

NEW MEDIA TEAM PROJECT

# BEAM BEATS

a project by

B & THE  
LAZERS

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## MEET B & THE LAZERS

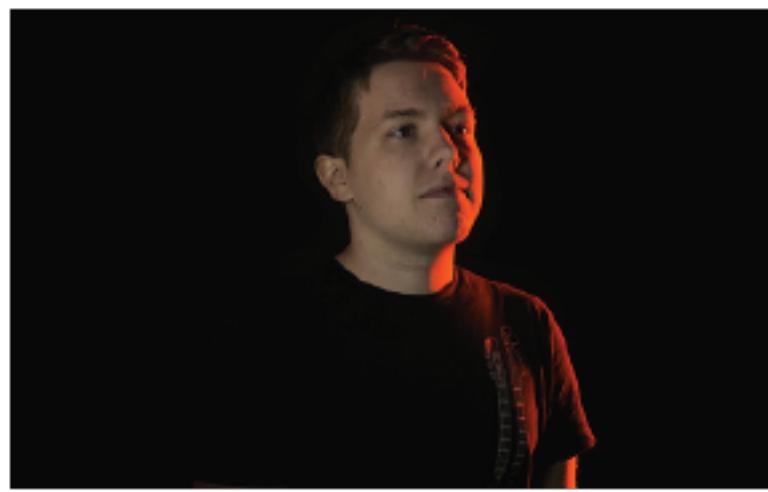
**OLIVIA GRACE**

Team Lead



**BRENDAN WHITFIELD**

Lead Developer



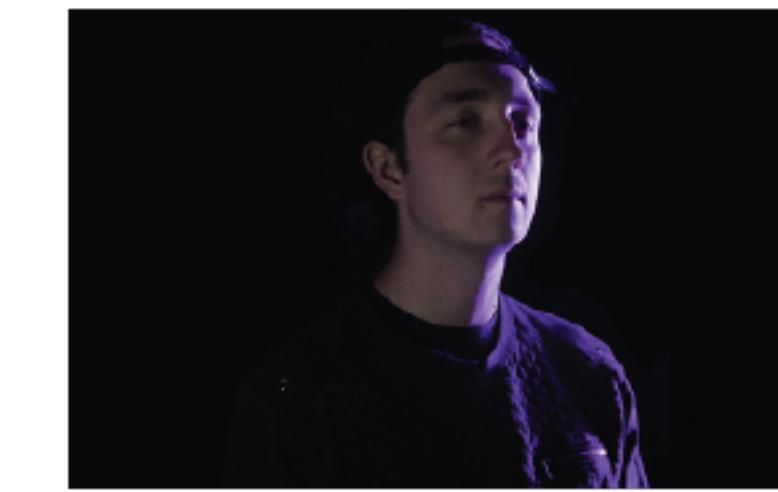
**COURTNEY BOIRE**

Lead Designer



**CAMERON ROBINSON**

Lead Designer



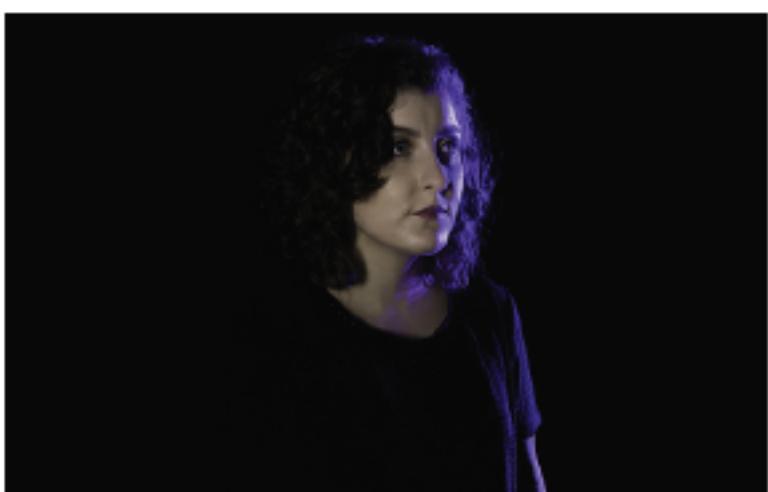
**NICK MINNOE**

Developer



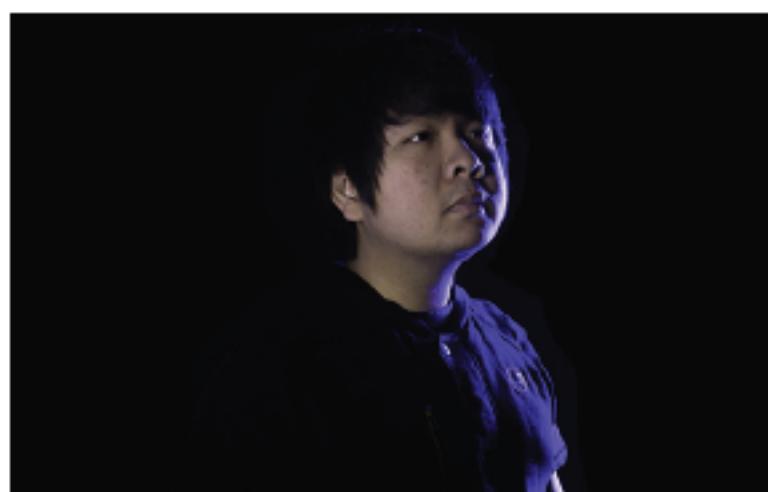
**NICOLE DOMBI**

Designer



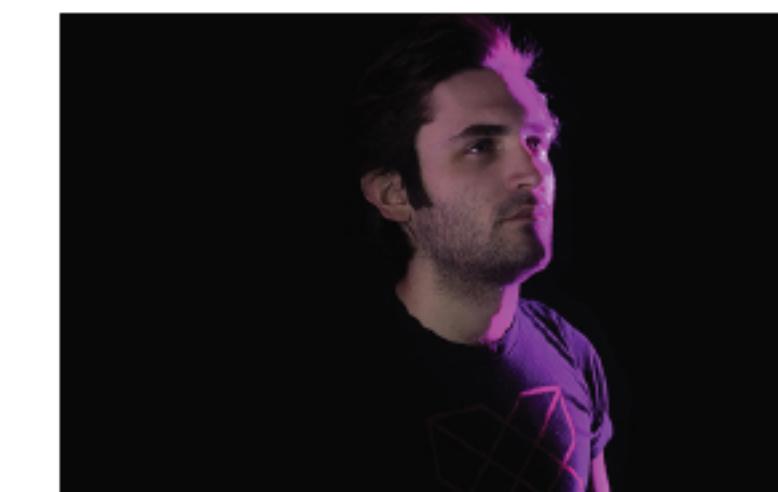
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Designer



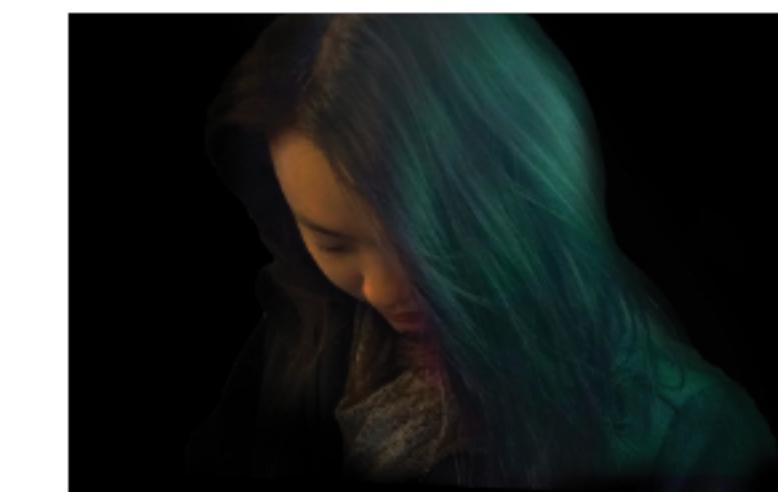
**MAX WHITEHEAD**

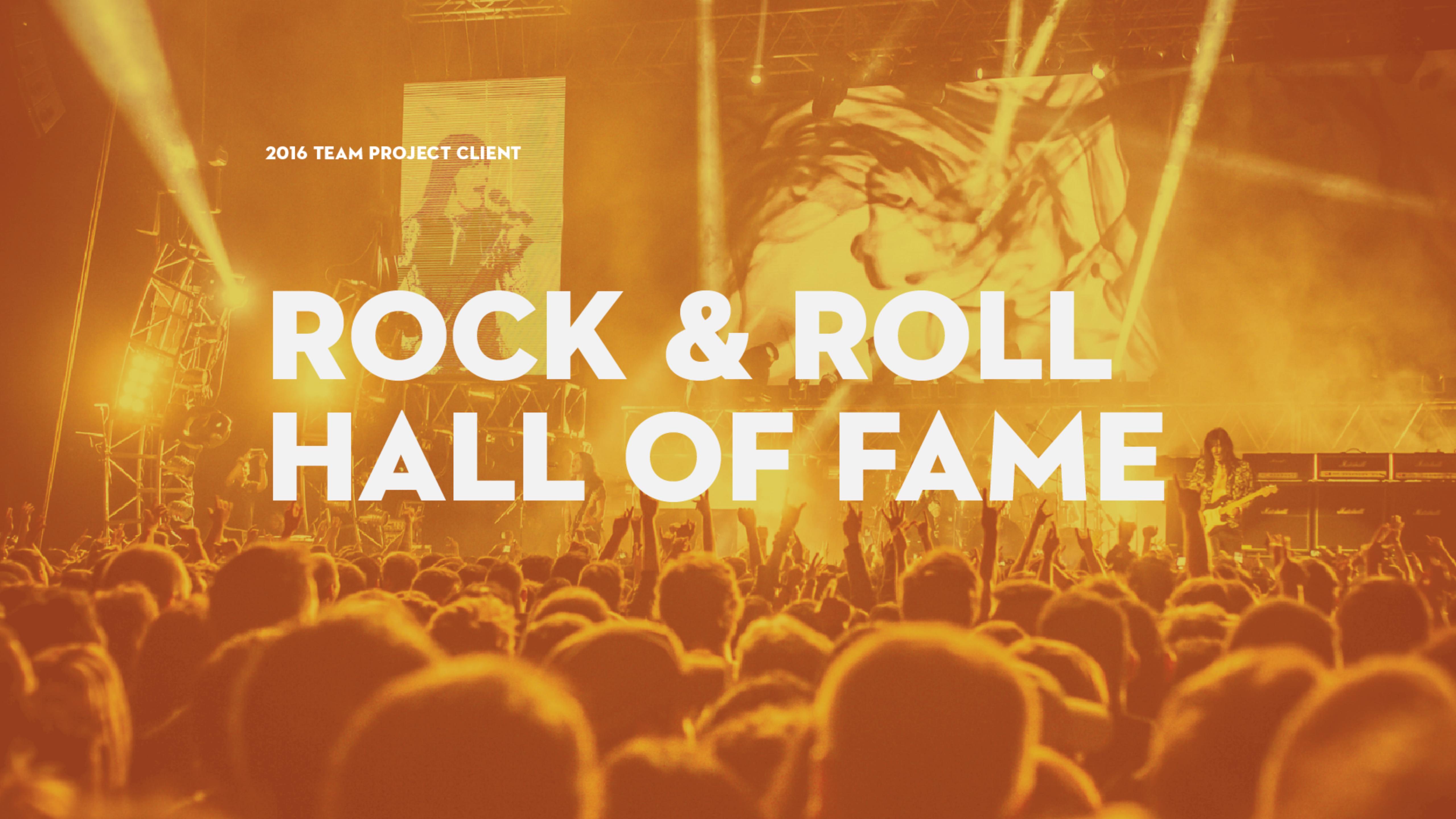
Industrial Designer



**YUMI KIM**

Developer



A vibrant, orange-tinted photograph of a concert scene. In the foreground, the silhouettes of many audience members' heads are visible, looking towards the stage. On the stage, several musicians are performing under bright, colorful lights. A large vertical banner is positioned on the left side of the stage, featuring a portrait of a person and the text "2016 TEAM PROJECT CLIENT".

2016 TEAM PROJECT CLIENT

# ROCK & ROLL HALL OF FAME

**BRIEF**

THE ROCK & ROLL HALL OF FAME ASKED FOR OUR HELP  
TO ATTRACT MORE VISITORS TO THE MUSEUM AND  
CREATE / MAINTAIN CONNECTIONS WITH VISITORS  
AFTER THEIR VISIT.

## THE PROBLEM

# LOTS OF CONSUMPTION, LITTLE TO NO CREATION.

After going on a little field trip to the Rock & Roll Hall of Fame, our team identified the major problem with the visitor's experience in the Rock Hall. There was a lot of content for visitors to consume, endless cases of memorabilia, and music archives. Yet, the Rock Hall did not provide any way for the visitors to create music.



**OUR SOLUTION**

BEAM BEATS: A LIFE-SIZE, COLLABORATIVE MUSICAL INSTRUMENT THAT ALLOWS USERS OF ALL SKILL LEVELS TO BECOME MUSICIANS.

**OUR GOALS****ALLOW VISITORS TO EXPERIENCE  
THE SPIRIT OF ROCK & ROLL**

Rock & Roll is about the spirit of reckless creativity. We want to bring that experience to the visitors by allowing them to experiment and create their own music in the Rock Hall

**LET VISITORS CREATE AND BRING  
HOME A UNIQUE KEEPSAKE**

Each song is unique and there's endless possibilities that visitors can create through Beam Beats. We want them to be able to bring home a unique memory from their visit.

A person with long hair and glasses is playing a drum set. A bright, glowing blue light emanates from their body, creating a circular glow around them. The background is dark.

BEAM BEATS

# EXHIBITION COMPONENTS

## BEAM BEATS EXHIBITION COMPONENTS

Beam Beats requires several components to make the full exhibition working. The components will be explained in further detail in the following pages of this document. There are four main components to our exhibition:

### 1. PHYSICAL INSTRUMENT

Two digital projectors which produce our beams of light. To play this instrument, users simply place their hands in the light. Using two USB video cameras, running computer vision software, we are able to detect the user's hand.

### 2. BRANDING

Before we started any digital design, we defined some branding guidelines to make all of our designs more cohesive.

### 3. VISUALIZATION

While playing the music instrument, the notes are visualized in real time through Processing. This visualization is projected in front of the users while they play the instrument.

### 4. WEBSITE

Once the users are done playing, they can find their visualization on our website. On the website, they can edit their visualizations and email it to themselves.



BEAM  
TEATS



# PHYSICAL INSTRUMENT

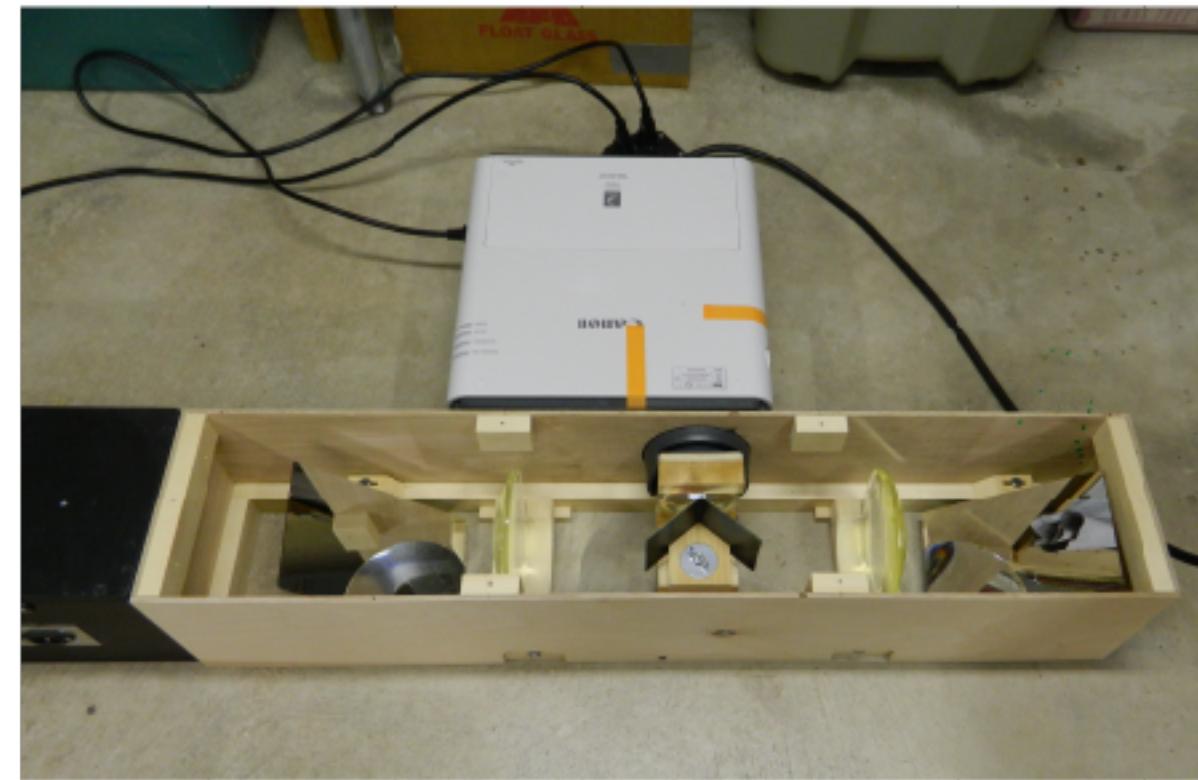
## INSTRUMENT COMPONENTS

There were a few components to the physical design of the instrument:

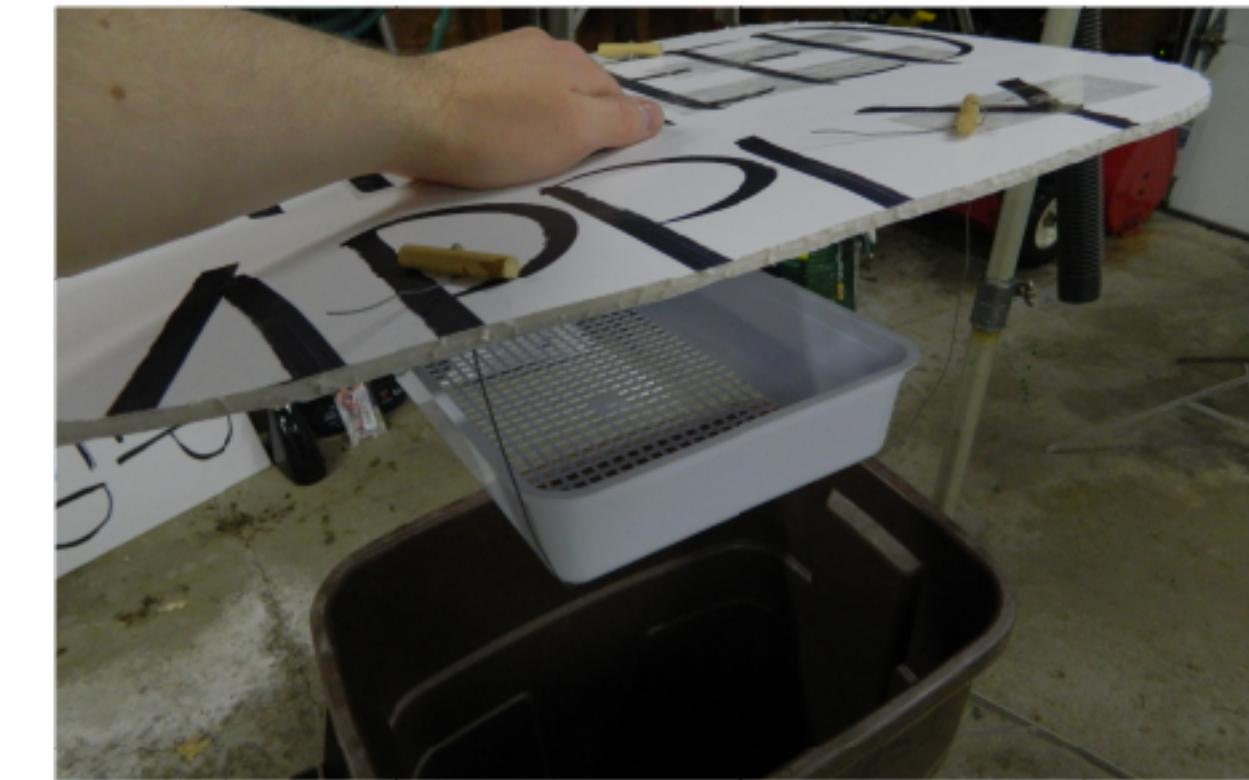
TRUSS



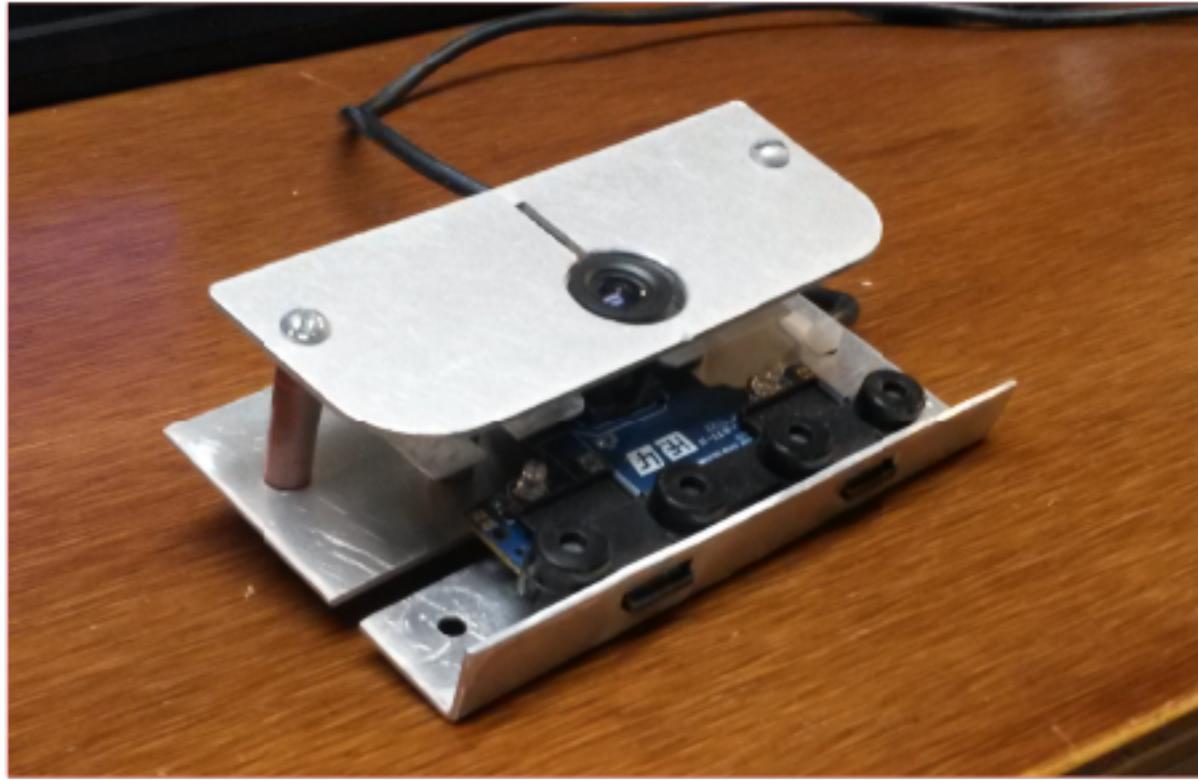
BEAM BOX



DRY ICE CONTAINER



CAMERAS



SYNTHESIZERS





**VISUALIZATION**

## VISUALIZATION COMPS

After many brainstorming and sketching sessions, we decided that our favorite solution was a circular visualization that was otherwise literal in its translation. We used the same components listed previously (note, octave, beat, and duration) and wrapped the timeline around a circle so when complete, you can't tell where it starts or ends.

### NOTE = POSITION

The note played on the beam is translated onto the visual as a position relative to the center of the circle.

### OCTAVE = COLOR

Since each beam is a color, the color of the note placed on the visual is representative of which beam it was played on.

### BEAT = PLACEMENT

Seeing a note appear on the visual is the indication of beat. They shoot out from the center to their position around the circle.

### DURATION = SIZE

Once the notes are placed, they continue to grow until the hand is removed and the note is no longer being played.

## VISUALIZATION COMPS

Smaller squares explode off with every note played to create a more interesting visual.

Patterns start to show as rhythm is formed.

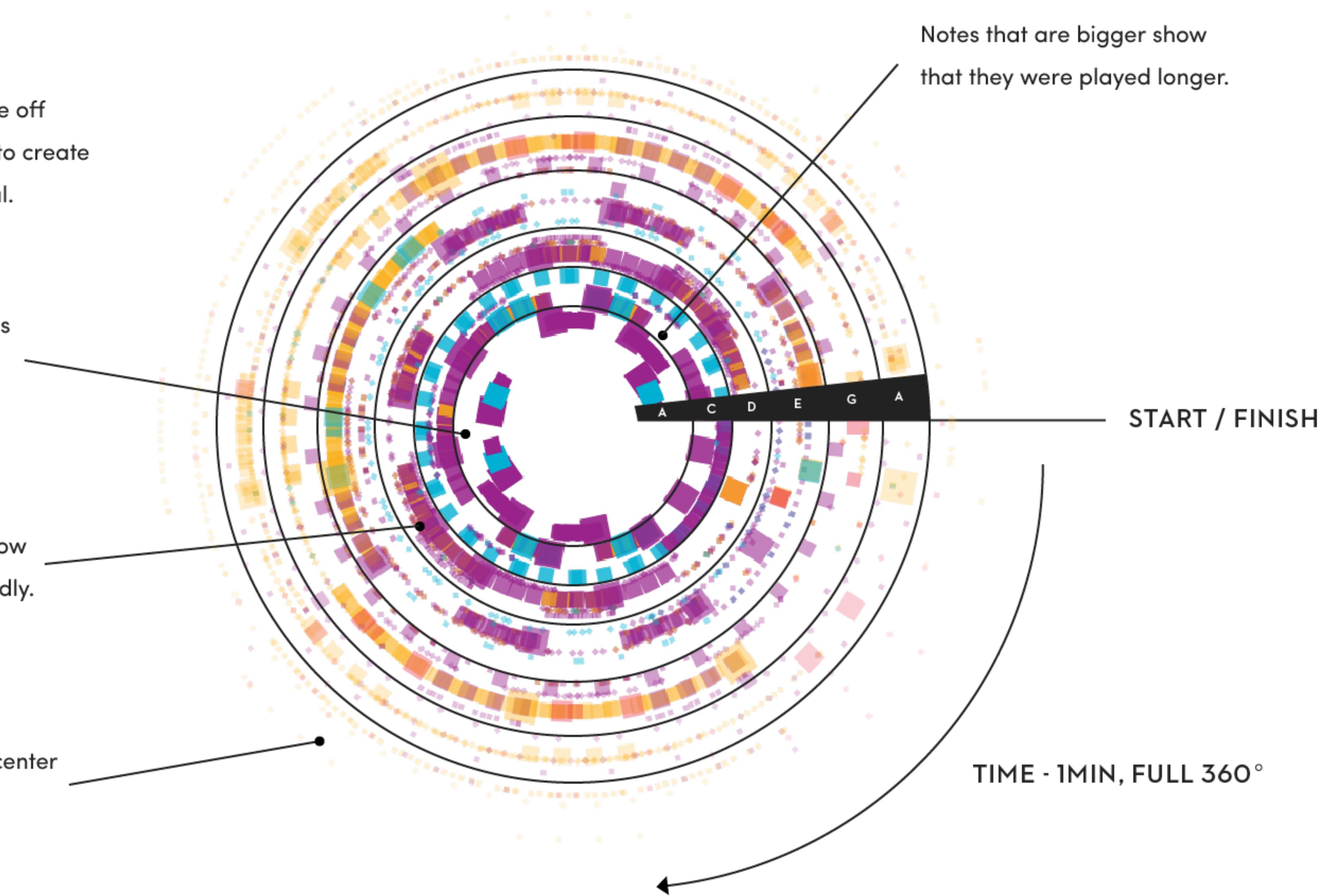
A buildup of squares show notes being played rapidly.

Notes farther from the center are more transparent.

Notes that are bigger show that they were played longer.

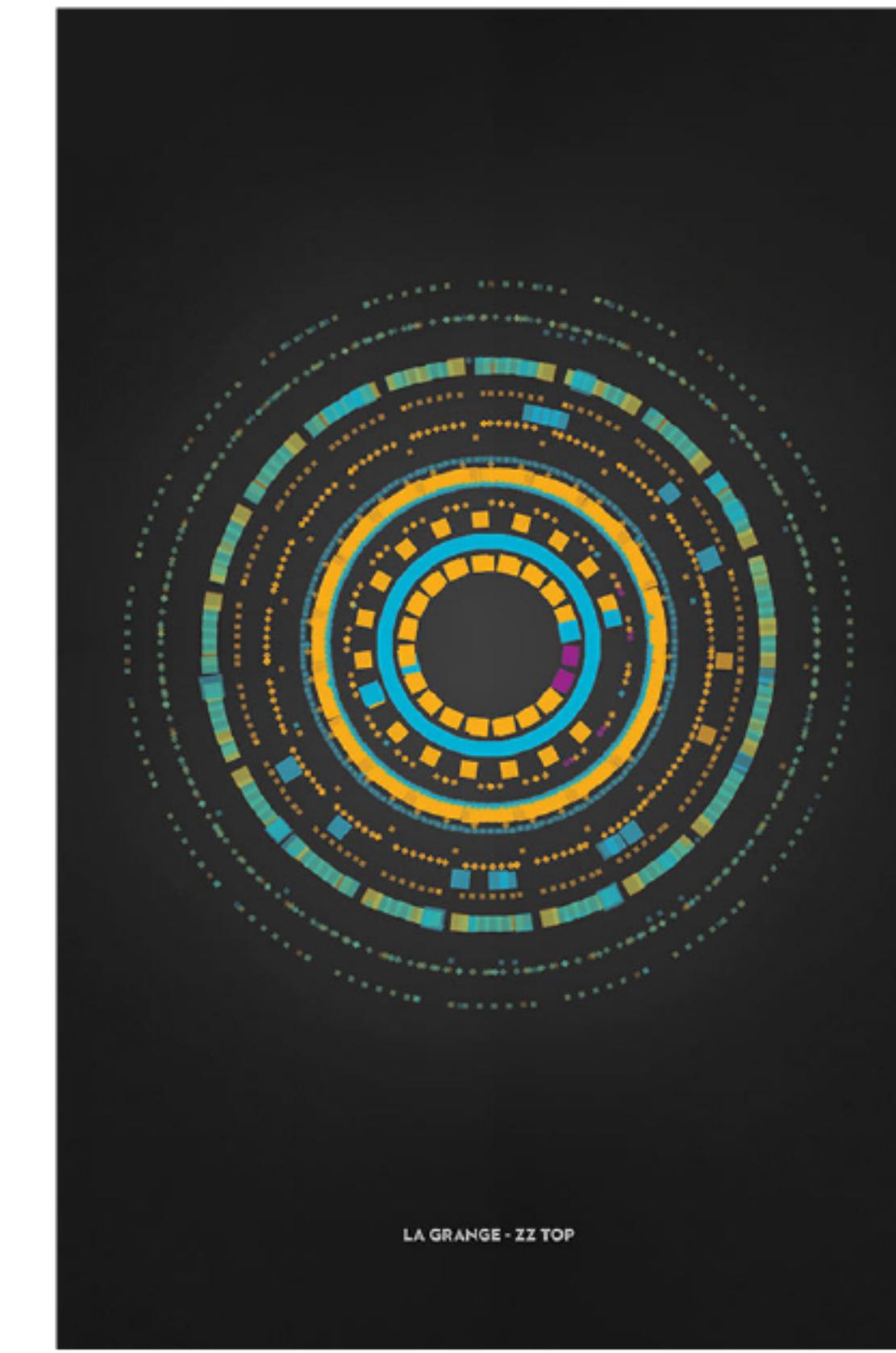
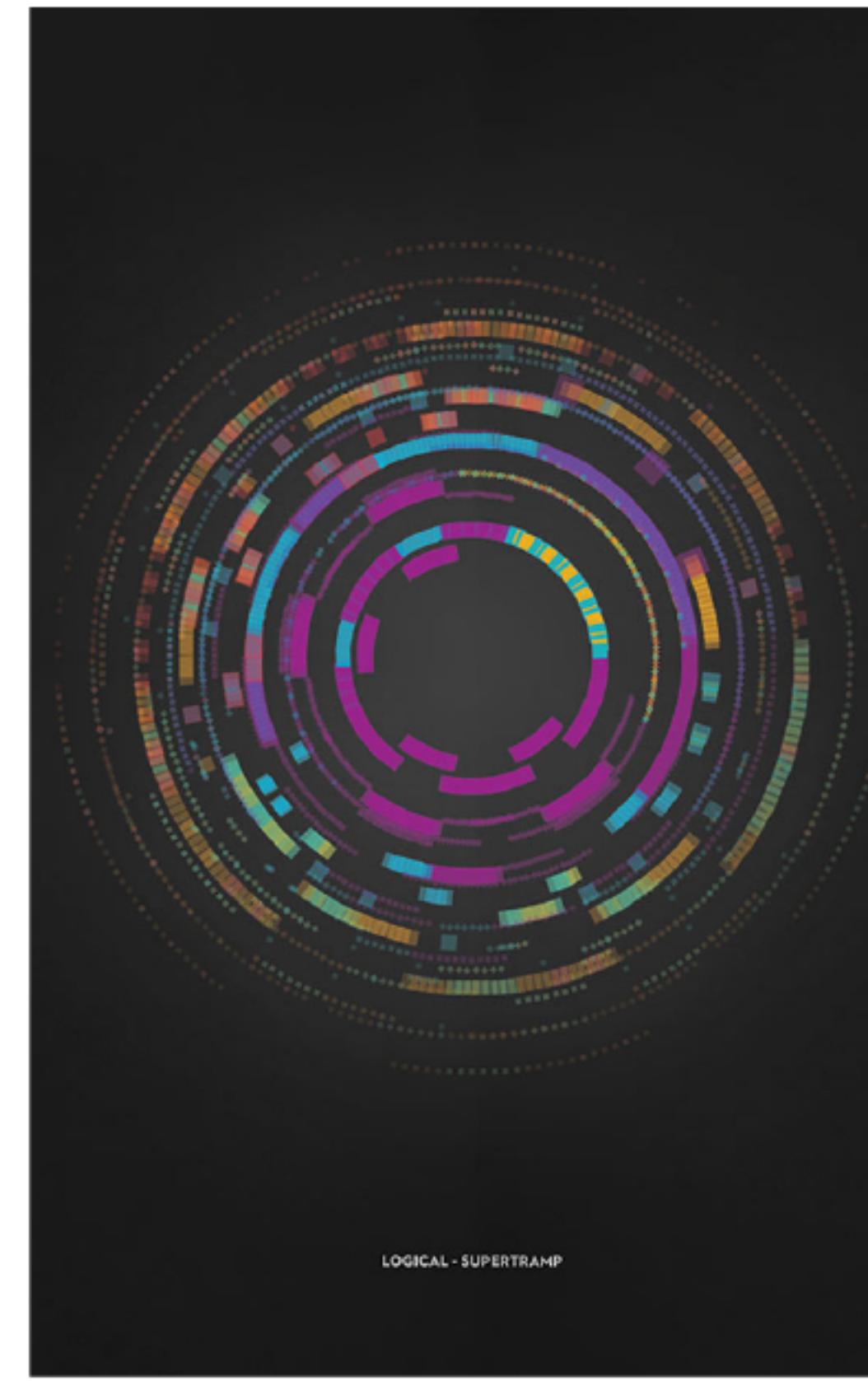
START / FINISH

TIME - 1MIN, FULL 360°



## FINAL VISUALIZATION

The visualization is directly aligned with the users interactions. Notes are the same colors as the beams they were played off of and are placed on the screen based on their position along the beam.





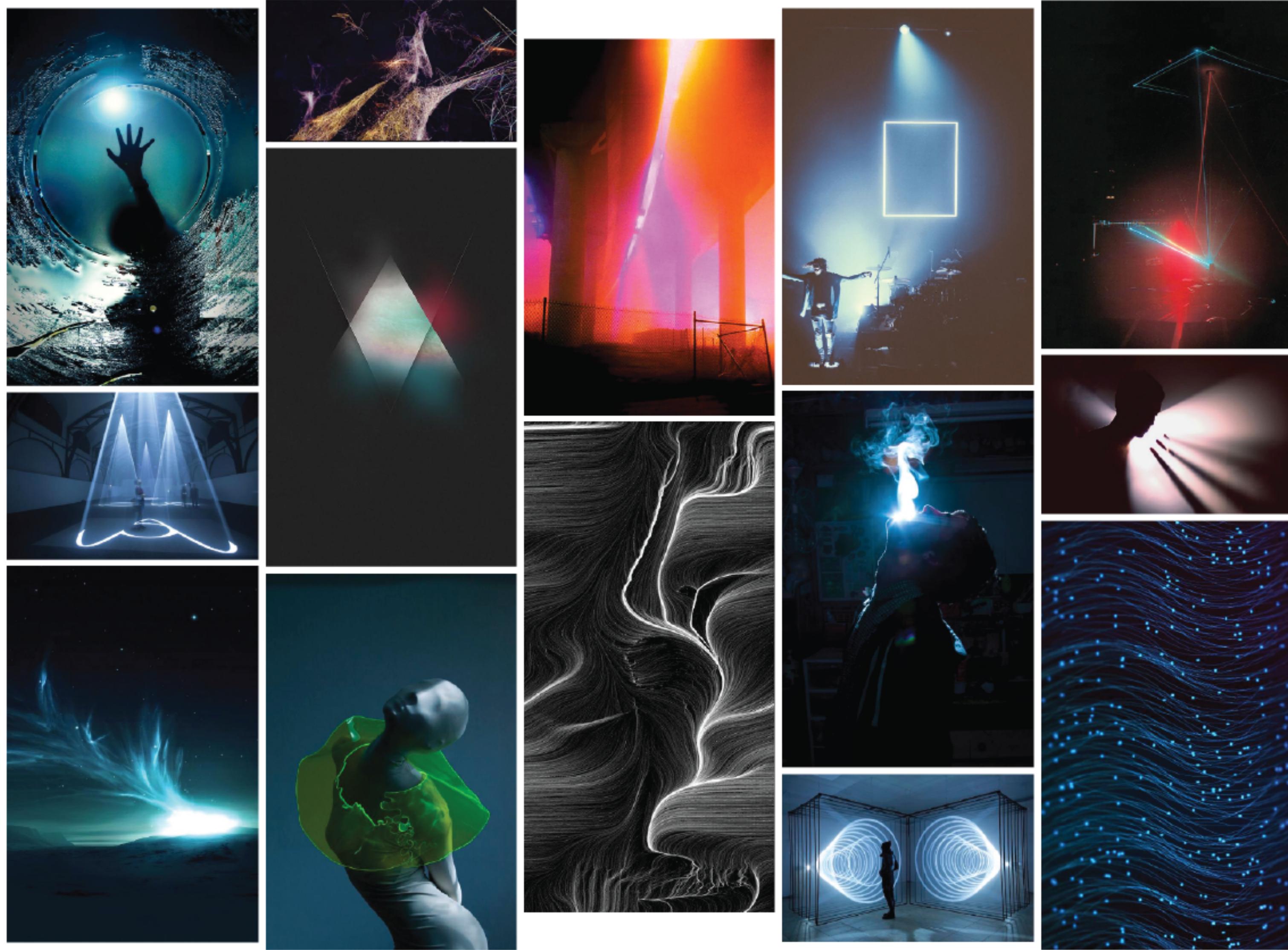
# BRANDING

2016-05-07 16:28:56

2016-05-07 16:28:56

2016-05-07 16:24:59

## MOODBOARDS

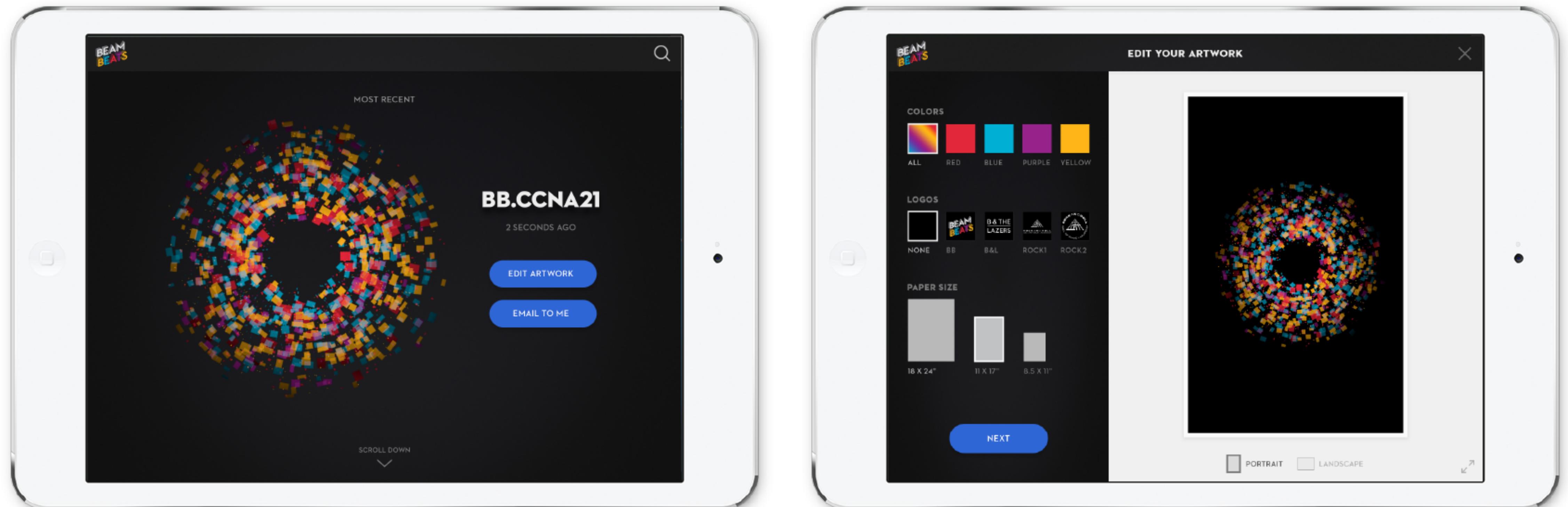


WE WANTED OUR EXHIBIT TO REFLECT AN ENERGETIC, INTRIGUING AND DRAMATIC ENVIRONMENT; LIKE THAT OF A ROCK CONCERT.

**WEBSITE**

## IPAD EXPERIENCE

Each song is unique and there's endless possibilities that visitors can create through Beam Beats. We want them to be able to bring home a unique memory from their visit. On the website, they can edit their visualizations and email it to themselves.

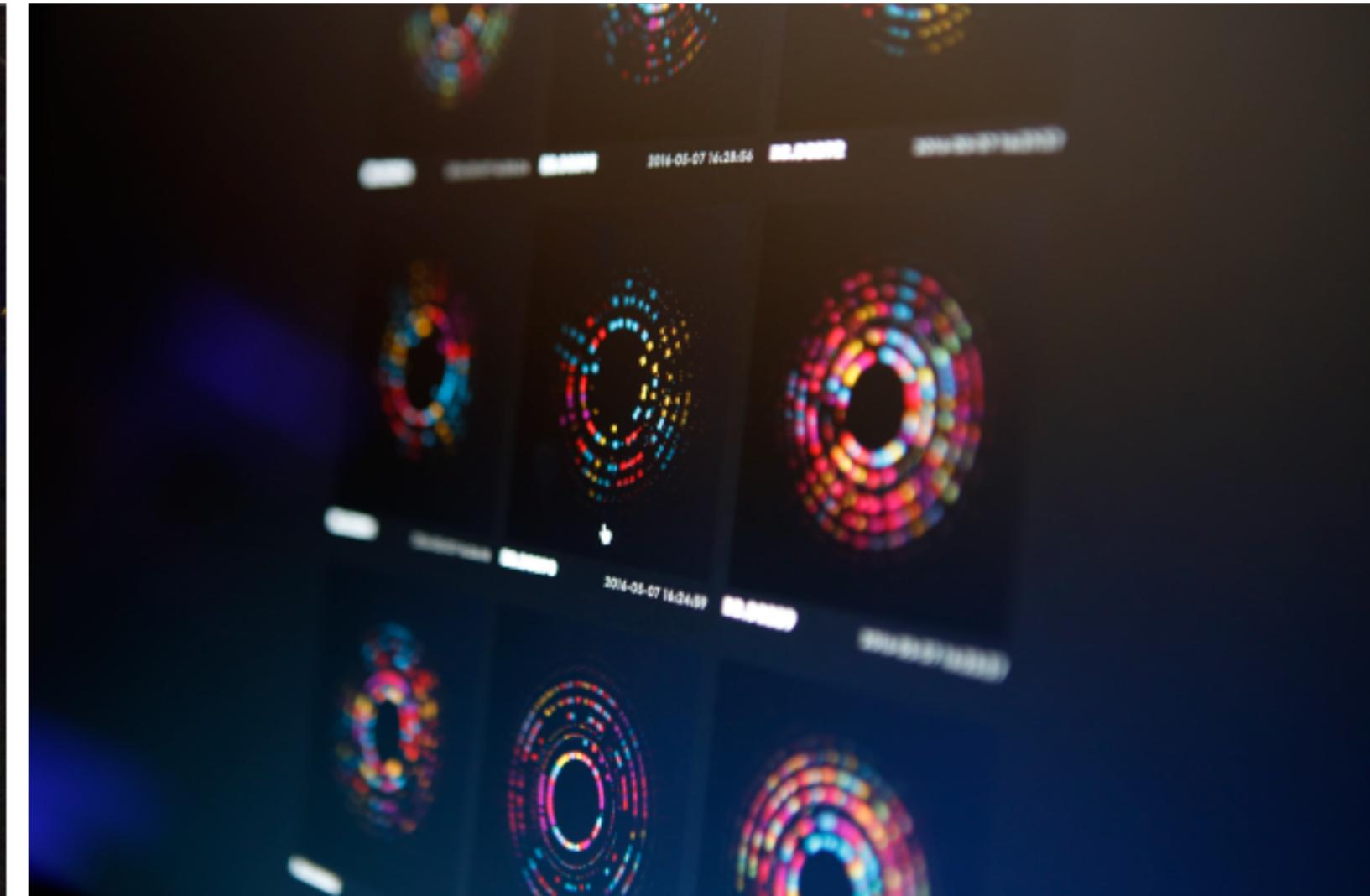
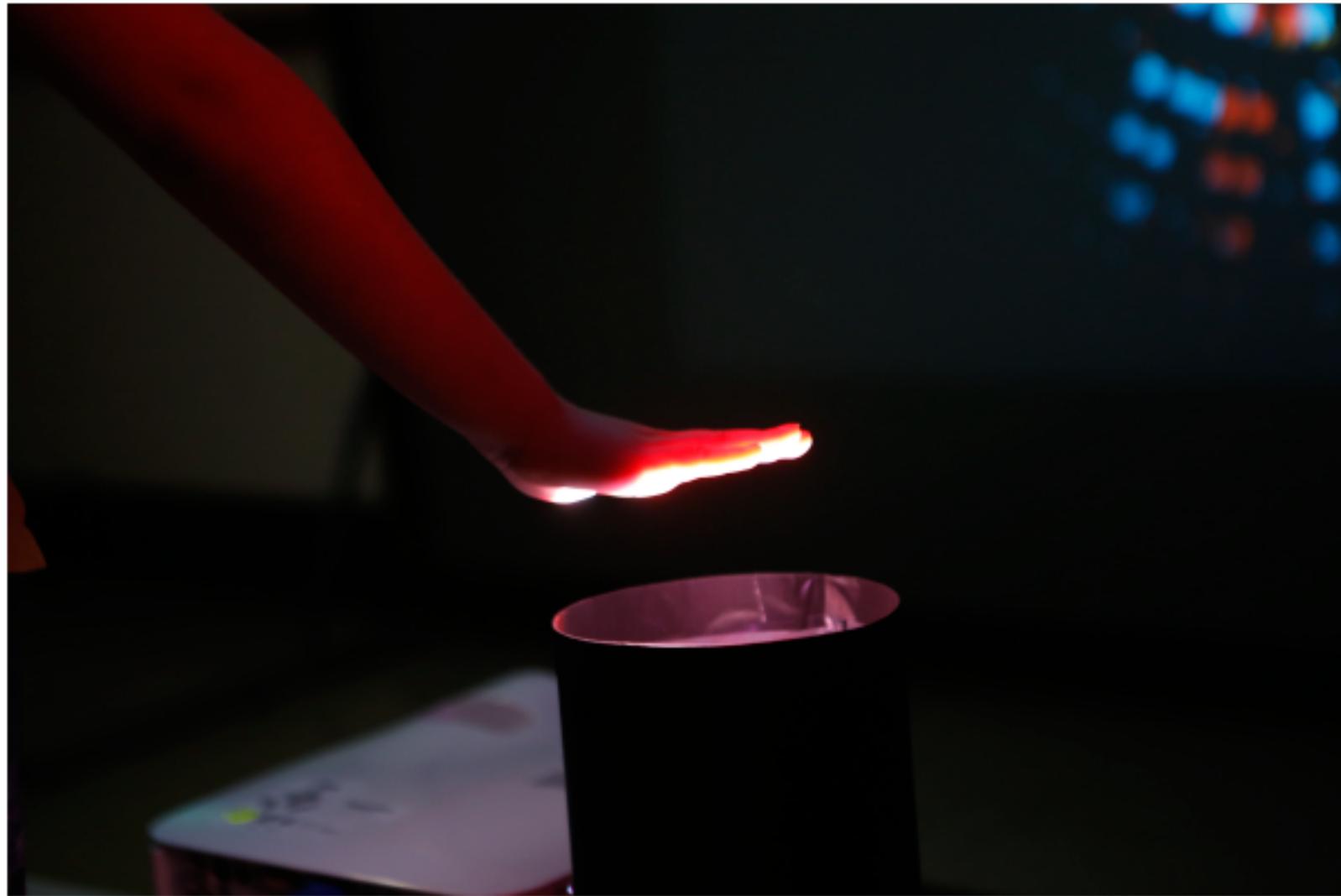
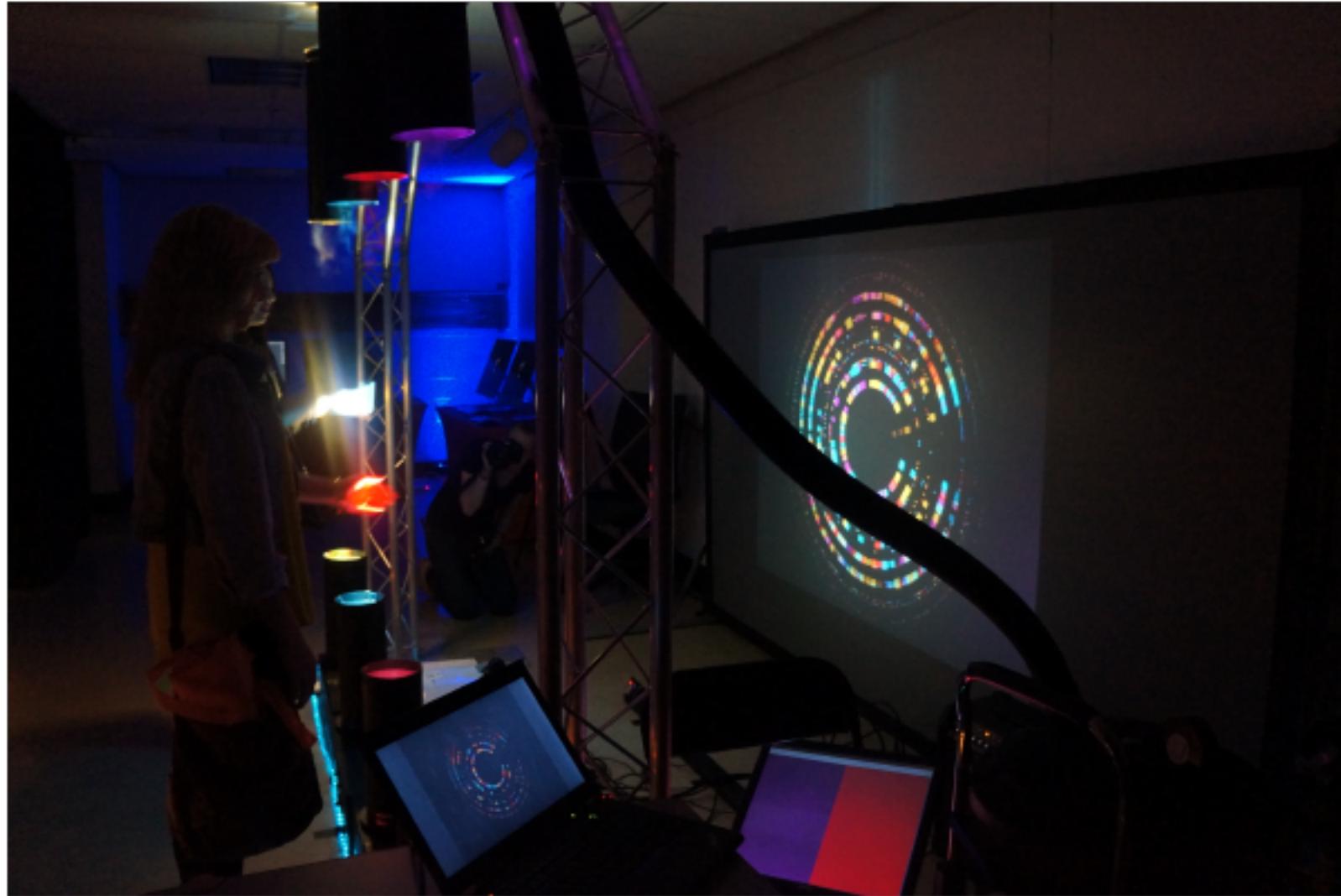


BEAM BEATS

# FINAL PRODUCT



## EXHIBIT PHOTOS





## VIDEOS

### PROMOTIONAL VIDEO

[vimeo link here]

### RECAP VIDEO

[vimeo link here]

BEAM BEATS

THAT'S A  
WRAP!

## LESSONS LEARNED

**TEST! MAKE SURE IT WORKS.**

**COMMUNICATION IS KEY.**

If there is a problem, we shouldn't wait until the next meeting to tell the group.

**SET EXPECTATIONS EARLY.**

**CONSULT WITH THE EXPERTS.**

When designing sound, we should consult with sound designers to make a device sound musical

**IF IT'S SHINY, PEOPLE WILL PLAY WITH IT!**

Regardless of its musical quality

## FUTURE DIRECTIONS

### BETTER SOUND DESIGN.

Make the instrument more melodic and allow users to create more unique songs.

### MAKE USE OF MORE GESTURES IN THE BEAMS.

### GIVE USERS PHYSICAL CONTROLS.

Allowing users to change the sound of their beam.

### FIND A LOCATION THAT CAN TOLERATE THEATRICAL HAZE.

### BIGGER, BETTER VISUALIZATIONS

A visualization that display more of the artit's expression.

**SUMMARY**

## BEAM BEATS WAS A GOOD LEARNING EXPERIENCE TO PREPARE OURSELVES FOR THE “REAL WORLD”.

New Media Team Project overall was a good exercise of team work. Much of the skills that we don't learn in our typical New Media classroom setting we got to practice during team project. Learning to trust each other with the quality of work, being punctual, and work ethics was not always fun; but the end result was well worth it.



THAT'S A WRAP!

# THANK YOU!

SPECIAL THANKS TO ADAM SMITH, NANCY  
DOUBLEDAY AND THE ROCK & ROLL HALL OF FAME!