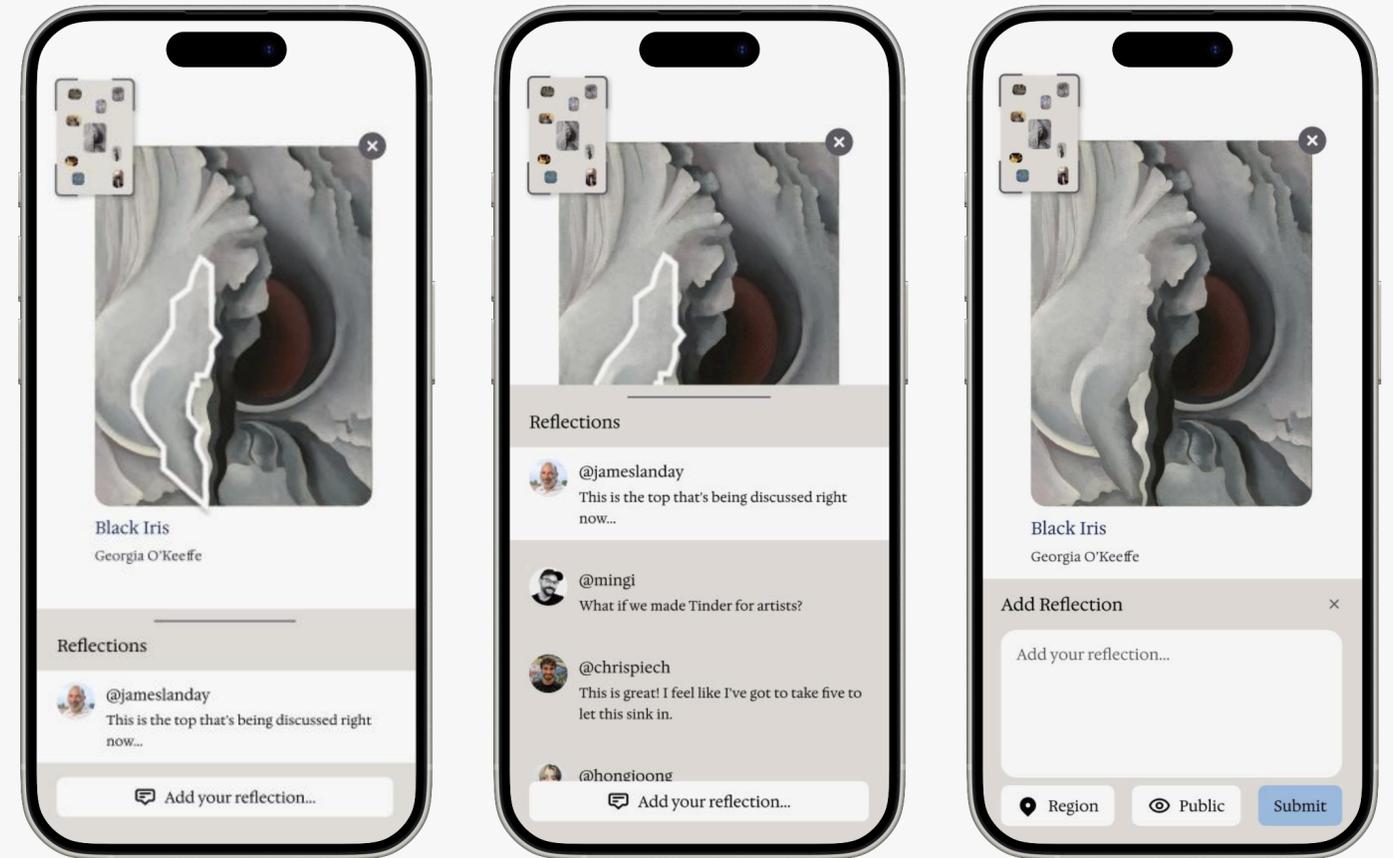
Simple Task Violations

- Zooming and dragging interactions are unclear
- The fully zoomed-out starting view is overwhelming and unclear
- Confusion about the function of the the “Metrics” tab
- “Metrics” tab lacks options for users who rely on non-visual patterns
- The graph icon (used as a back button) does not match user expectations
- Artwork images do not clearly behave as tappable elements



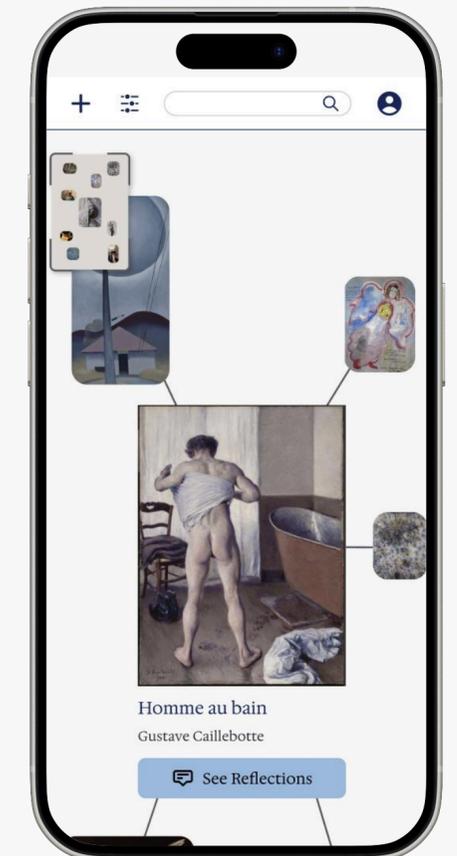
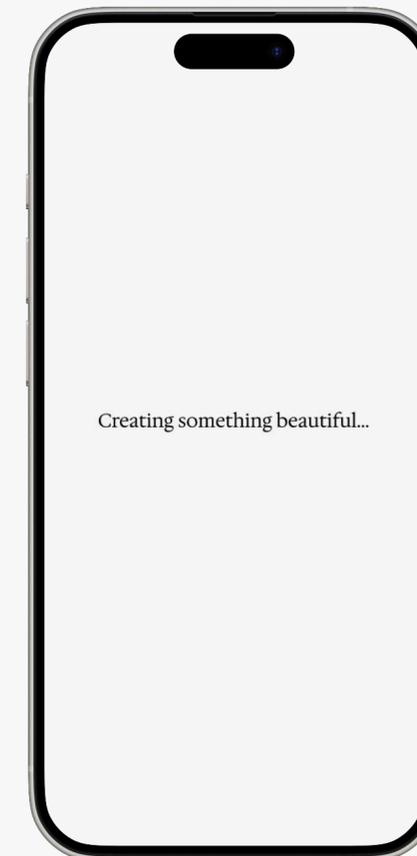
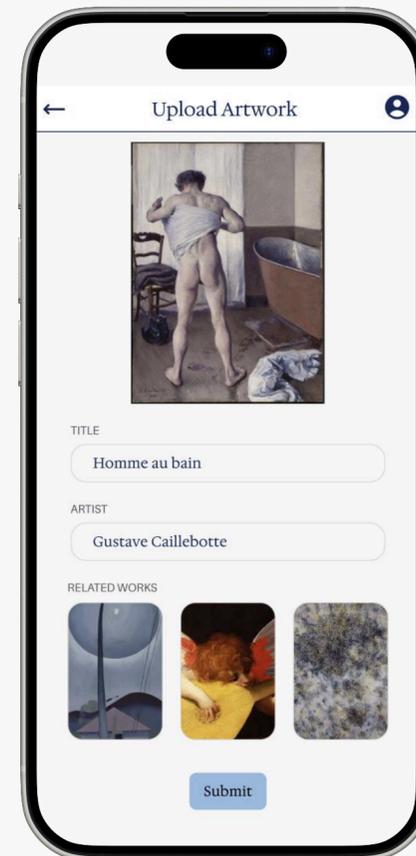
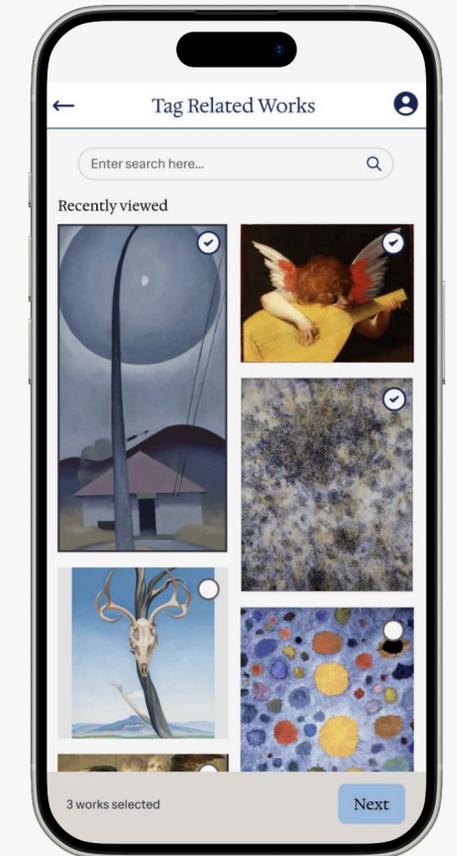
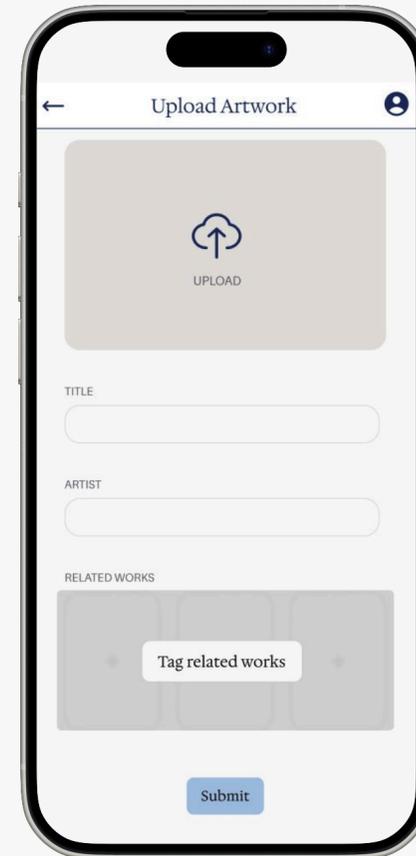
Moderate Task Violations

- The exit button on the reflection panel is too small to tap reliably
- Reflections have no timestamps
- Users cannot edit or delete their reflections once posted
- The “Submit” button is active even when no reflection is typed
- “Region” button label is confusing or unclear
- Highlighted regions lack visual contrast
- Public/Private toggle lacks visual clarity



Complex Task Violations

- The “Submit” button is active even when no file is uploaded
- No loading or progress feedback during uploads
- Tagging UI does not show a maximum number of allowed related works
- No option to edit or remove tagged related artworks
- Some UI elements (e.g., checkboxes) are misaligned
- Users cannot edit or delete artwork after uploading



Disregarded Feedback

Aesthetic Disagreement

“Revisit the color palette, typography, and layout rhythm to evoke more organic, artistic qualities. Consider smoother transitions, softer shapes, and gallery-inspired visual metaphors that reflect an art-viewing experience rather than a data map.”

Figma Limitations

“Users are forced to write their reflection before selecting a region. The interface enforces a rigid order, preventing users from choosing or adjusting regions first

Out of Scope

“The current interface does not prevent any cases of impersonation or plagiarism”

Not Related to a Core Task

“Add a "save" or "like" button to each art piece.”



UI Revisions

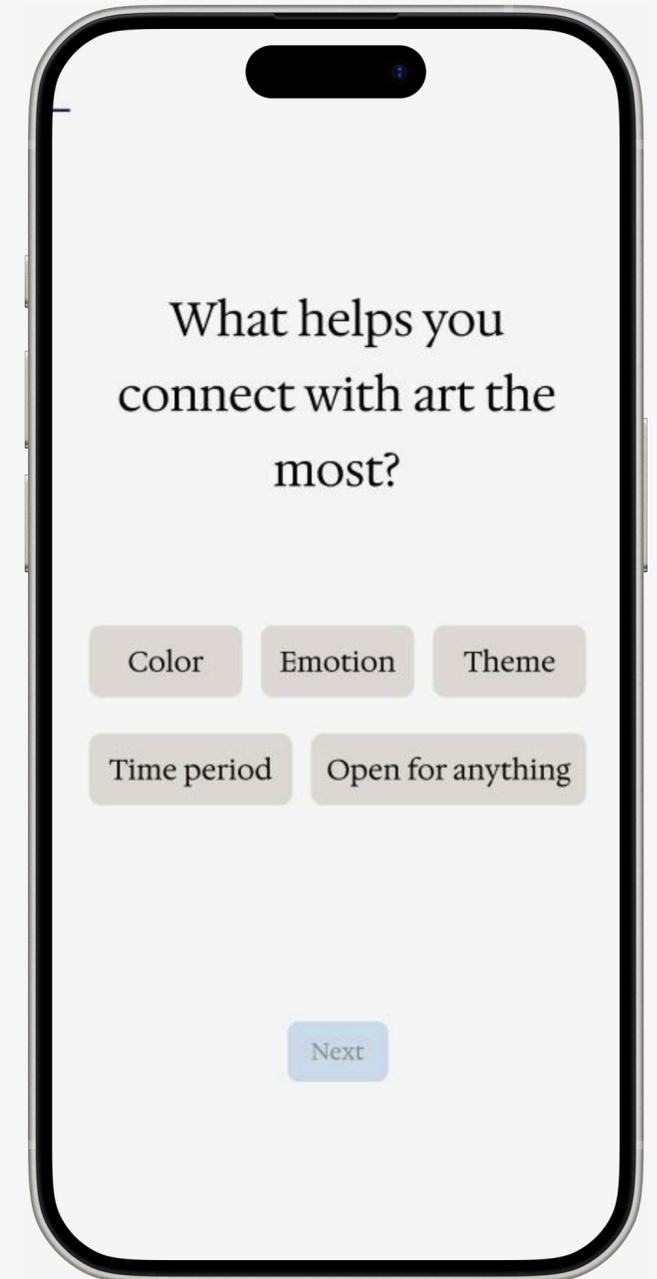
Onboarding Flow

Problems

- Zooming and dragging interactions are unclear
- The fully zoomed-out starting view is overwhelming and unclear

Fixes

- Added onboarding screens introducing the user to the app's core tasks
- Added a short personalization question to guide starting point



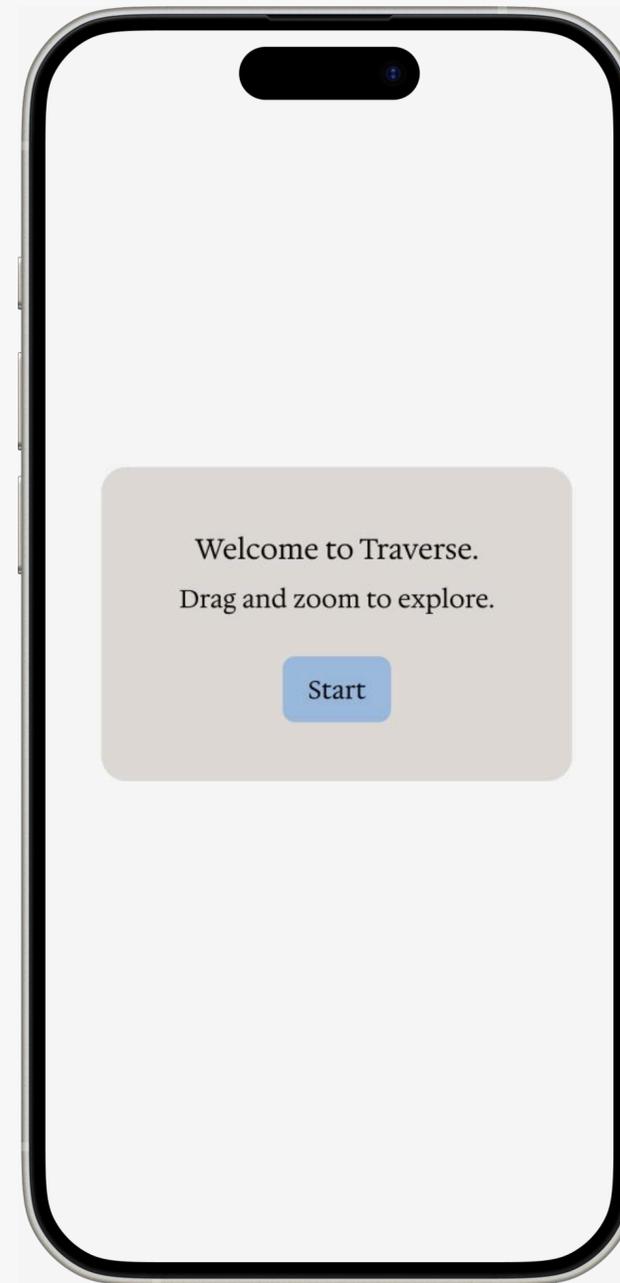
Onboarding

Problems

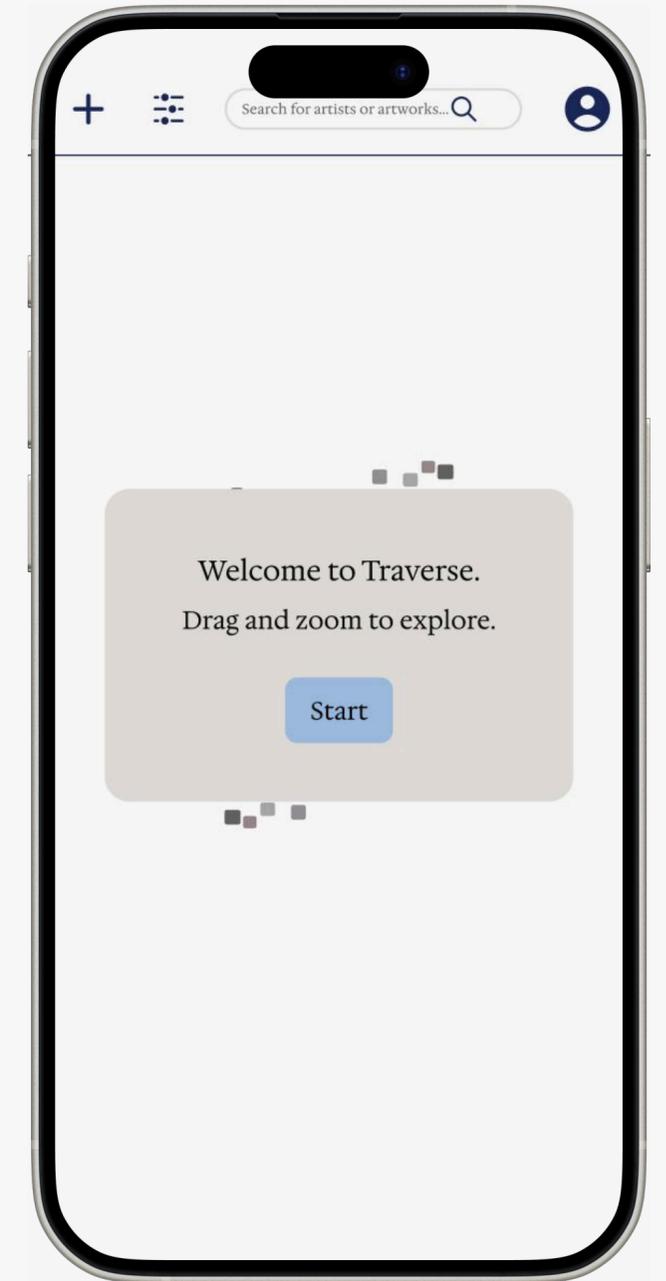
- Instructions for interacting rely too much on memory

Fixes

- Instructions appear as a pop-up on top of the graph instead of before so they can learn in context



Before



After

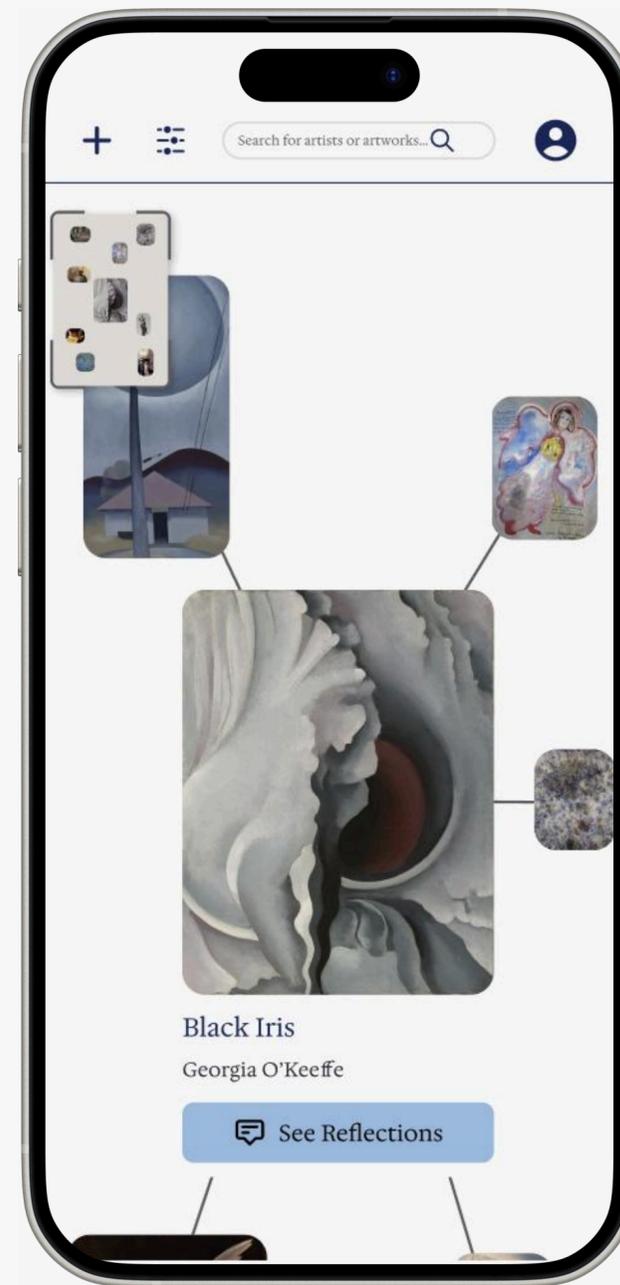
Simple Task: Artwork View

Problems

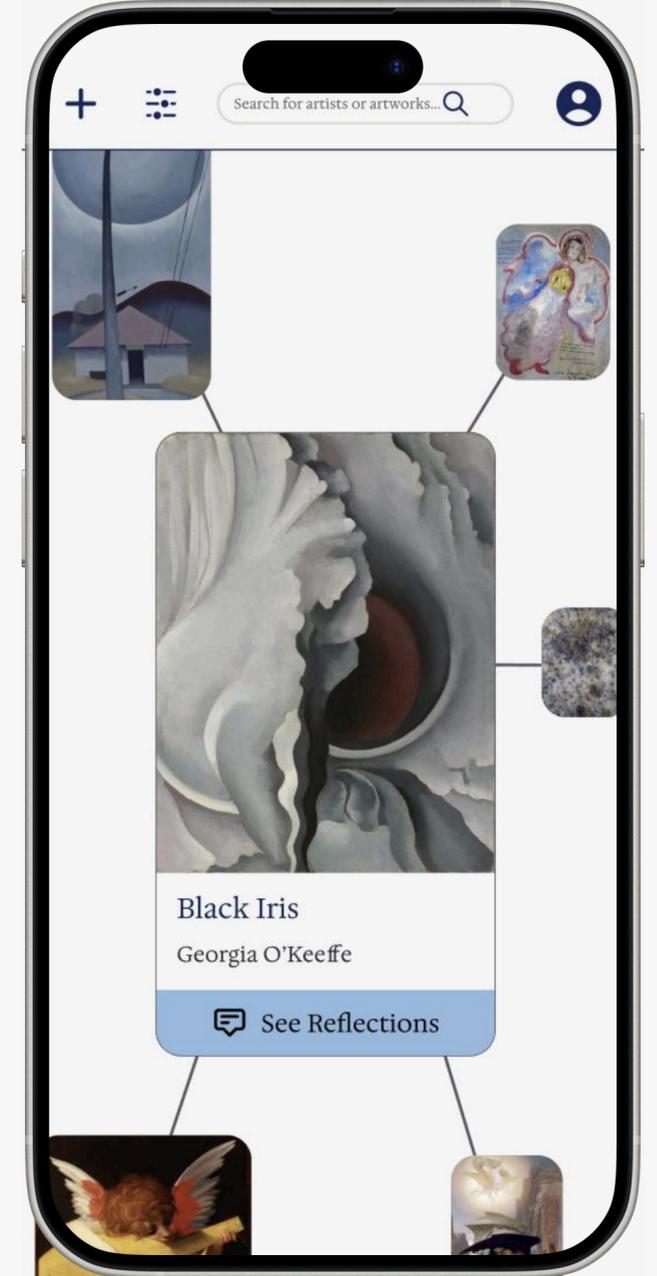
- The graph icon (used as a back button) does not match user expectations
- Artwork images do not clearly behave as tappable elements

Fixes

- Removed the mini-map as users will be able to pinch to zoom out
- Redesigned the main artwork card so it reads as one clear tappable element



Before



After

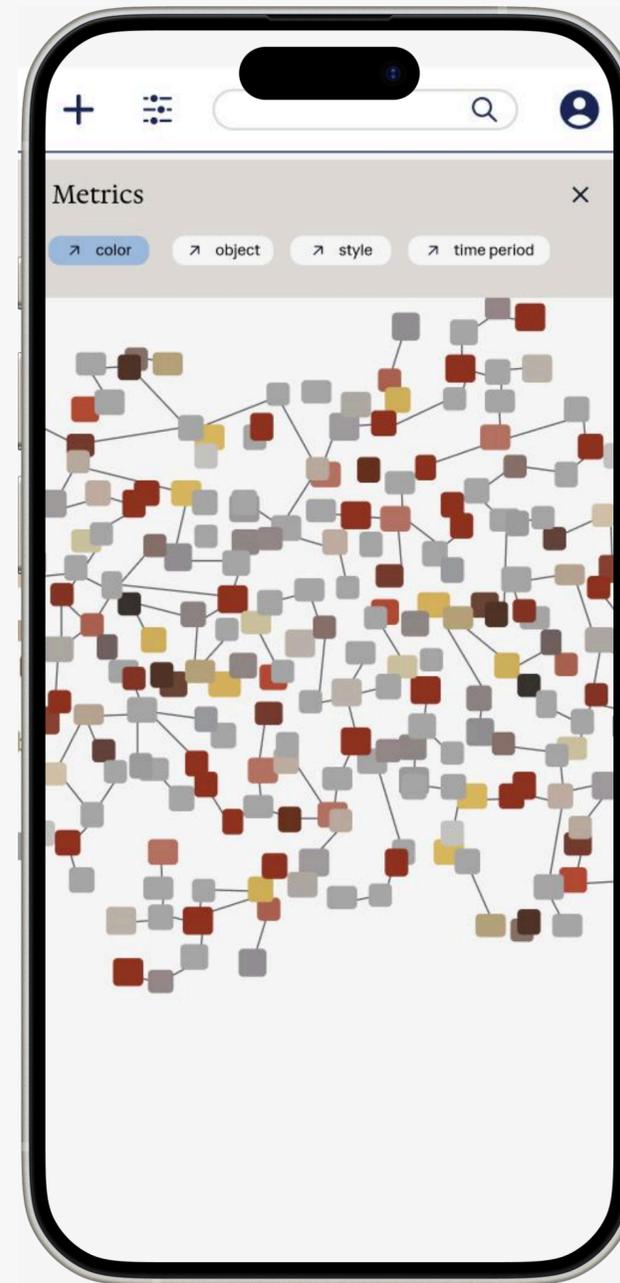
Simple Task: Metrics Tab

Problems

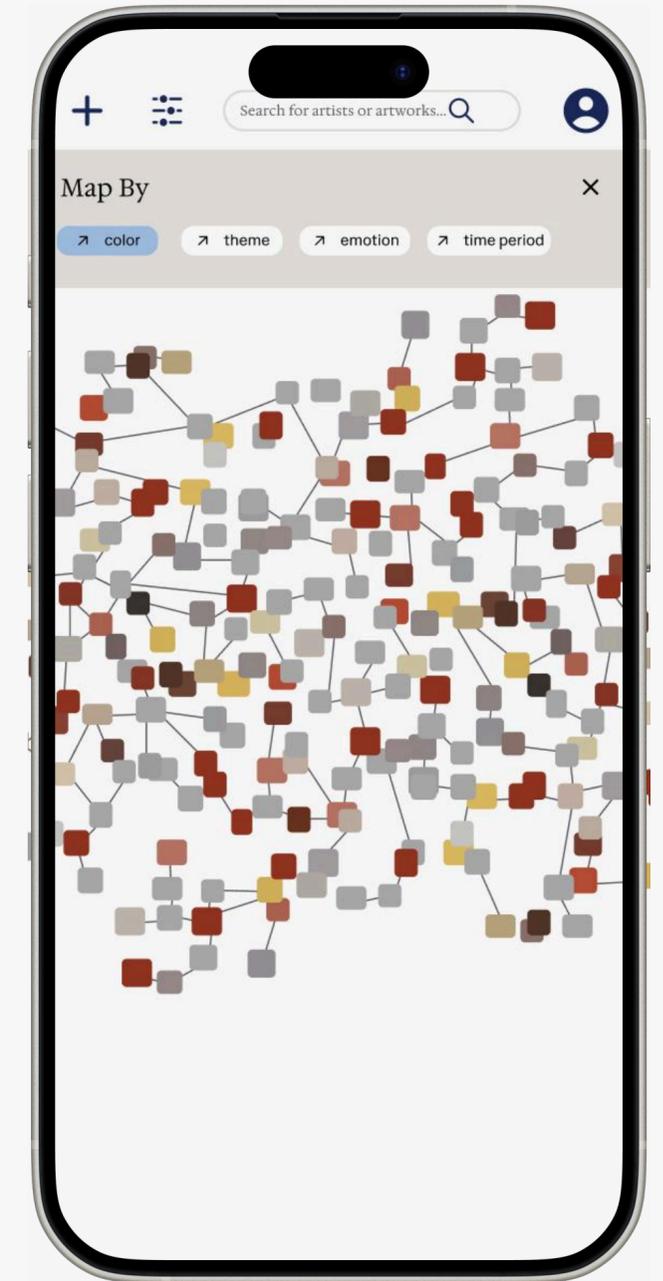
- Confusion about the function of the the “Metrics” tab
- “Metrics” tab lacks options for users who rely on non-visual patterns

Fixes

- Renamed feature to “Map by”
- Changed graph options from “color, object, style, and time period” to “color, theme, emotion, and time period”



Before



After

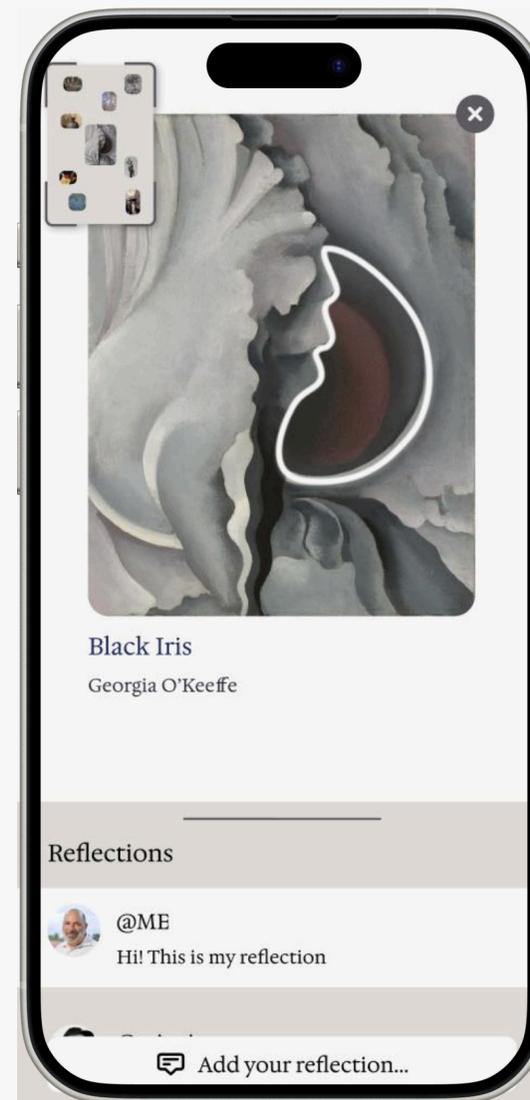
Moderate Task: Reflections Page

Problems

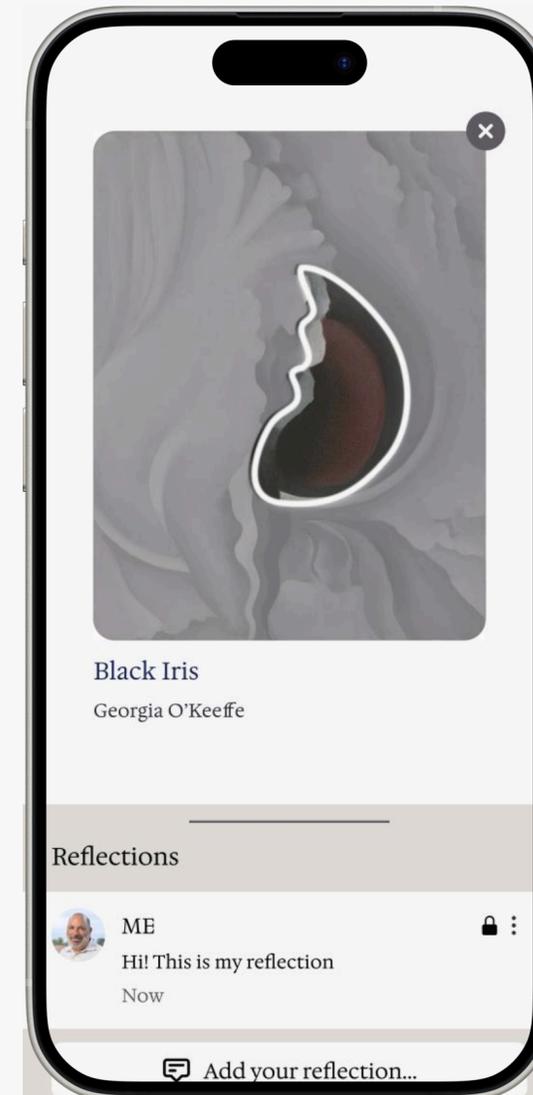
- Users cannot edit or delete their reflections once posted
- No clear indication of whether a reflection is public or private
- Highlighted regions lack visual contrast
- Reflections have no timestamps

Fixes

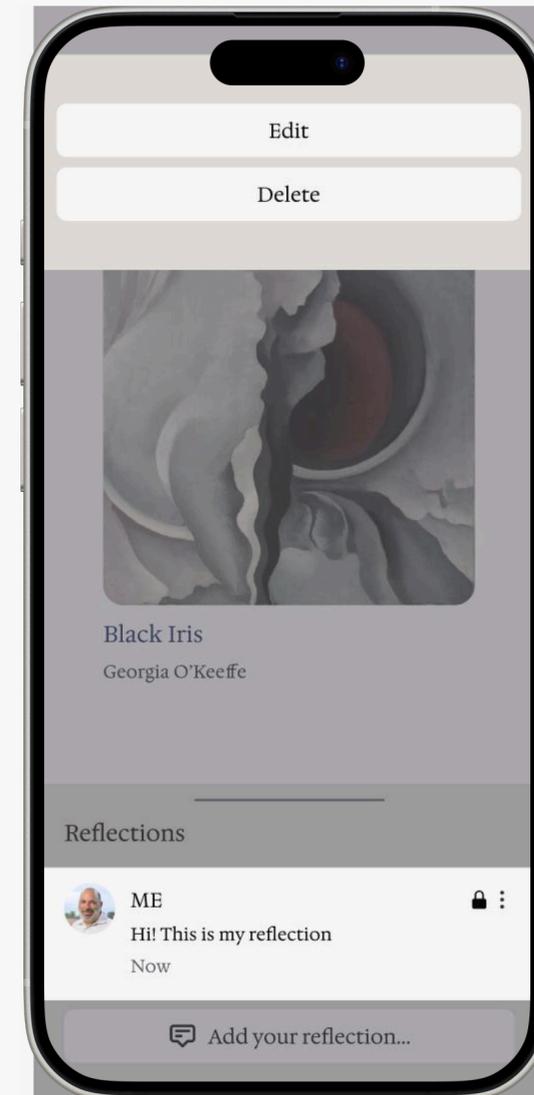
- Added timestamps so users know when each reflection was posted
- Added a lock icon to clearly mark private reflections
- Improved region highlighting with higher-contrast strokes
- Added edit and delete options for personal reflections



Before



After



After

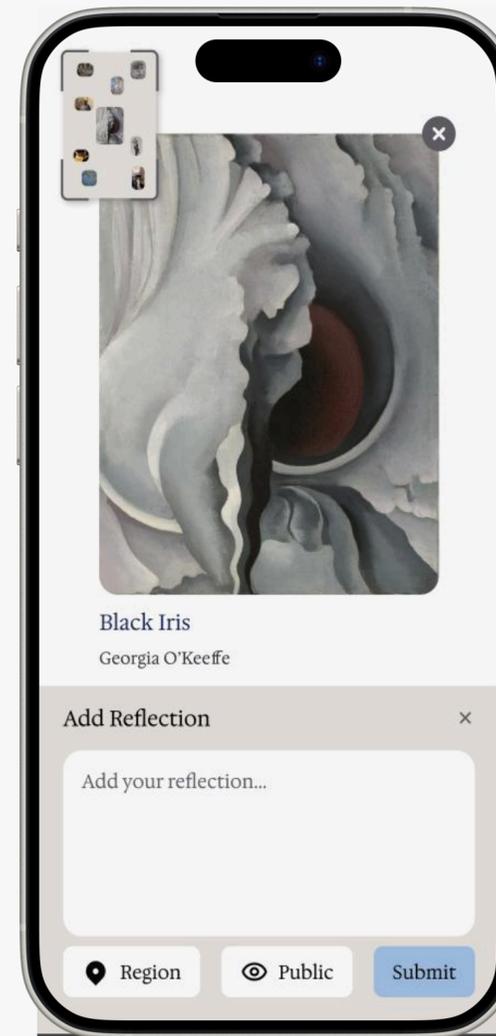
Moderate Task: Writing a Reflection

Problems

- The “Submit” button is active even when no reflection is typed
- “Region” button label does not match user expectations
- Public/Private toggle lacks visual clarity

Fixes

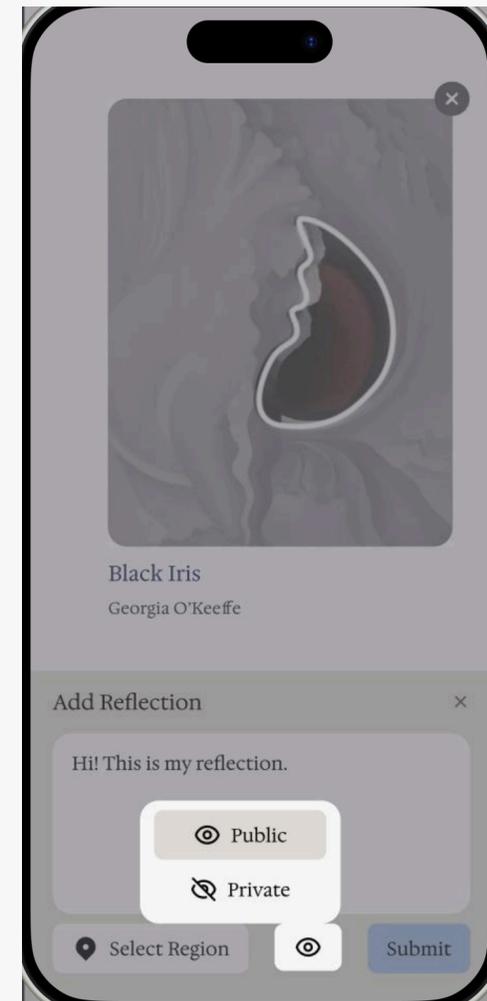
- Disabled the Submit button until text is entered
- Renamed “Region” to “Select Region” to set clearer expectations
- Replaced the public/private toggle with a drop-up menu



Before



After



After

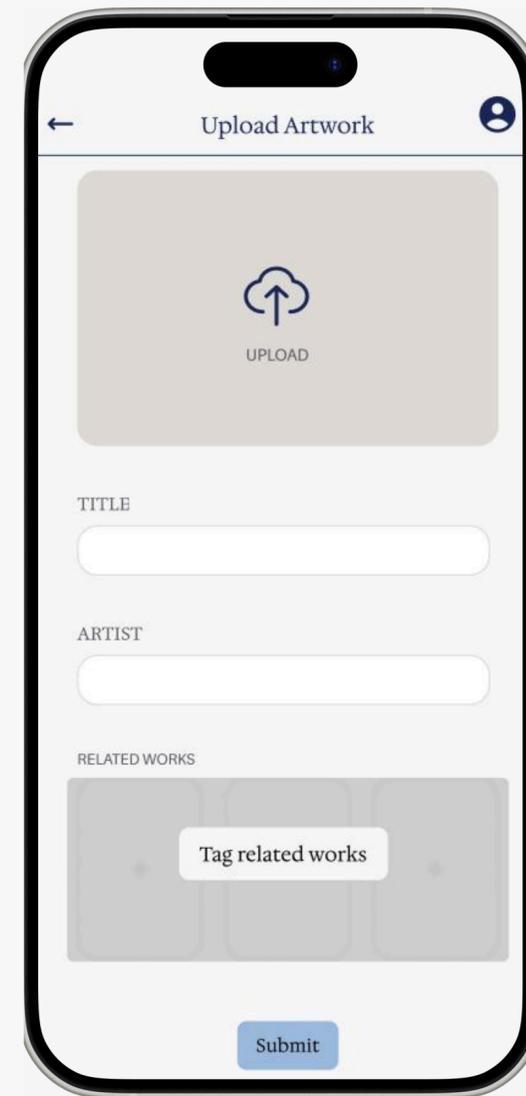
Complex Task: Uploading

Problems

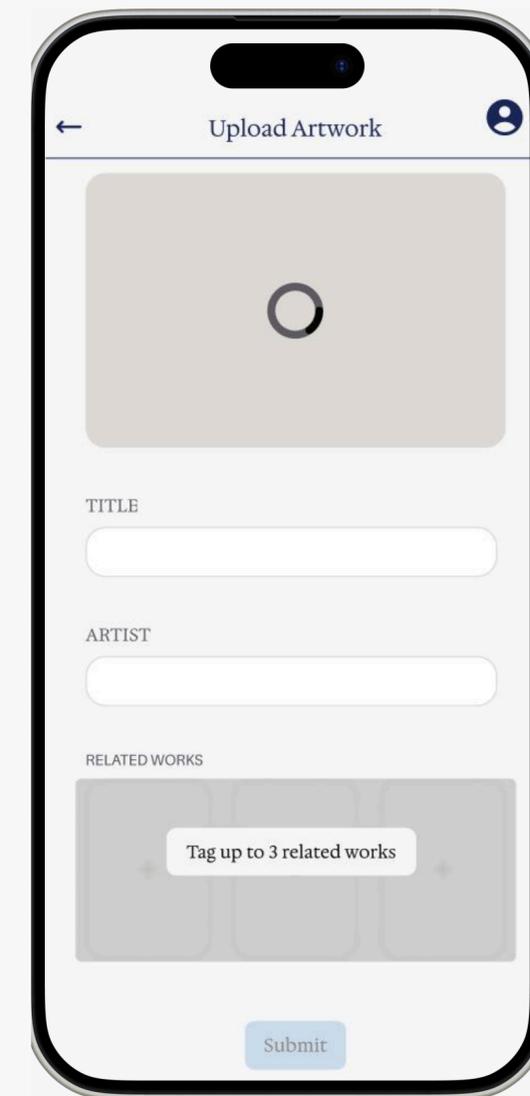
- The “Submit” button is active even when no file is uploaded
- No loading or progress feedback during uploads
- Tagging UI does not show a maximum number of allowed related works
- No option to edit or remove tagged related artworks

Fixes

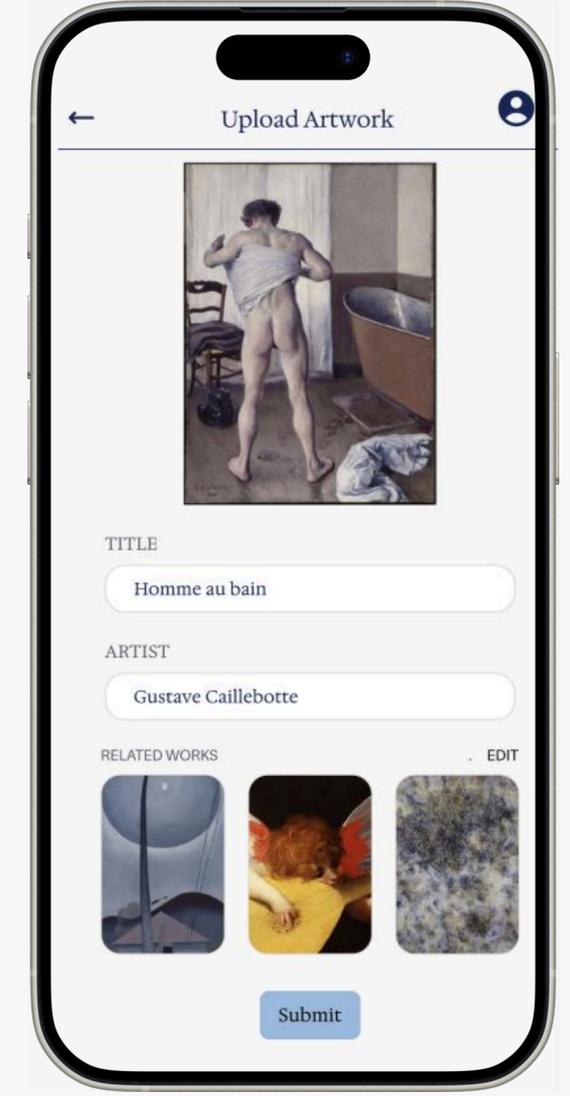
- Disabled the Submit button until all required fields are complete
- Added a loading indicator to show progress after selecting an image
- Updated the tag section label to “Tag up to 3 related works” to set the limit clearly
- Added an Edit option for related works so users can revise or remove selections



Before



After



After

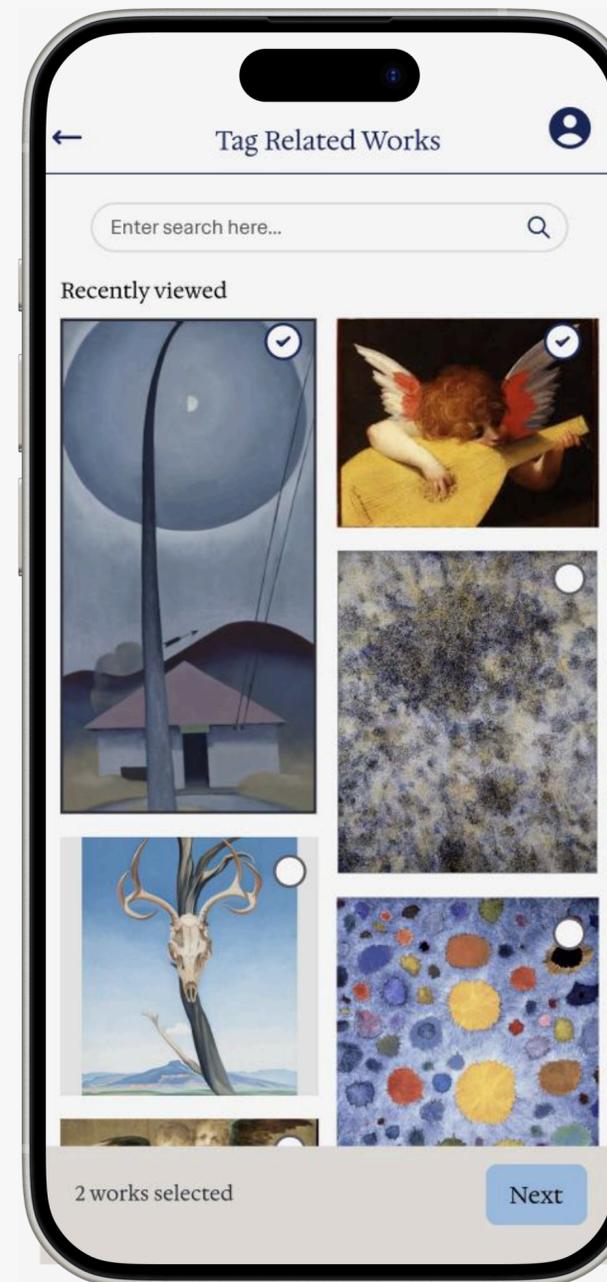
Complex Task: Tagging

Problems

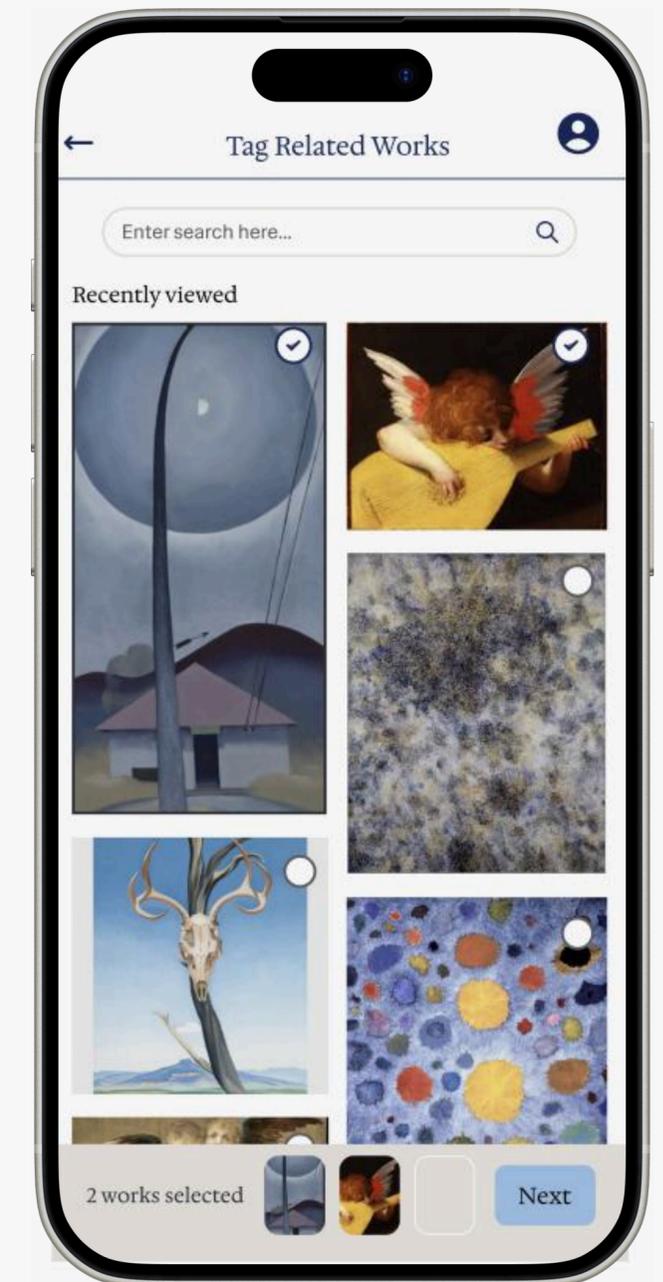
- Tagging UI does not show a maximum number of allowed related works

Fixes

- Added placeholder slots to show the 3-tag limit so users know how many related works they can select



Before



After

Usability Goals



Efficient

Tasks can be completed quickly and with fewer steps



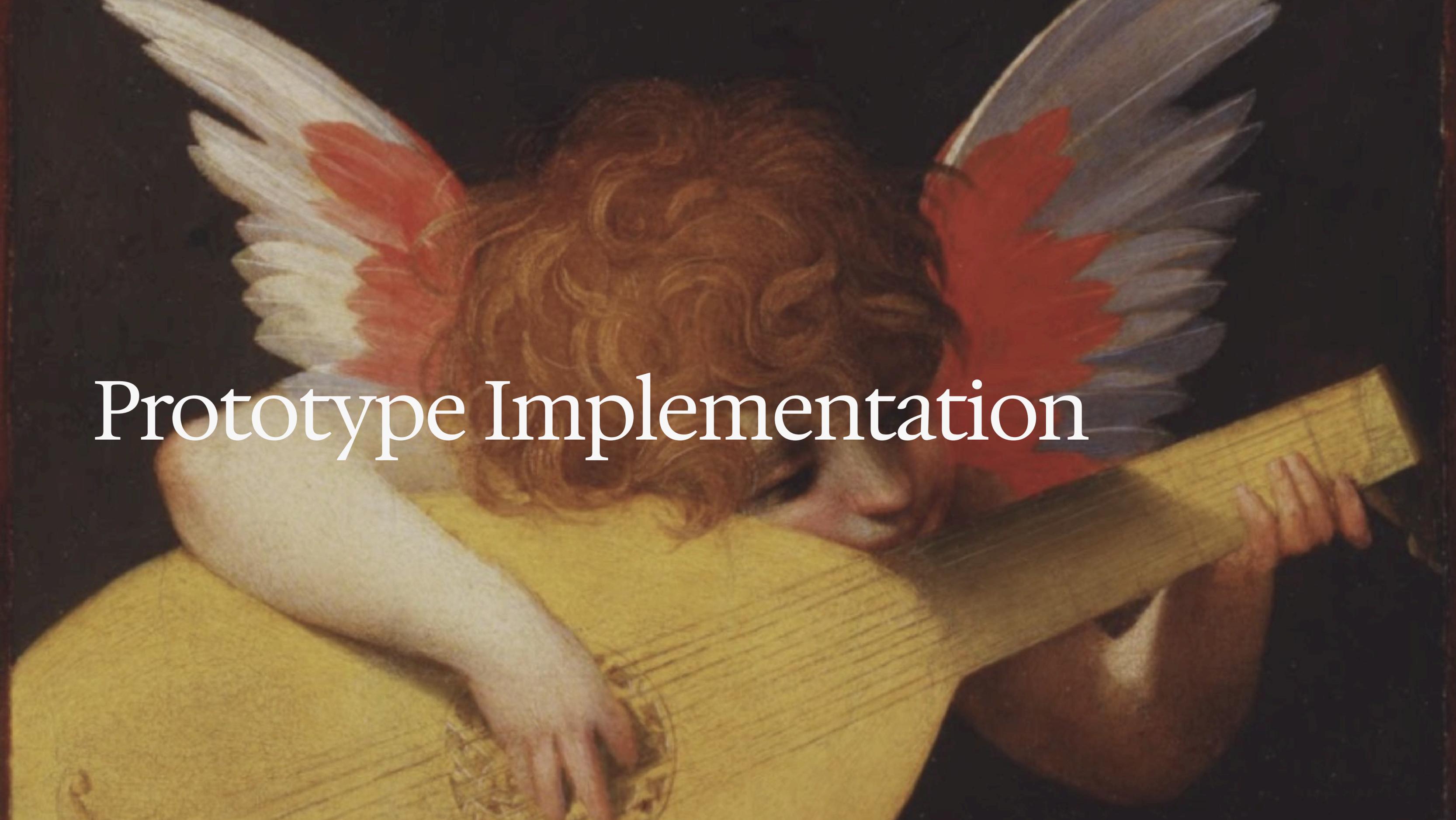
Intuitive

Actions feel natural, predictable, and easy to understand



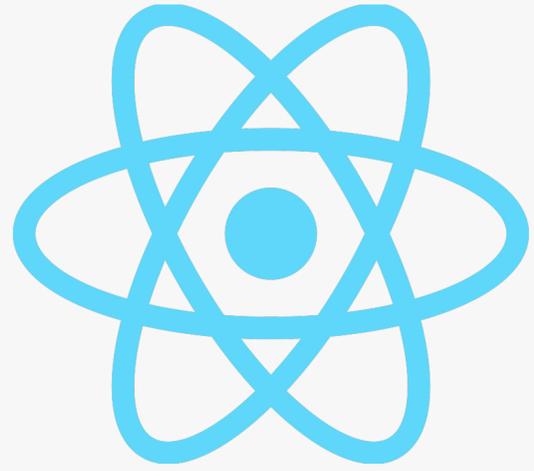
Satisfaction

Smooth, enjoyable experience that encourages continued use



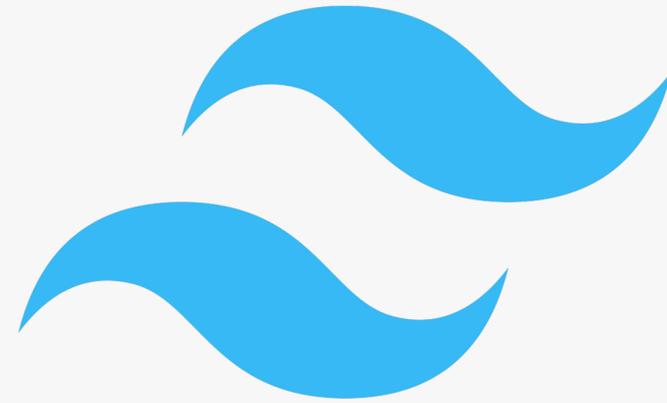
Prototype Implementation

Tools Used



React Native

Application
Framework



Tailwind

Styling
Framework



Cursor

AI-Assisted
Coding



GitHub

Collaboration

Implemented Simple Task

- We implemented a working traversal flow where users can explore a small graph, view an artwork, and return to the graph.
- Implemented dynamic graph repositioning logic from scratch (no React Native library that satisfies requirements)
- Header with navigation icons
- Selecting a node navigates to a focused view with artwork title and author
- Tap outside the artwork or tap the graph icon to return to the graph
- Basic zoom-in and zoom-out states

Unimplemented Features (Will Be Prototyped)

- Viewing comments, adding comments, and saving reflections to Supabase
- Uploading artwork from the device + full “add artwork” flow
- Search bar jump-to-artwork functionality (will be hardcoded)
- Onboarding flow that preselects the user’s starting point in the graph
- Metrics filtering button (to test “map by” options)
- Adding more artwork nodes to the graph (goal: ~30 images for exploration richness)

Wizard of Oz Techniques

- Graph similarity is determined manually rather than by real algorithms because it would require real similarity models

Hard-Coded Aspects

- Graph artworks and connections (edges)

Plans to Finish

Tuesday (11/25)

- Reflections flow (Supabase views, create) @Kat
- meta Segmentation API @Saniya
- System settings upload @Sam

Saturday (11/29)

- Search @Sam
- Onboarding set up screens @Kat
- Add 30 more images to graph @Saniya
- Metrics filtering button @Saniya

Ангел-Анна.

Анна! Станьтея наро-моя
Услышь требоваю любовь
Быть может я грешна ищи

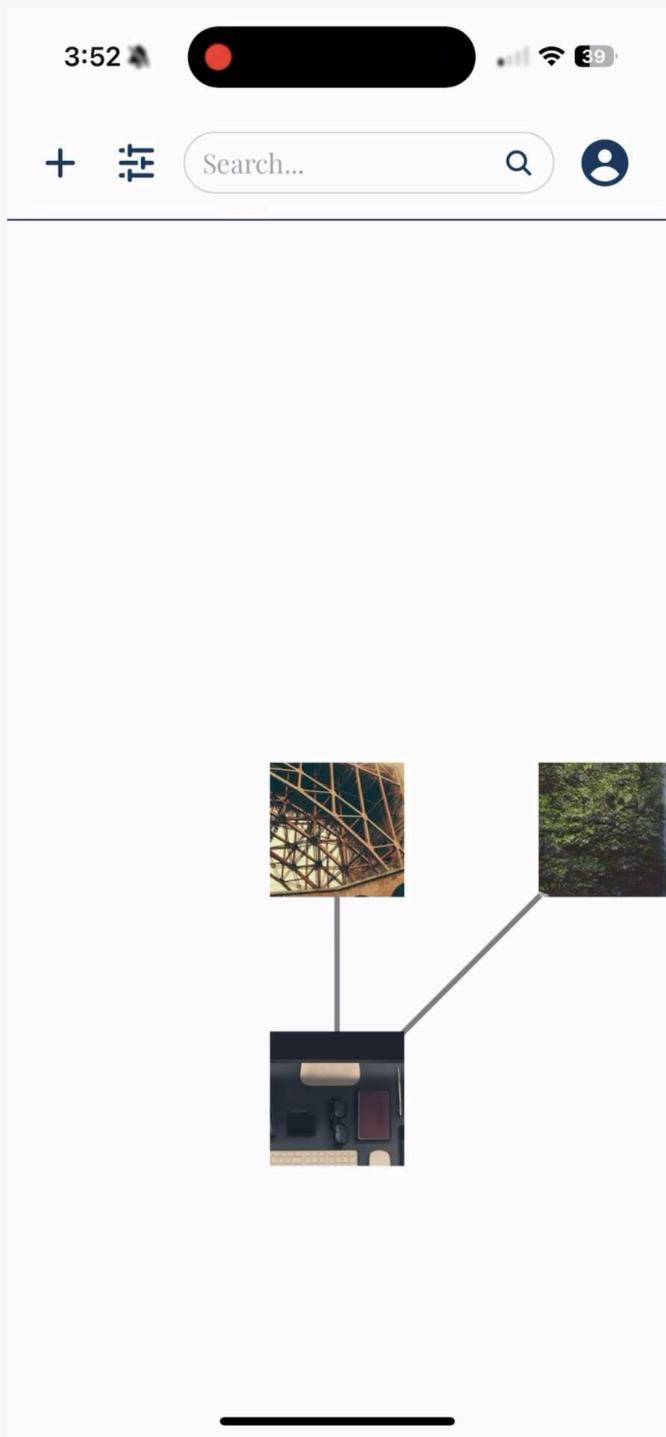
Мой ангел-Анна, ты моя!

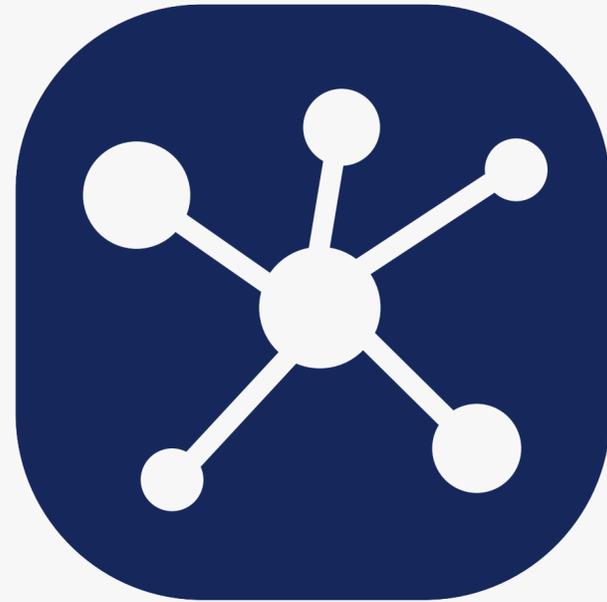
А. Пушкин

Demo



Demo





Thank You!

Questions?

Appendix



Heuristic Evaluation Review (Link)

Includes

- All violations
- “Yes/No/Modify” for revisions
- Description of revision / justification of no revision
- Check mark if revision is reflected in updated Figma

Updated Figma (Link)

Includes

- New onboarding flow
- Updates to simple/moderate/complex task

Does not include

- Prototype functionality

Unimplemented Features (Will Not Be Prototyped)

These are out of scope for the prototype:

- Actually inserting newly uploaded artwork into the live graph structure
- Changing graph layout dynamically when switching metrics

These require backend logic and real graph computation, so we're simulating them instead.

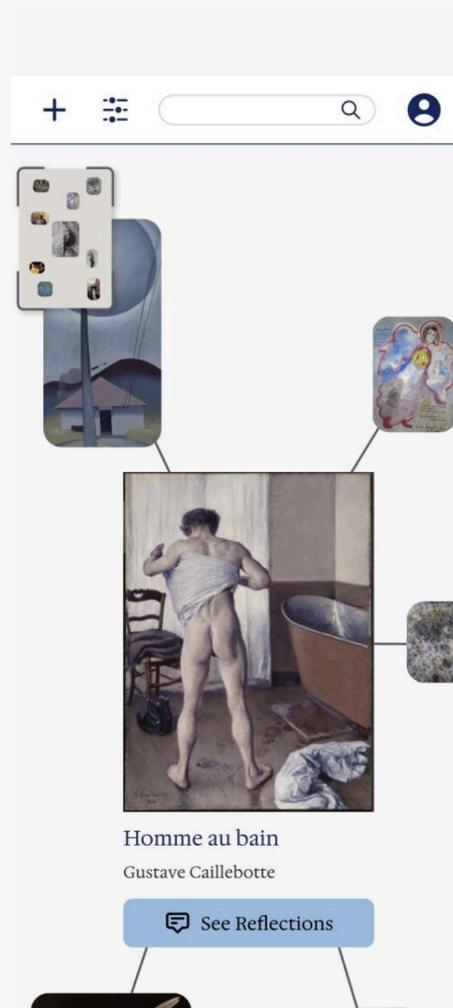
Complex Task: Uploading

Problems

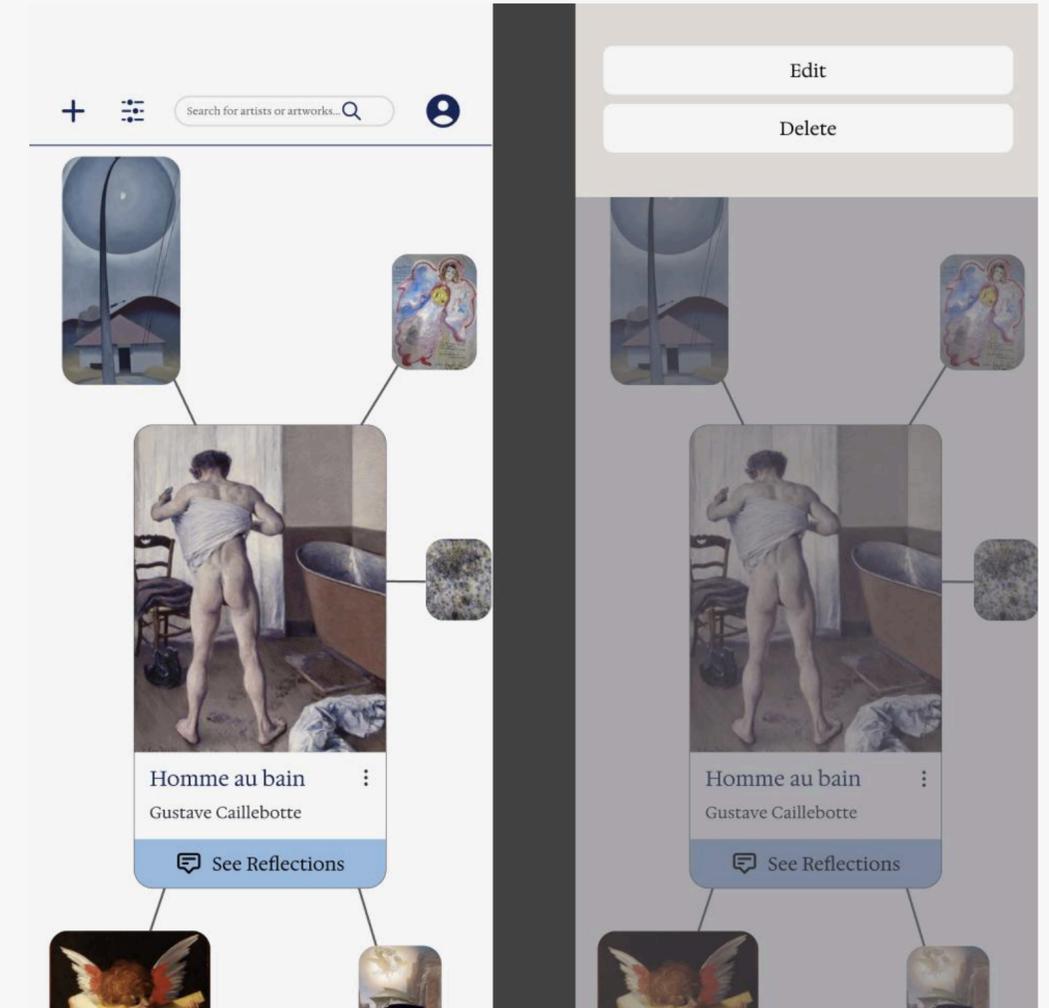
- Users cannot edit or delete artwork after uploading

Fixes

- Edit and delete options for uploaded artwork



Before



After

Progress Towards Efficiency

Progress

- Simplified the artwork view by turning the main artwork into one clear tap target
- Removed the mini-map to incentivize zoom feature
- Added timestamps, edit, and delete options to reduce recovery time

Impact

- Fewer accidental actions means fewer corrections
- Uploading, writing reflections, and tagging feel smoother
- Reduces time cost for the core tasks (reflection + uploading)

Considerations

- Streamline the onboarding flow further
- Improve tagging search results to minimize scrolling

Progress Towards Intuitiveness

Progress

- Renamed unclear buttons (“Region” → “Select Region”)
- Made visibility controls more understandable with a drop-up menu + icons
- Increased contrast for region highlights so users can see what they selected
- Added tag placeholders to show the maximum number of allowed selections
- Improved first-time graph instructions for zooming and dragging

Impact

- Users understand what to do without guessing
- Clearer labels reduce misclicks and failed attempts
- Spatial interactions on the graph feel more guided

Considerations

- Add micro-cues (like subtle animations) to reinforce gestures

Progress Towards Satisfaction

Progress

- Cleaner artwork view makes the app feel more polished
- Visibility icons create trust around public vs. private reflections
- Loading indicators make uploads feel more stable
- Edit/delete options give users control over their content

Impact

- Users feel safer sharing reflections
- The experience feels more refined and less risky
- Encourages curiosity and return visits because interactions feel reliable

Considerations

- Add richer discovery tools (search, filters, categories)
- Introduce subtle motion/animation to give the graph more “life”