

Stepping Through Time: Team 1 presents

Needfinding

A Brief Overview



Introductions

A Brief Overview

1



Introductions

2



Needfinding

3

4

A Brief Overview

1



Introductions

2



Needinding

3



Results

4

A Brief Overview

1



Introductions

2



Needinding

3



Results

4



Analysis

1

Introductions

Get to know us a little!

Who are we?



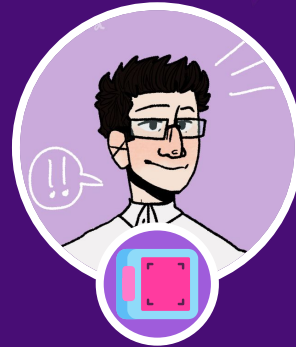
**Janine
Fleming**

Janine is a senior studying STS with a focus on Comm and Media. She loves painting and singing karaoke!



**Elizabeth
Fitzgerald**

Elizabeth is a senior/coterm specializing in computer science. She loves designing games and puzzles!



**William
Song Liu**

William is a sophomore studying CS AI track. He loves game development and playing games on PC and his Quest 2!



**Hyunseok
Hwang**

Hyunseok is a supa-senior studying CS HCI track. He loves the metaverse and is interested in the AR/VR/Web3 space!



2

Needfinding

Let's talk about our interview methodology!



**Determine our
DOMAIN!**



Memory
(Past)

Art

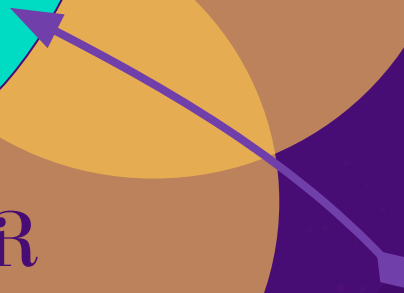
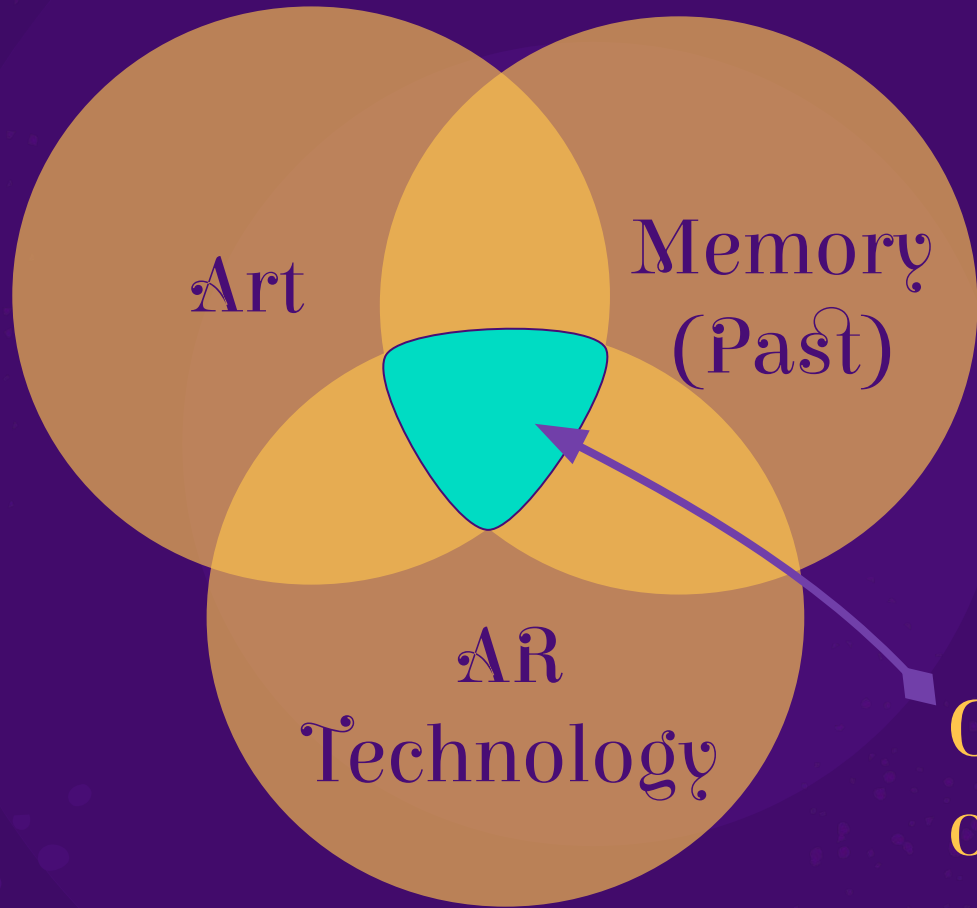
Memory
(Past)



Art

Memory
(Past)

AR
Technology



Our domain
of interest

Our participants



Veronica Graham

WHO: Art/VR Lecturer at Stanford

WHY: Explores the intersection of Art and VR technology

HOW: Live interview with written notes and an audio recording

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WHY: Can provide unique insights into music as a form of art.

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WHY: He studies the psychology of VR technology and has thoughts on how VR affects users.

HOW: Zoom meeting

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WHO: A docent at the Cantor Arts Center with 10+ years of experience.

WHY: She is familiar with how the average person appreciates visual art, and has thoughts on how traditional art should be viewed.

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Sample Questions

The background features a dark purple field with several large, semi-transparent purple circles of varying sizes. At the top, there are colorful, wavy borders in yellow, pink, and light blue. White decorative lines, including a solid curve and a dotted curve, are positioned in the upper corners.

Sample Questions



When you perform music, how do you remember your pieces?



Which would you say is strongest: your visual, audible, or verbal memory?

Sample Questions



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Which would you say is strongest: your visual, audible, or verbal memory?



As an artist, what's exciting about AR/VR technology?



What are some common uses for both AR and VR?

Sample Questions



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As an artist, what's exciting about AR/VR technology?



What are some common uses for both AR and VR?



How often do you have the opportunity to visit museums or exhibitions?



How do you remember or keep track of art pieces you were inspired by?



3

Results

Empathy maps and more!



Say

Think

Do

Feel

Traditional art galleries gate-keep their audience with barriers to entry such as money and knowledge.

Games are the biggest use case for VR, though AR can have a wider audience.

VR is sometimes used for identity work in order to show lived experiences that users may not have experienced before.

She thinks that VR art is worthwhile despite it not turning a profit.

She believes that VR/AR technology will become more integrated with everyday life.

Publishing on platforms is like an open world with freedom to explore anyone's creations.

For the average person, the future of VR/AR is now simply because of barriers to entry.

She doesn't find it important that art be an experience to be shared with others after the fact.

She thinks every design choice should be intentional and meaningful in the context of the world you are building.

She looks for ways to create innovative art.

She closed herself off a bit more when asked about flaws to how we currently consume art.

She views VR as an opportunity to worldbuild.

She would rather curate her own content from sites like itch.io than view digital art in galleries.

She feels that the ability to be immersed in an experience is an important part of VR.

She feels that younger generations are more excited or understanding of VR than her older peers.

As a creator, she seeks to have an almost "shared" experience with users.

She supports independent artists and developers.

She feels that the ability to experience perspectives other than one's own is a unique benefit of VR.

Contradictions , Tensions , & Surprises



C

She thinks the future of art is muddy, but that it can also be seen in the present.

She finds it important for art to be a shared experience between creator and viewers, but not between viewers themselves.

T

She is forced to acknowledge that VR galleries are a successful form of VR, particularly for art, but she doesn't like them that much.

It feels like wants to like AR, but doesn't see a strong future in it.

S

We were surprised by how much she seemed to dislike most VR art galleries.

We were surprised that she didn't believe that viewing art needed to be a shared experience.

We were surprised to learn that AR is fairly challenging to work with.



Enjoying art is an individual activity.

Say

Think

Do

Feel

He remembers all the pieces he has learned to play without keeping a formal record of them.

He cannot take notes during performances because he loses the immersion of the experience.

Enjoys talking about when the other person has an in depth knowledge of the art in question.

He places a great deal of import on how emotionally expressive a piece of art is.

Conversion of music which is an auditory form of art into a mosaic of colors which is a visual form of art is cool.

He believes there is an objective quality to art, at least as far as piano goes.

He believes that although there are variations in meaning from artist to artist, there is an inherent meaning granted to piano pieces by their composers.

He thinks emotional expression while playing pieces comes from a lot of practice and having confidence.

He utilizes minimal technology when practicing piano (i.e., metronome, iPad for sheet music).

He only remembers the overall feeling coming out of the recital, not necessarily the name of specific pieces.

He listens to different recordings of the same piece to develop a standard of perfect performance.

He is uncomfortable discussing other (private) piano performances he has viewed.

He feels strongly about the fact that inspirations from other artists are the essence of creating new art.

Traverses through his memory in terms of time to space to actions.

When attending public music performances, he speaks to the performing artist (if possible).

He enjoys talking to other knowledgeable artists about music.

He is curious about the intersection between technology and music.

Contradictions , Tensions , & Surprises



C

He considers emotional expression to be a very important part of a performance, but when asked how he expresses himself, does so through incredibly technical thinking.

While he says artists apply their own interpretations to playing a piece, there still exists a set boundary where creative expression is limited.

T

He seems to be very capable of critically judging performances but does not do so because of social norms and out of respect.

He seems to be invested in arts but is not able to recall the name of the pieces.

S

He did not consider the enjoyment of art to be a shared experience.

Despite being so technically minded, he clearly thinks deeply about the emotions perceived from art.

Emotions entail much more than the specific of the art.



Say

Think

Do

Feel

Interacting as an anonymous user creates new opportunities for social settings.

Spatial and physical learning is good in VR, however, it is bad for remembering declarative knowledge in VR.

Increased immersion in VR has a negative correlation with memory.

Interactive art in VR has a lot of potential to change the way people perceive and interact with art.

Bringing all senses via virtual reality technology is key for immersion

VR experience is optimal when the activities involve a temporal (time and space) aspect

Favorite VR museum is "museum of other realities"

Hardware and software for VR is ready to be adopted by the masses but innovative contents are required in the long run.

Virtual reality has lots to offer in the realm of Experiential art

Co-founded Strivr, b2b vr content platform focused on education of warehouse workers.

Interacts with art and sculptures in virtual reality.

Passionate about location based entertainment and strongly encourages us to check it out.

He can enjoy art in vr both by himself or with other people. Virtual reality opens doors for new kinds of interactions

Goes to virtual museums and exhibitions.

Tries out the newest contents on VR to get inspiration for new research projects.

Cynical that cost is a barrier for the consumers as mobile phones cost 3 times as much.

Cutting up art pieces and manipulating art in virtual reality is cool

Despondent about the fact that there is lots of high quality content that cannot be experienced in standalone VR goggles.

Contradictions , Tensions , & Surprises



C

Viewing 2D art in virtual reality instead of crowded museums is better but he would rather interact with 3D art in VR than 2D.

Declarative/factual learning is decreased as immersion in virtual reality increases.

T

There is a lot of high quality content out there in the world but standalone devices cannot handle the computing power.

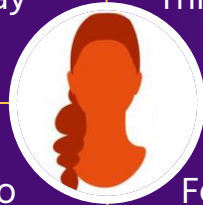
VR is not universally applicable to everyday activities.

S

Standalone VR headsets have changed the landscape of the VR industry.

Key factor for mass adoption of VR technology is creating useful and highly applicable content.

Many of the art forms in VR are experiential.



Say

Think

Do

Feel

It's important for visitors to have a personal, first encounter with a piece of art

It's hard to talk about a specific art piece with another person w/o both people being in the same location

Remembers feelings rather than exact words/statements from an art piece

It's important/fun to listen to other people's opinions on art, but not before forming an opinion of your own

Journaling/writing down thoughts about an art piece in the moment is too much of a hassle

Being able to easily comment/have dialogue with people/close friends is the only valuable thing one can do through social media

It would be nice to have a given framework/vocab to talk about art

Remember the overall style of the art (like color, sometimes composition) over details like artist's name, background info etc; Visual > Verbal

Digital technology can't capture the size and/or immersiveness of some art pieces

Colorful, or more thought-provoking art pieces are easier to recall/remember

Doesn't journal down her thoughts, feelings or observations about an art piece

Went on a tour herself, where the docent encouraged interaction; hears other people's perspectives that she differed from hers

Likes to visit museums, will go to the same museums multiple times

She's disappointed that she can't always recall/remember the entire experience of viewing an art piece

Loves art and the kind emotions that come with experiencing it

Doesn't feel the need to share what she felt about specific exhibits or art, outside of her time as a docent

Shares some travel, art and food posts with a few friends on Facebook, not so much with family

She's connected to her identity as a Taiwanese; feels a strong connection to Asian-American art/museums

Is easily enveloped by larger paintings in person

She feels restricted/finds it hard sometimes to describe art/feelings about art to other people

Contradictions , Tensions , & Surprises



C

She loves talking about art with others/hearing different opinions, but doesn't feel the need to discuss/share thoughts on art outside of her job as a docent.

She wishes that she remembers more about the art pieces she sees, but doesn't have the habit of journaling about it.

T

Thinks digital spaces have provides some benefits in sharing art (ex: accessibility/access during the pandemic, taking pictures to remember), but finds that they provide less of an immersive experience than looking at pieces in-person


S

As a docent, she prefers visitors to have an individual, first impression of art pieces and gives them time to reflect. Then, if necessary, she'll provide background information about a piece. This is different from other tours, where usually tour guides go immediately into explaining the background/highlighting parts of an exhibit

4

Analysis

Where do we go from here?



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Art is primarily remembered by the emotion it evokes, and then the details of the piece of itself.

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VR/AR technology provides unique opportunities for 3D art and immersive experiences.

Art is primarily remembered by the emotion it evokes, and then the details of the piece of itself.

People who are knowledgeable about art like discussing pieces with other knowledgeable people.

The background is a dark purple color with a subtle pattern of small white dots. There are several large, overlapping shapes in shades of purple and yellow. A large, solid purple circle is centered in the background. In the top-left corner, there is a yellow shape with a purple border. In the bottom-right corner, there is a pink and purple shape. White wavy lines with dotted borders are scattered around the edges of the image.

Plans going forward...



Create POVs



Create POVs



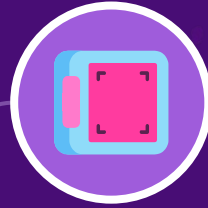
**Conduct more
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Create POVs



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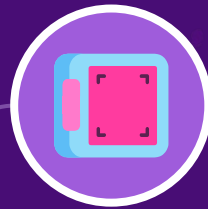
**Analyze new
data**



Create POVs



**Conduct more
interviews**



**Analyze new
data**



**Generate HMW
statements**



Questions?



Thank you!