

# Needfinding

Empowerment through Mixed Reality Applications

# Introduction

**Members:** Alex, Kaley, Hana, Josh

**Problem Domain:** Empowerment through Mixed Reality  
Applications

# Methodology

Wanted to interview people who are passionate about something: **art, gaming, sports, theater...**

Chose people whose lives revolve around their dedication to a particular hobby or interest

Interviewed people in comfortable, familiar locations (**dorm rooms**) or over the Internet (**Skype**)

# Interviewee #1: Reilly



**Athlete** (rower)

Dedicates 30+ hours a week to rowing

Mechanical engineer

Enjoys camping

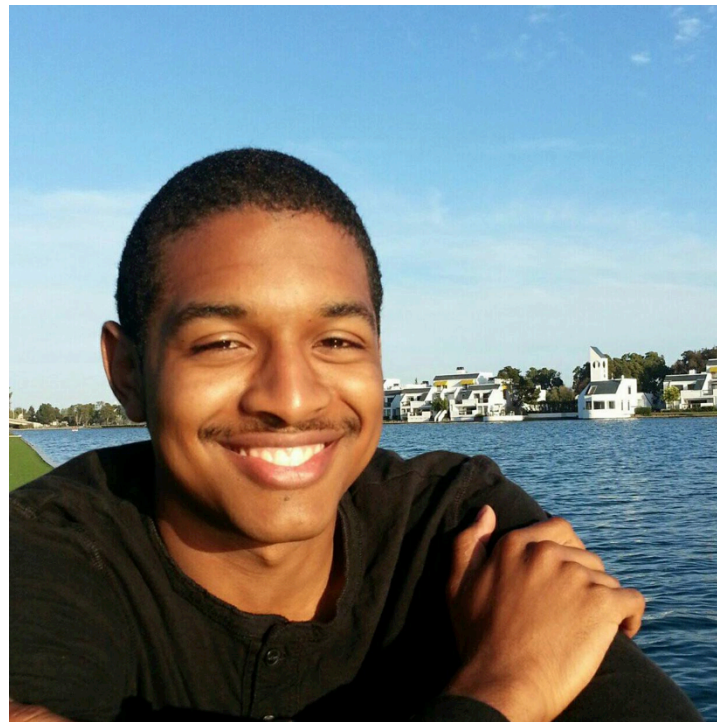
# Interviewee #2: Micah

## Gamer

Has several gaming setups  
(desktop, console, etc.)

Marvel fan

Proud of his academic  
accomplishments



# Interviewee #3: Lauren



## Artist/Muralist

Following her passions

Feels strongly connected to her surroundings

Complex relationship w/ people

# Interviewee #4: James Sherwood

**Theater** (producer)

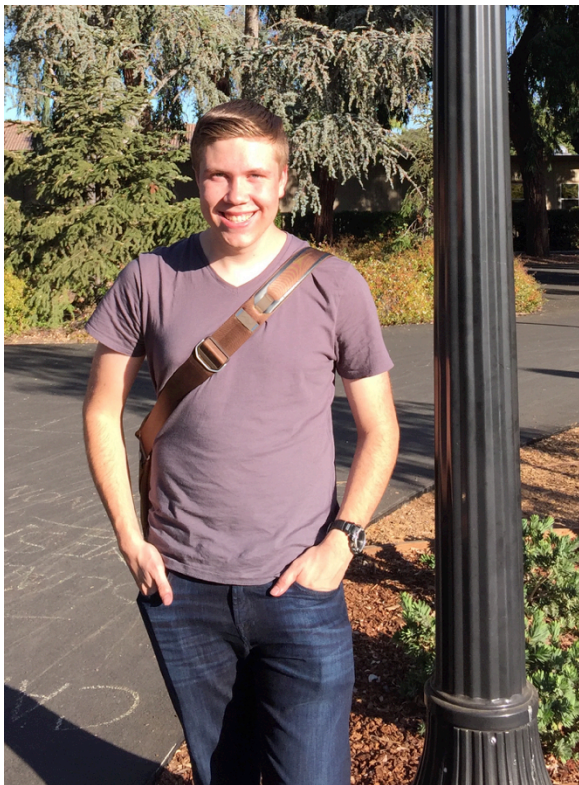
The experience of waiting for a show to start is boring

Pre-visualization for lights takes 60 hours, and stage prep for lights takes 80 hours

Pre-visualization software can be inaccurate



# Interviewee #5: Steven Hitchcock



**Theater** (lighting/set designer)

There are hundreds of individual controls for theater lighting and sound

Lighting pre-visualization can be inaccurate, and it can be difficult to tell which light is causing problems

# Results



Everything in **Reilly's** routine ties back to rowing

She enters a “flow state” when she rows

She spends a lot of time commuting to and from rowing practice

# Results

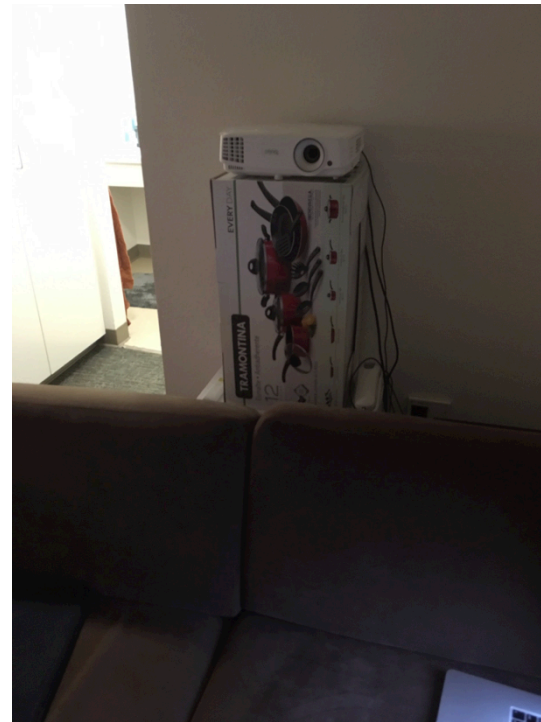
**Micah** doesn't want to  
“seem interesting”

He games at night so he  
doesn't “waste time” during  
the day

He wants to make the “best  
lemonade”



# Results



# Results



**Lauren YS** didn't want to show us her face

She prefers working outdoors and finds studios lonely

The best way to truly know someone is to “share a bed with them”

# Results

The image is a screenshot of a web browser displaying a Google search for "lauren ys muralist". The browser's address bar shows the search URL: [https://www.google.com/search?q=lauren+ys+muralist&rlz=1C1CHFX\\_enUS511US551&source=lnms&tbm=isch&sa=X&ved=0ahUKEvjk4t20tMXPAhUp2IMKHSp3GJEQ\\_AUICgB&biw=1522&bih=730](https://www.google.com/search?q=lauren+ys+muralist&rlz=1C1CHFX_enUS511US551&source=lnms&tbm=isch&sa=X&ved=0ahUKEvjk4t20tMXPAhUp2IMKHSp3GJEQ_AUICgB&biw=1522&bih=730). The search bar contains the text "lauren ys muralist". Below the search bar, there are tabs for "All", "Images", "News", "Shopping", "Videos", and "More", with "Images" selected. A "Safe Search" dropdown and a settings icon are also visible. The main content area displays a grid of 24 images, each showing a different mural by Lauren Ys. The murals are highly colorful and feature stylized, often grotesque or fantastical figures, including faces with large eyes, tentacles, and abstract forms. Some murals are on walls, some on a bus, and some are smaller pieces of art. The bottom of the page shows a partial URL: <https://www.google.com/imgres?imgurl=http%3A%2F%2Fnews.1xrun.com%2Fwp-content%2Fuploads%2F2015%2F06%2Ftati-suarez-caratoes-lauren-ys-jansport-mural-sf-street-art-1xrun-01.jpg&imgrefurl=https%3A%2F%2Fnews.1xrun.com%2Ftati-suarez-lauren-ys-caratoes-in...>

# Results



# Results

**James Sherwood** felt that waiting for a show to start is boring

He also felt like that pre-show set up can be iterative, time-consuming, and frustrating



# Steven Hitchcock



**Steven Hitchcock** found lighting pre-visualization software to be inaccurate.

He wished that there were easier ways to track lights in a show during set setup.

# Analysis - Reilly

## Say

- Hates driving 10hrs/wk
- Thinks in terms of teams
- Enjoys external validation
- Likes making others feel loved

## Do

- “Loves oversharing”
- Leaned forward, open
- Visibly excited about compliments
- Visibly angry about past coach

## Think

- Interview messing with bedtime
- Why do I only talk about rowing?
- What would life be like without this long commute?

## Feel

- It bugs me when the routine breaks down
- I wish I was more confident that I was doing everything right
- I like having my life figured out

# Analysis - Micah

## Say

- Wakes up and “checks channels”
- Feels guilty gaming during day
- Wants to make the “best lemonade”

## Do

- Stiff and nervous for most of interview
- Lights up when discussing Marvel/lemonade
- Embarrassed/hesitant about gaming

## Think

- Gaming is embarrassing
- I have to break stereotypes
- I want to accommodate other people

## Feel

- Guilty about the way I spend my time
- Embarrassed to talk about passions
- Excited about Marvel, lemonade, cooking

# Analysis - Lauren YS

## Say

- “I don’t do FaceTime video”
- Process: “2-day banger”
- Likes “busted houses,” “color of rust,” and “the way people talk” in Detroit

## Do

- Wouldn’t show her face
- F-bombs, relatable, earnest
- Sadder, lower register when discussing her depression

## Think

- I can be better
- I’m doing what I love and I’m lucky
- Following a passion is important

## Feel

- I feel intimate with other artists
- I feel lonely in a studio
- I feel a lot of potential in an empty wall
- I feel lonely in my own head

# Analysis - James Sherwood

## Say

- “Playbills are outdated”
- “Set plans are created on paper, usually”
- “We have two days to complete a lighting setup”

## Do

- Used hand-motions to describe stressful situations
- Frowned when thinking smartphone-assisted special effects in theater

## Think

- Show production is extremely stressful
- The theater experience is primarily about storytelling

## Feel

- Excited about reducing pre-show preparation stress
- Excited about improving the experience of someone who’s waiting for a show to start.

# Analysis - Steven Hitchcock

## Say

- “There are hundreds of lights to control on stage”
- “It’s difficult to tell where lights are on stage during set up”

## Do

- Grinned when talking about late nights in theater
- Grinned when talking about all of his theater lighting gadgets

## Think

- Lighting pre-visualization software is lackluster
- I wish I had a better way to understand where my lights are during set up

## Feel

- Frustrated that lighting pre-visualization software is often inaccurate
- Thankful that pre-vis software exists

# Needs and Insights

**Reilly** has a need for external validation; it impacts everything else

She has a fractured work style at times - 15 minutes at a time

She needs to be always reaching toward something

# Needs and Insights

**Micah** needs to feel confident and inspired

He needs to feel like he's not wasting time when he indulges his passion for gaming

He wants to fit into the crowd and not stand out

# Needs and Insights

**Lauren** wants to feel connected to other people, but she also wants to maintain a barrier (hiding her face)

She needs to feel open spaces and sunlight

She needs to feel like she's not in her own head when she's working

She feels like giving and making murals is worth it on their own; doesn't need validation

# Needs and Insights

**James** wants the set and lighting design process to be intuitive, but appreciates the complexity and importance of existing tools.

He's skeptical about the use of theater-goer facing technology during a show--he thinks it might be distracting--but he thinks that such technology might improve the theater experience before the show starts.

# Needs and Insights

**Steven** wants the process of creating lighting and effects for a production to be as intuitive as possible, and feels that it's incredibly complex and stressful right now.

He loves theater and tech, and is optimistic about how new technology can enhance the experience of a theater-goer.

# Summary

We discovered a need to **feel confident** and **not get wrapped up in your own thoughts**, as well as a desire to **escape the need for others' validation**

We found both **satisfaction** and **guilt** about devoting your entire life to one hobby or interest

In theater, we found a lot of **pain points** associated with the **lighting and production process**. We also found that some aspects of the theater-goer experience could be improved.