# Project 3: Immersive Environments

**3D Design 2: Modelling**

**Sam Giustizia**
**Noah Kawash-Barnes**

**VDES29207**

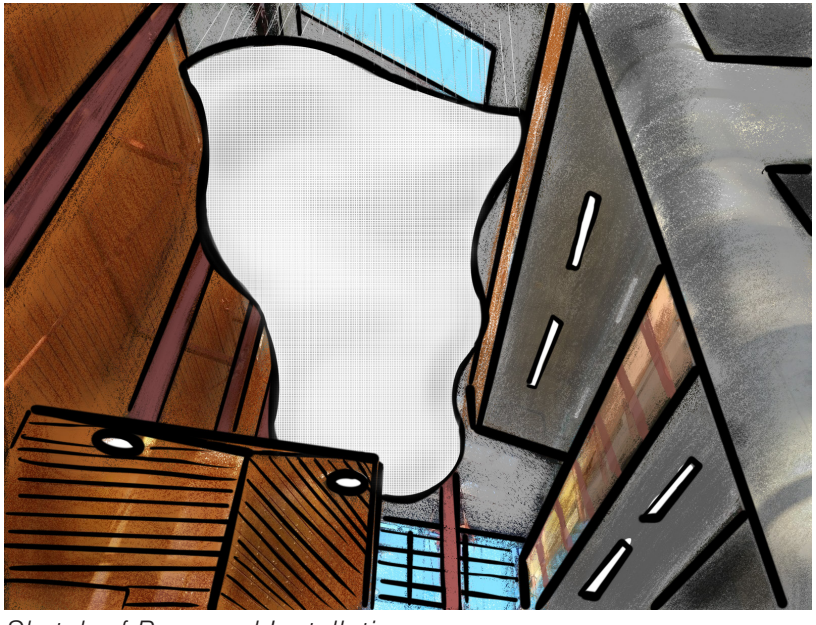
**Steve Hudak**

**Winter 2019**

# Proposed Installation

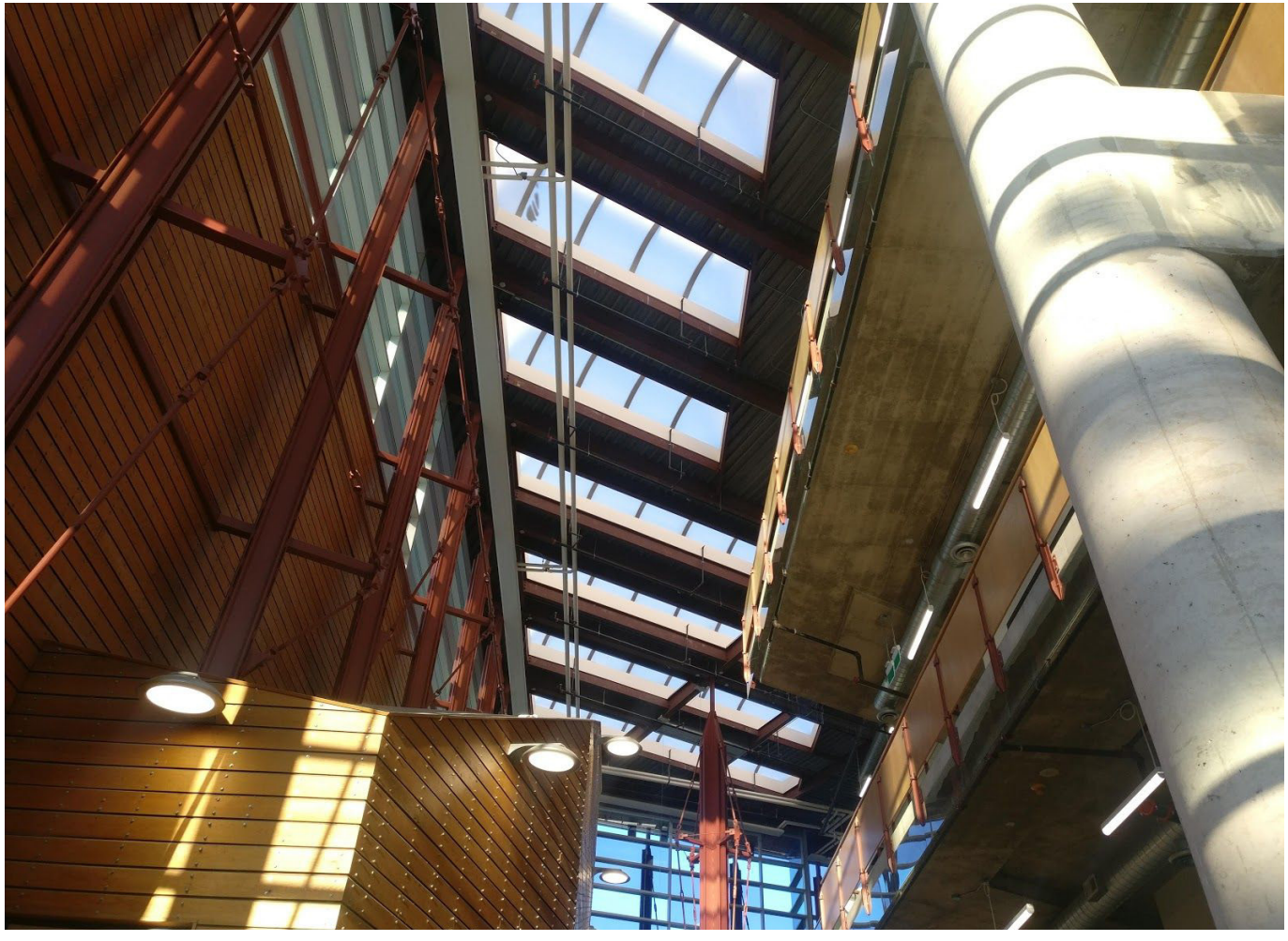
Description of the proposed installation

The installion which we are proposing to build is inspired by the aesthetic nature of white clouds rolling over a landscape.  The installation would be fabricated from a 15mx30m sheet of 3D printed “fabric” and would be suspended by roughly 4000 wires from the ceiling of the SCAET building at the Sheridan Trafalgar Campus. Each suspension wire would be connected to it’s own servo motor, which would be precisely raised and lowered by a series of arduinos to create a Perlin noise effect which would span the ceiling of the space.



*Sketch of Proposed Installation*

# Proposed Location



**Ceiling of Sheridan's Trafalgar Campus SCAET Wing**

Sheridan College, Oakville, Ontario

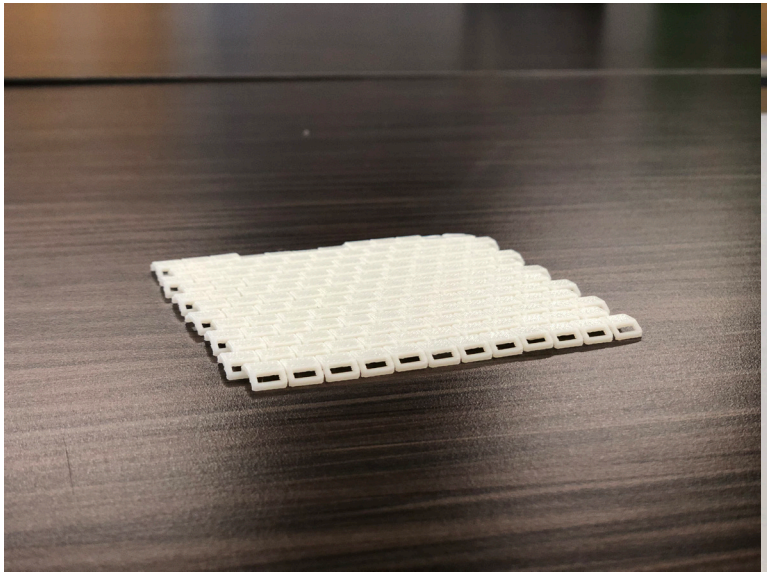
# Proposed Installation

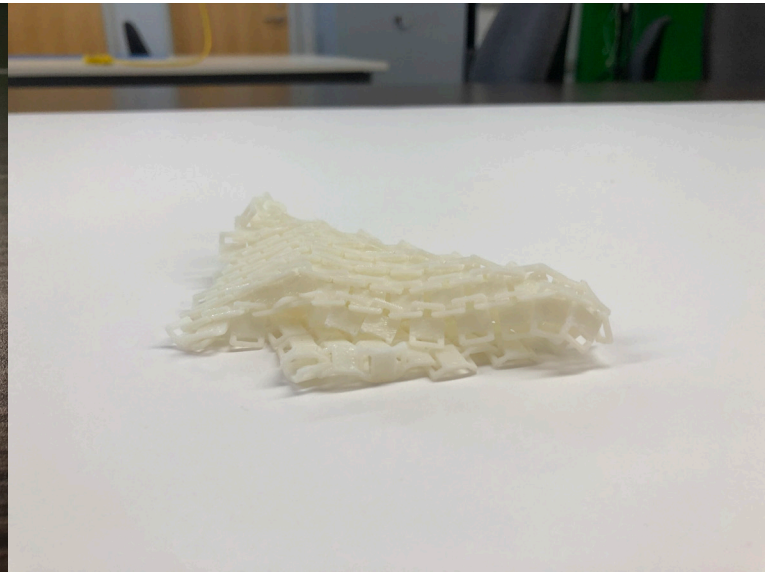
Why have has this space been chosen for the proposed installation? How will the instillation enhance the space?

The SCAET building has been chosen as the subject of the proposed installation piece because it is more than just another wing for Sheridan students to use for its classes and facilities, it is also the face of Sheridan for many of its visitors and first time students. The SCAET building acts as the hub that connects Sheridan's many facilities and buildings to one central location. In addition to being the physical hub of the school, it is also the ideological hub for what Sheridan represents. It is a free and open space with interesting architecture and a welcoming atmosphere. However with all these embodied ideals, focal elements, and interesting features of the building, it still lacks a single, central focus to tie everything together and act as a compelling anchor for the space. This need for a central point of focus is why the SCAET building has been chosen for the proposed installation. With the addition of this project, users of the space will have a spectacle unlike any other on campus, from which to draw inspiration, and admire. Additionally, the floating, suspended nature of the installation means that it is entirely unobtrusive, so for regular users of the space it does not distract or deter them from using the space as they would normally.

The installation enhances the space by adding to its pre-existing atmosphere of creativity, and positivity. The free flowing proposed structure is dynamic and constantly shifting and changing, much like the nature of ideation, and creativity itself. The generative nature of the structure means that no form will be exactly identical to another, and that the exact appearance of the installation will be unique for all its visitors. Finally, the structure is only able to function when thousands of individual nodes and components are functioning in harmony, much like how teams of creative professionals in their fields must function as a whole, underneath one central ideal and cohesive theme in order to achieve something truly amazing, and unique.

# Proposed Material



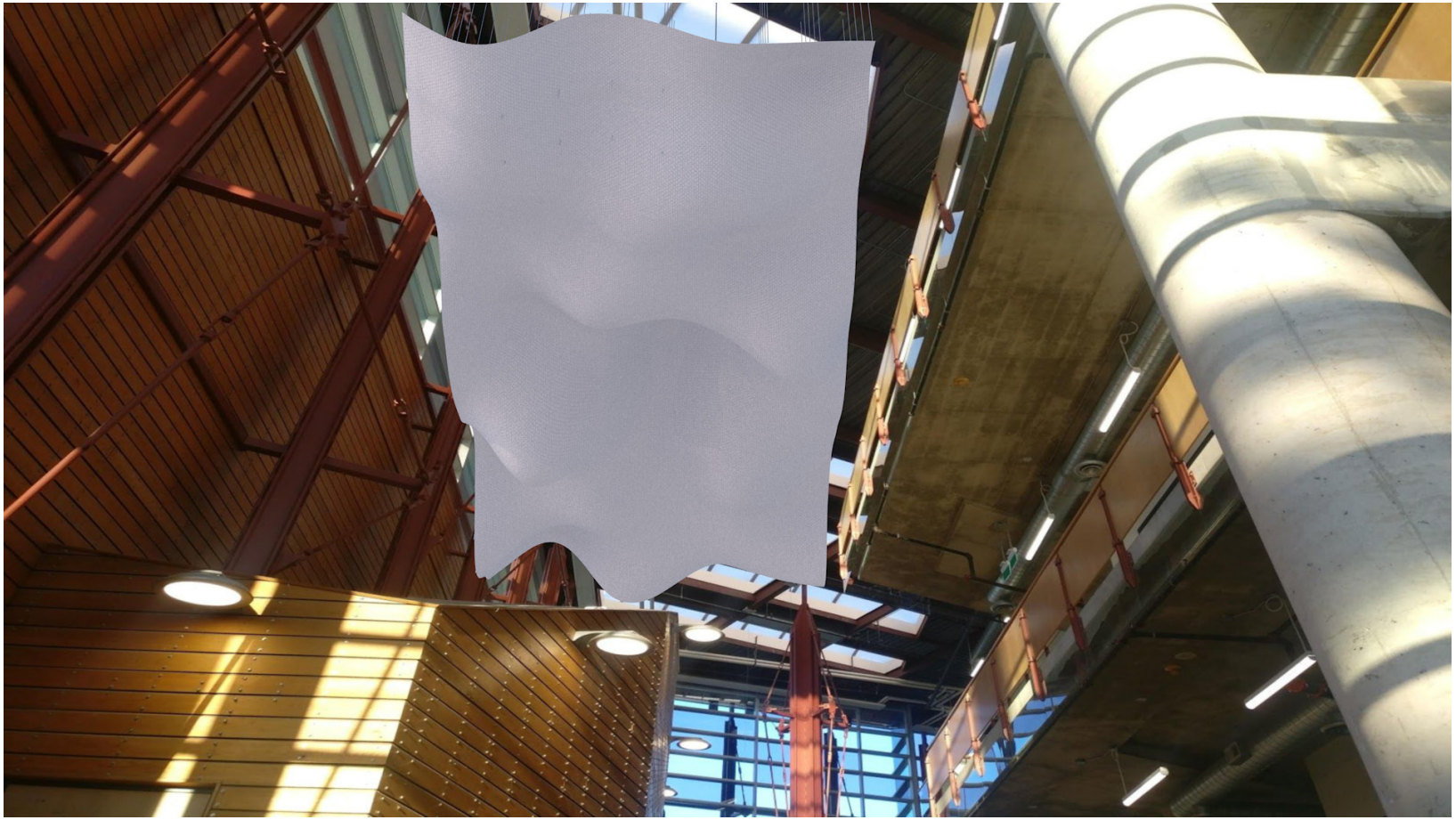


The proposed material for this project is a custom designed 3D-printed chain link pattern that creates a fabric-like behaviour. The reason why we have chosen this material is because of its interlocking nature. The object is made out of hundreds of tiny components that all work together to create a whole that is greater than the sum of its parts, much like Sheridan. Sheridan is a space where hundreds of thousands of creative minds have come together to express themselves and to create works that represent who they are. When these creatives are given a space with the facilities and community to help grow their skills, they become far greater than they would be as lone individuals.

On a more practical level, this material is cheap to produce, and would not require any cleaning or maintenance since the dynamic nature of it means that it will not collect dust. Furthermore the shuffling of the chainlinks will add to the ambience and atmosphere of the installation by creating a low satisfying rattle of moving pieces.

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# Visualization



**Rendered Image of Proposed Installation**

Ground Level View

# Visualization



**Rendered Video of Proposed Installation**

Upper Level View

# Project Research - 1



**Carte E Fibre Installazioni - Daniele Papuli**

The Casa Dugnani Gallery, Italy

*http://www.danielepapuli.net/Carte-e-Fibre-Installazioni* - Personal Site

# Project Research - 1

**Carte E Fibre Installazioni - Daniele Papuli**

## What is this piece?

Suspended piece consisting of 500 white cardboard sheets, with hand cut patterns in the material, as well as light shining through it.  It seems as though it also ripples and moves to create dancing patterns on the walls and floor.

## What is the purpose or meaning?

The artist behind this project is fascinated by the idea of the cosmos, and hoped to create a piece that would arouse the same sense of wonderment into the viewers as celestial bodies and other galactic forms.

## What is the relevance to the proposed installation?

This project was valuable to our concept because it was an example of how successful these types of installations can be, even without requiring a user interaction, as well as the impact that they can have on the viewers.  Furthermore, this project was largely assembled only with simple materials and a brilliant core concept, which shows that the core idea is truly the defining factor of a good installation. Additionally the way this piece uses light is quite interesting, and may influence some further research and experimentation towards what kind of lighting would look best, and if cutting patterns in the fabric of the proposed piece would make things more interesting.

# Project Research - 2



**Patisserie III - Ideo Arquitectura**

Fast Be Pan & Pasteles, Calle Mayor, 3, 28801 Alcalá De Henares, Madrid, Spain

*https://ideoarquitectura.com/2015/12/24/croissanteria/* - Design Firm

*https://www.designboom.com/design/ideo-arquitectura-pan-y-pasteles-madrid-bakery-interior-02-19-2016/* - Publication

# Project Research - 2

**Patisserie III - Ideo Arquitectura**

## What is this piece?

This project was commissioned by a bakery in Madrid, whose location is a building nearly 150 years old. The goal of their design was to find an element of the location that they could complement without overshadowing, they felt that this installation piece would achieve that complimentary effect with the buildings ancient stone walls. The piece consists of 12,000 “Strawberry lollipops” aka painted wooden sticks.  The project won a NAN award for best Spanish Interior Design Project of 2016.

## What is the purpose or meaning?

The intended purpose behind this piece is exactly parallel to the intended purpose of the proposed piece, to be able to enhance the beauty of a location in a way that complements the existing architecture, without overshadowing it.

## What is the relevance to the proposed installation?

This piece is relevant to the research of the proposed installation because the design team behind it was extremely specific in ensuring that the piece complemented it surroundings, rather than simply being an interesting piece on its own.  This not only enhanced the experience of the establishment’s ceiling, but it also enhanced the experience of users interacting with the business and the space as a whole. This is what we hope to achieve with our project because the goal is not simply to create an interesting installation piece, but to complement the existing space and enhance the overall experience.

# Project Research - 3



**Styrofoam Cup Sculpture - Tara Donovan**

Ace Gallery, New York

*https://mymodernmet.com/tara-donovan-styrofoam-cup-sculpture* - Publication

# Project Research - 3

**Styrofoam Cup Sculpture - Tara Donovan**

## What is this piece?

This piece was created with simple household materials, plastic cups, and hot glue. The piece was created by Tara Donovan, who stated that the organic nature of the piece was created by simply choosing an object and experimenting with the various ways that it fits together with more of the same object, until a the piece starts to take shape. This lead to a design that looks entirely organic, and is made even more interesting by the lights being diffused by the cups, which create visually interesting darker and lighter areas that follow the flow of the form.

## What is the purpose or meaning?

The purpose behind this art piece was for the artist to experiment with household objects, until she was able to develop a unique form that could only be produced by that object. Tara stated, "In a sense, I develop a dialogue with each material that dictates the forms that develop. With every new material comes a specific repetitive action that builds the work".

## What is the relevance to the proposed installation?

This piece is valuable to the development of the proposed piece because it shows how regular materials that people might see in their day to day life have hidden potential locked inside of them that artists are able to set free and exploit. With the proposed design we want to achieve a similar effect, by making an installation that uses everyday materials, in a way that produces something the viewers have never seen before, and would never expect to see.

# Project Research - 4



**Barbouni - K-Studio**

*Costa Navarino, Greece*

*https://www.k-studio.gr/project/barbouni/* - Design Firm

*https://www.cnn.com/travel/article/costa-navarino-moving-roof-greece/index.html* - Publication

# Project Research - 4

**Barbouni - K-Studio**

## What is this piece?

This piece was designed by the Athens-based architecture firm K-Studio. Their team was commissioned by the Costa Navarino resort to design and construct a beachside restaurant and bar, later named Barbouni. The restaurant sits elevated on a wooden platform on the shore of the Mediterranean Sea. Hanging from the ceiling of the restaurant is an array of long fabric sheets that hang across the length of the entire structure. As the wind blows along the beach the fabric waves along with it creating a mesmerizing ripple that follows the strength of the wind.

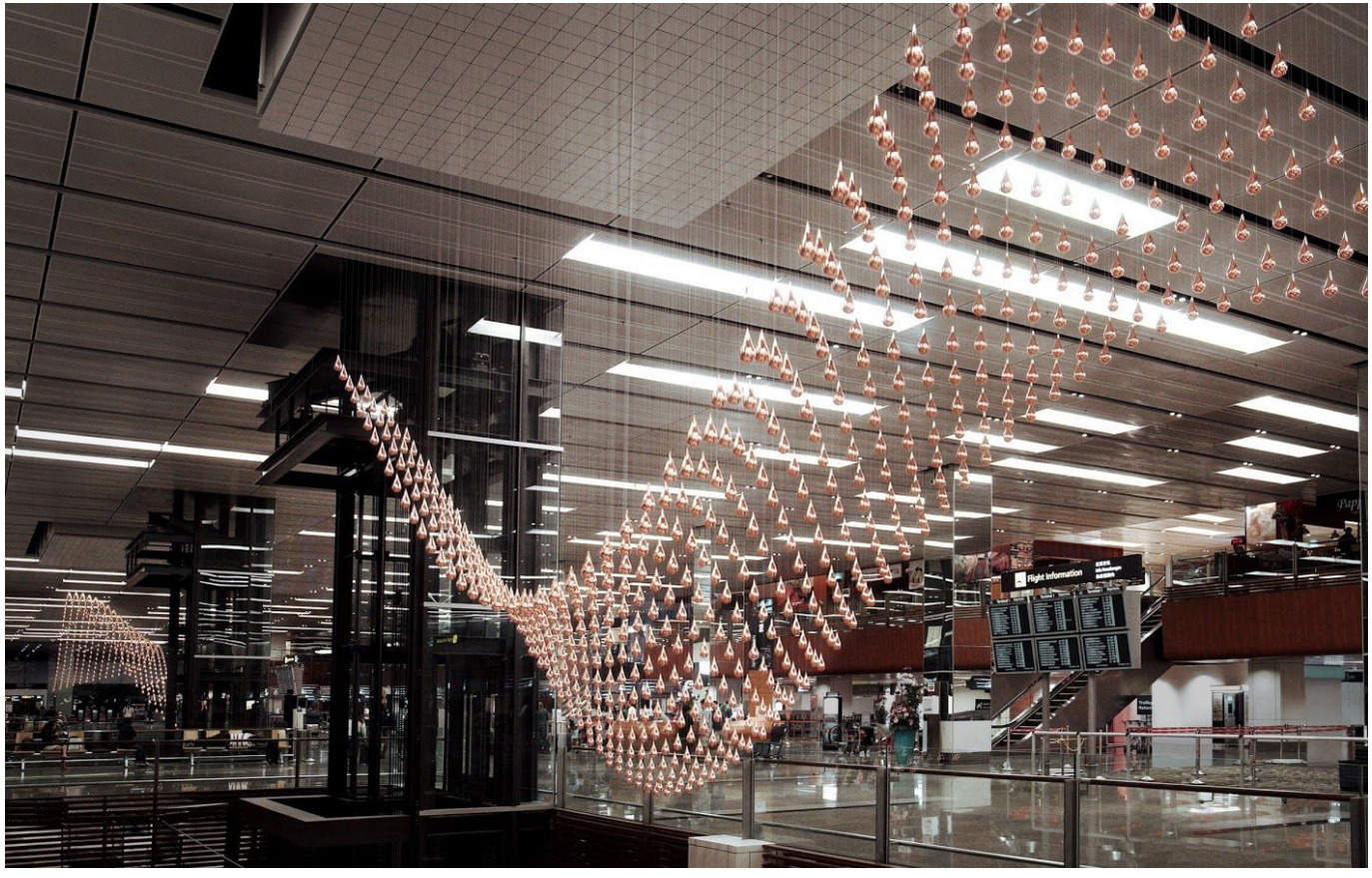
## What is the purpose or meaning?

Much of the inspiration behind the design came from the landscape and surrounding area. K-Studio wanted to create a structure that seamlessly fit into the intended area, and matched the tone and environment perfectly. This core concept is what lead to the design of the ceiling installation featured at the restaurant. The installation flows with the strength of the wind creating a harmony with the landscape that enhances the relaxing and sociable atmosphere of the resort.

## What is the relevance to the proposed installation?

K-Studio's installation is relaxing and soothing to watch from below, and adds a dynamic element to the static structure that enhances the experience of the space. With the proposed installation, we aim to create a piece that accomplishes a similar level of seamlessness. This piece was valuable to the development of the proposed installation because of the way the architects and designers were able to enhance a space organically, with elements of the landscape incorporated directly into the design and function. The proposed installation aims to augment its environment by allowing the pre-existing natural light of the ceiling to project a dazzling array of moving patterns onto the ground below.

# Project Research - 5




**Kinetic Rain - ART+COM Studios**

Changi Airport, Singapore

*https://artcom.de/en/project/kinetic-rain/* - Design Firm

# Project Research - 5

**Kinetic Rain - ART+COM Studios**

## What is this piece?

The Kinetic Rain sculpture in Terminal 1 of Singapore's Changi Airport was designed by the German based firm ART+COM Studios. The installation consists of 1216 copper-plated aluminum teardrops that hang from a central unit that controls the height of each droplet, and executes a number of pre-programmed animations and movements. Each central unit has 608 droplets and there are 2 units positioned a few hundred meters apart from one another. The units move in sequence through 15 minute looping animation sequence that runs continuously throughout the day.

## What is the purpose or meaning?

The purpose behind this dynamic piece was to pay homage to a previous sculpture that occupied the space, which was a static ring of cords that reached from the ceiling of the main level, to the floor of the level underneath. The team wanted to re-invent this idea, while also instilling the atmosphere and wonderment of flight. The team also describes that they felt the sculpture reflected the space by symbolizing the hundreds of moving parts moving in perfect sequence, much like an airport has hundreds of components and individuals that work together seamlessly, allowing it to function.

## What is the relevance to the proposed installation?

This particular installation was influential to the proposed project because of the way that it incorporates dynamic movement of hundreds of components in a way that enhances the experience of a space and creates a lasting, memorable impact. With the proposed instillation, the SCAET Wing at Sheridan college will be enhanced in the same way. Thousands of individual, interlocking pieces will work together to form a dynamic, and cohesive structure. One that instills the same organized chaos and creativity that exists that Sheridan and its students embody and practise every day.

# Form Exploration, Panelling Tools

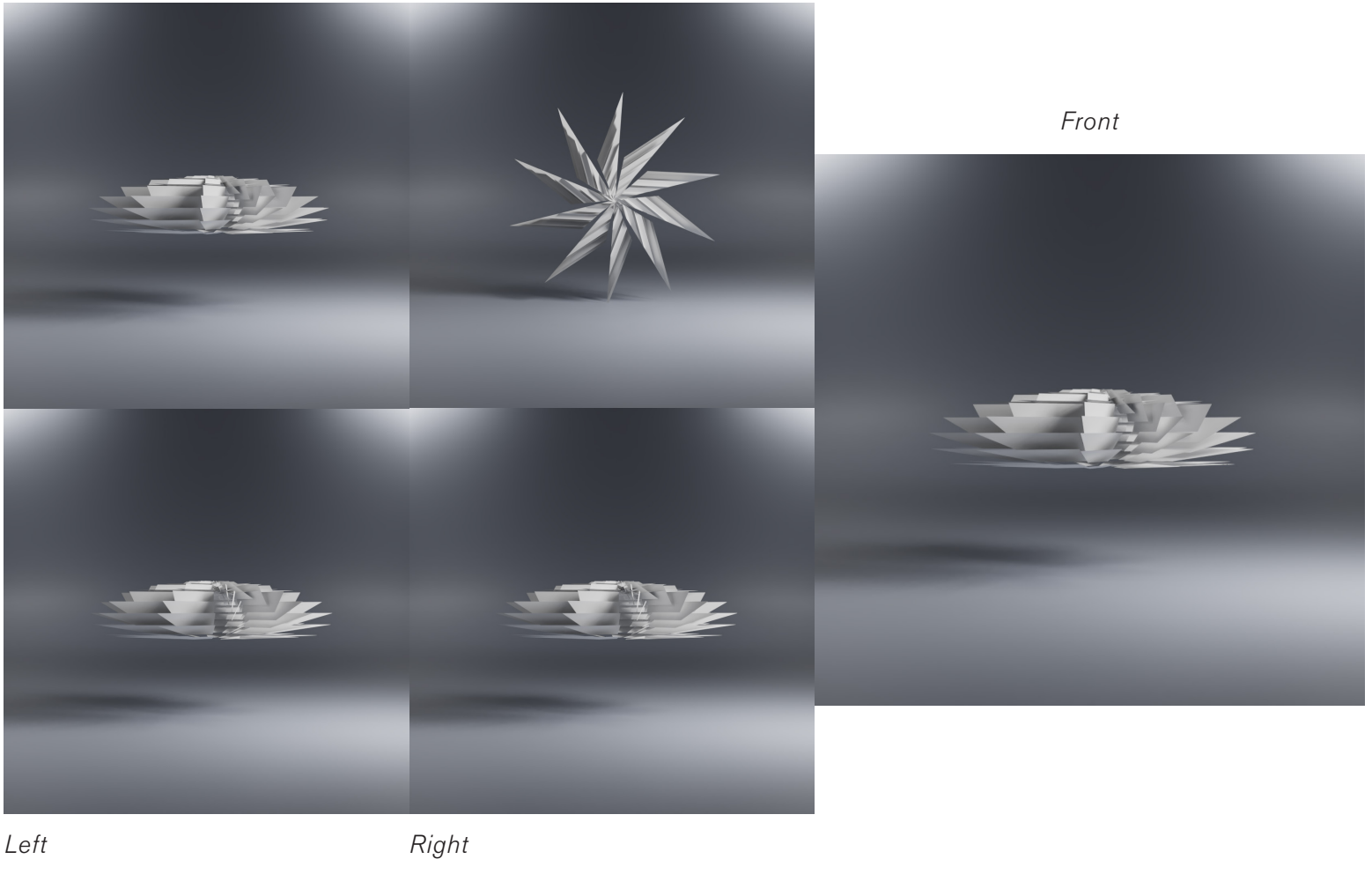



*Figure 1*

# Form Exploration, Panelling Tools

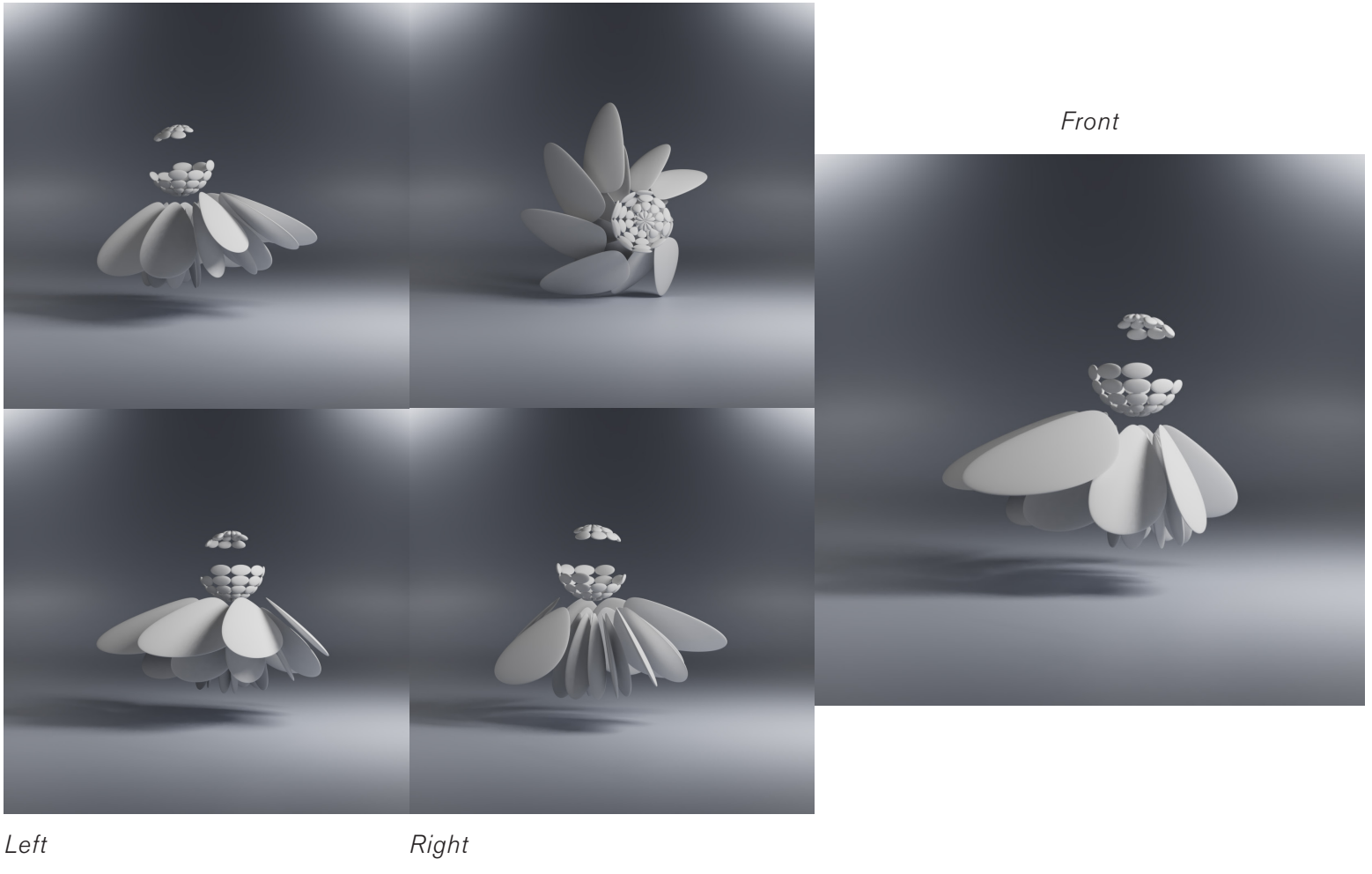


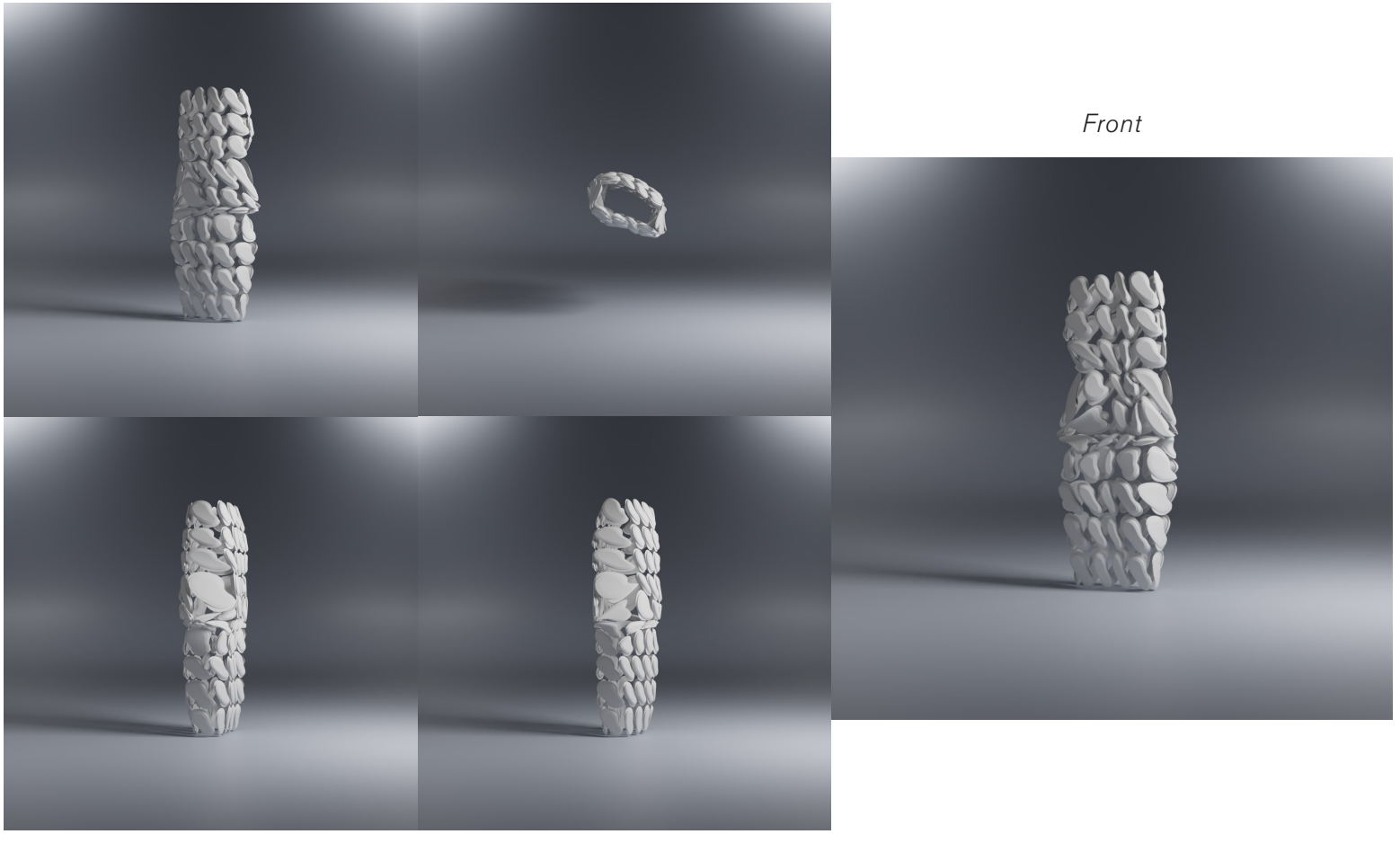

Figure 2

# Form Exploration, Panelling Tools

*Back*

*Top*

*Front*



*Left*

*Right*

*Figure 3*

# Form Exploration, Panelling Tools

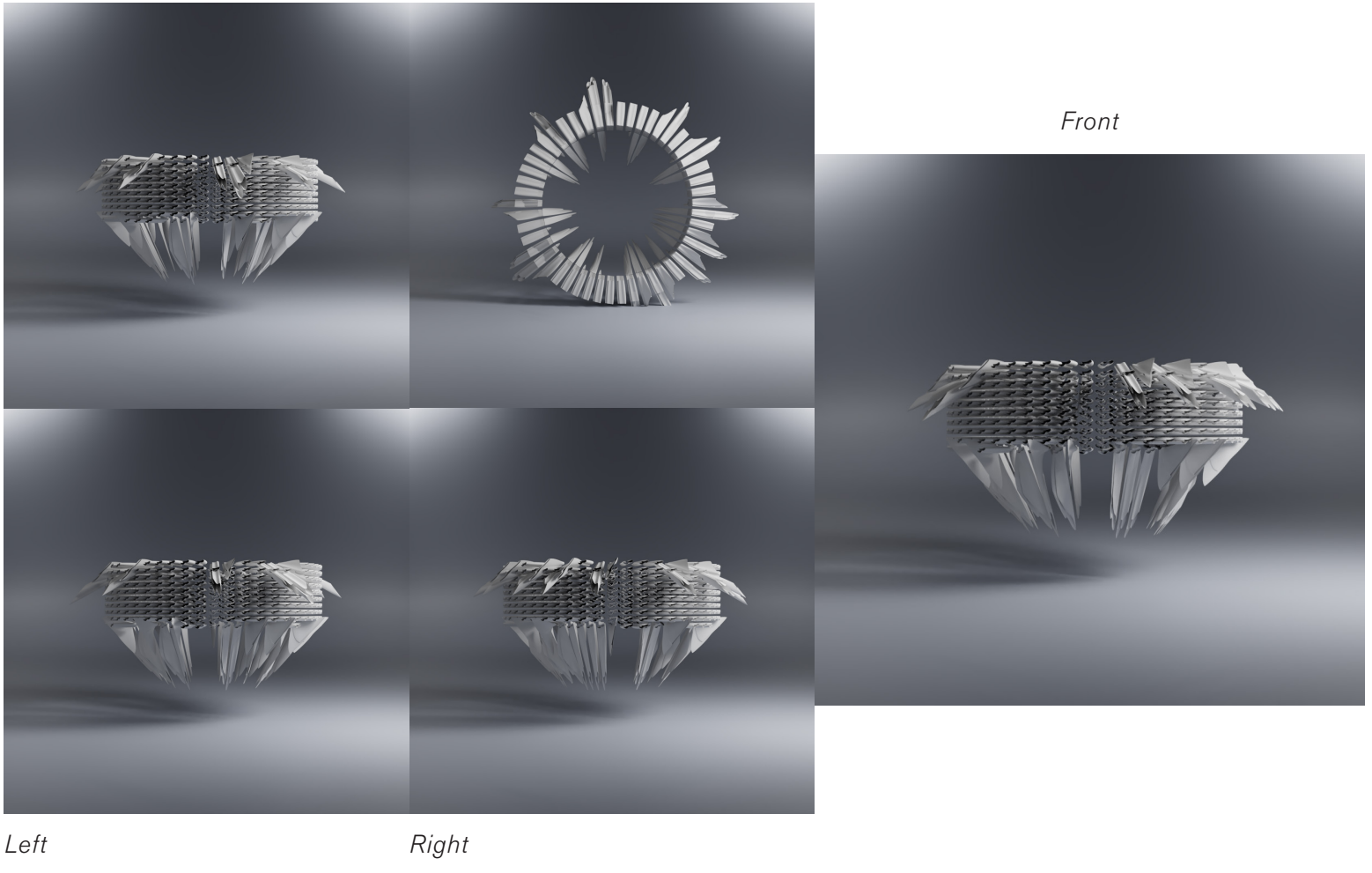



*Figure 4*

# Form Exploration, Panelling Tools

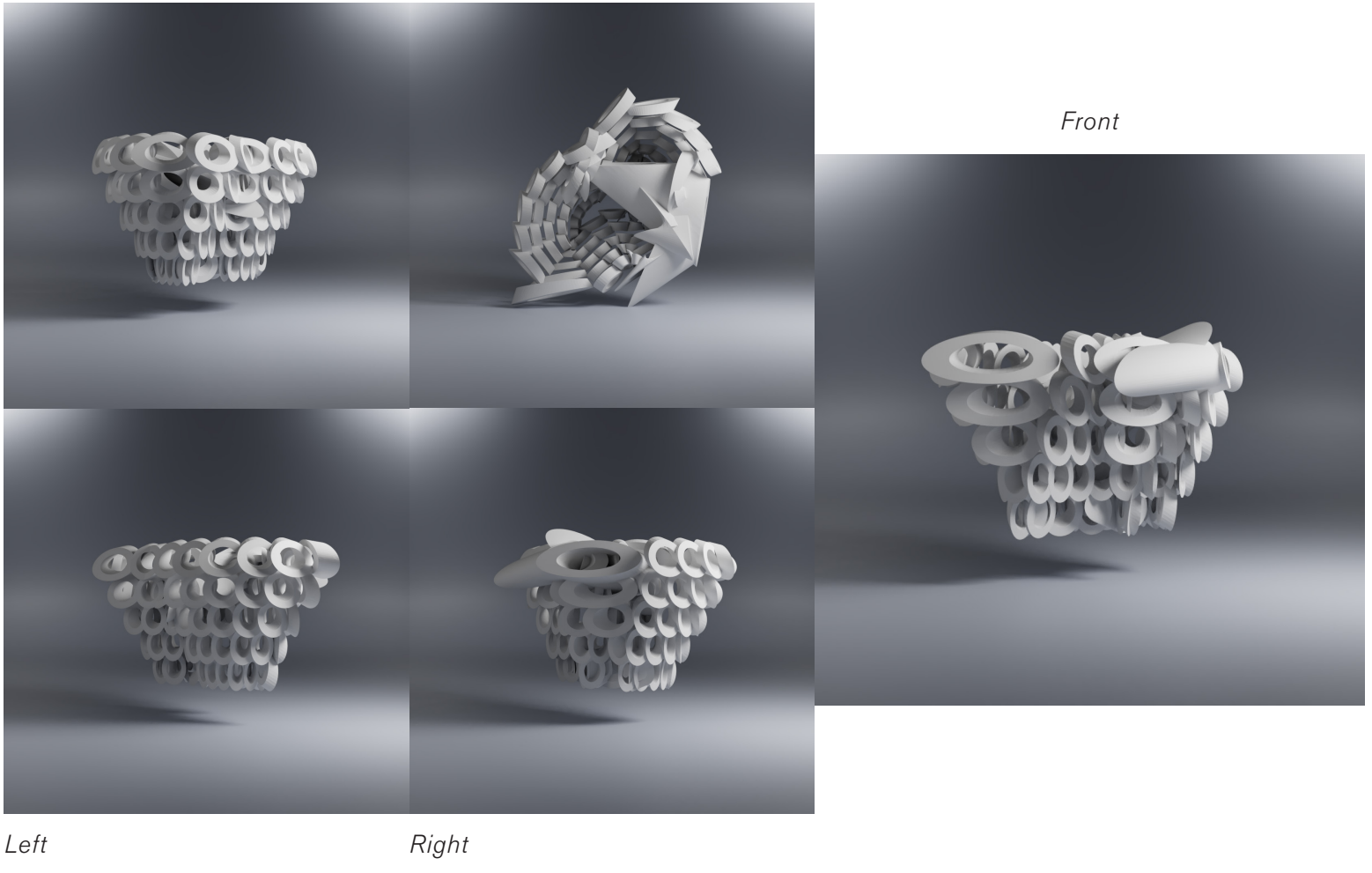



Figure 5

# Form Exploration, Panelling Tools

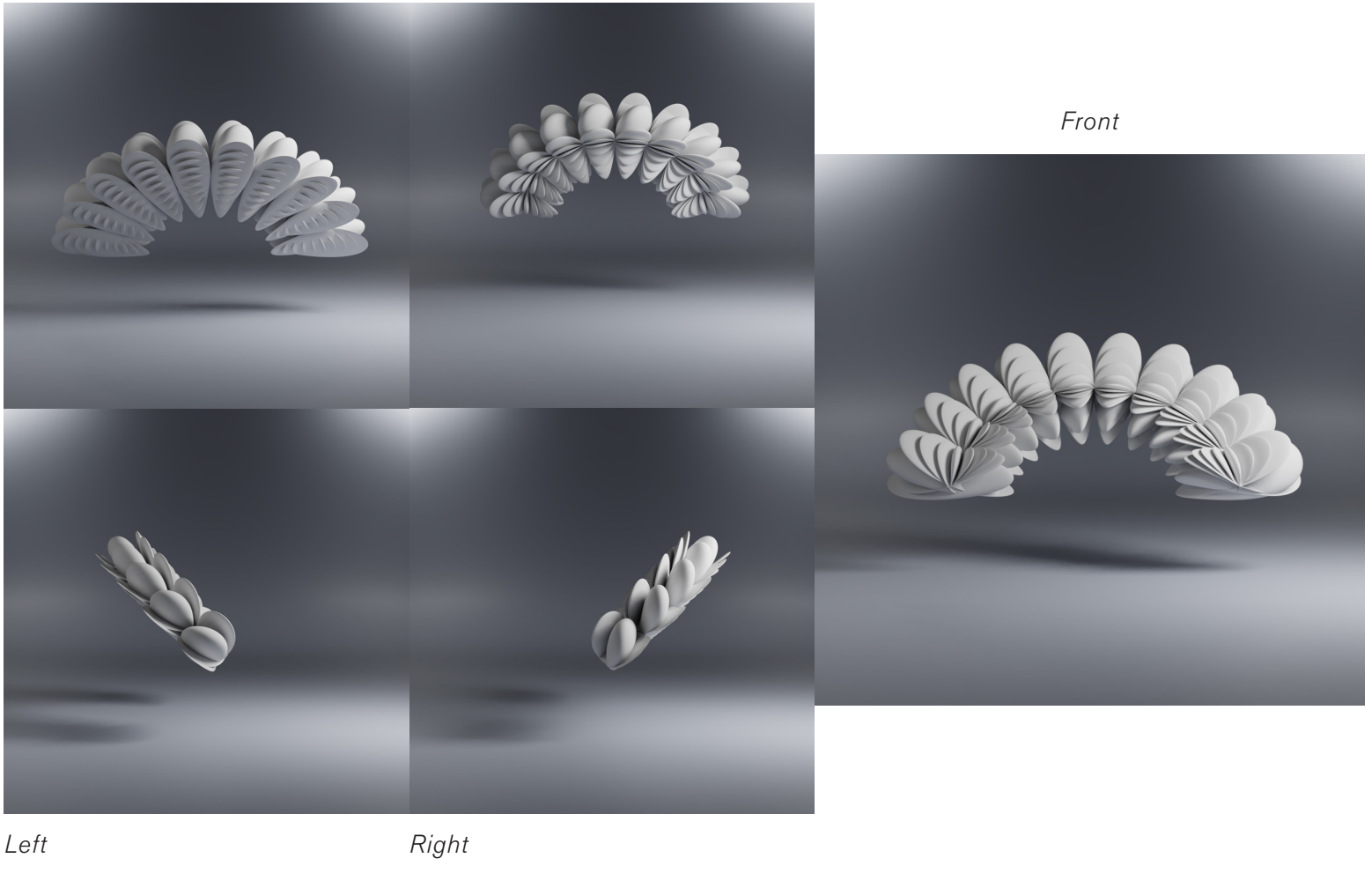



Figure 6

# Form Exploration, Panelling Tools

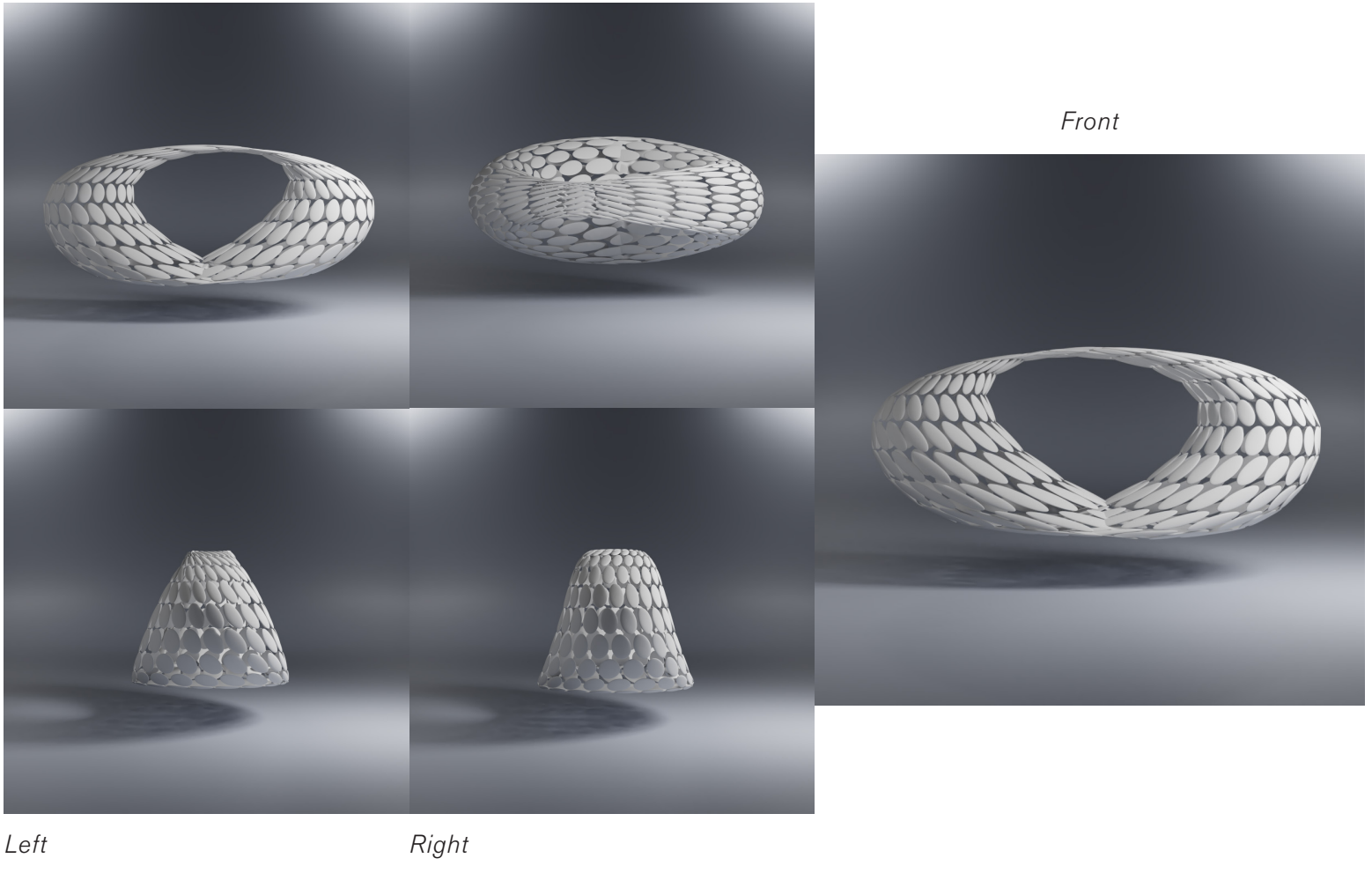



Figure 7

# Form Exploration, Panelling Tools

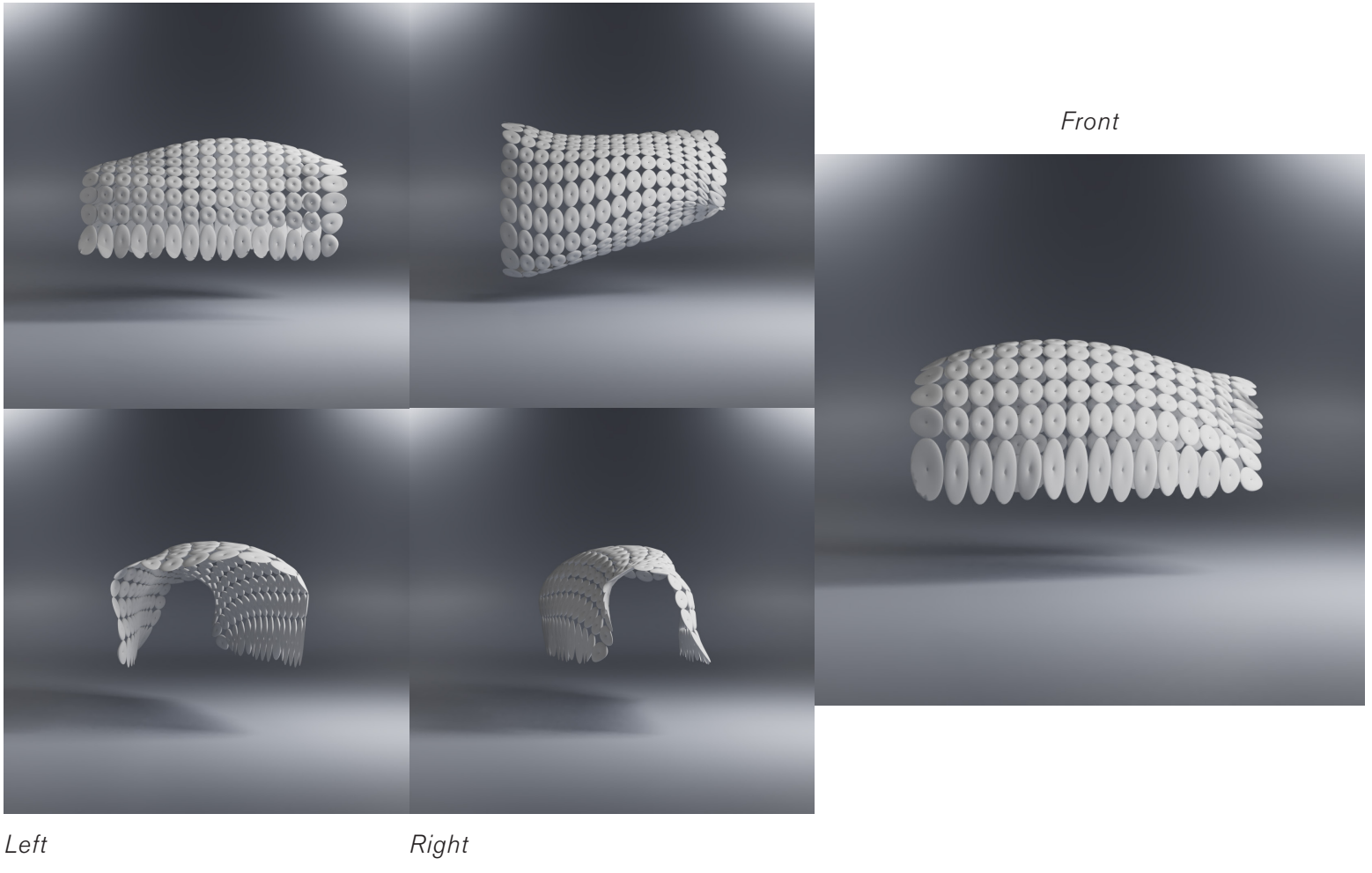



*Figure 8*

# Form Exploration, Panelling Tools

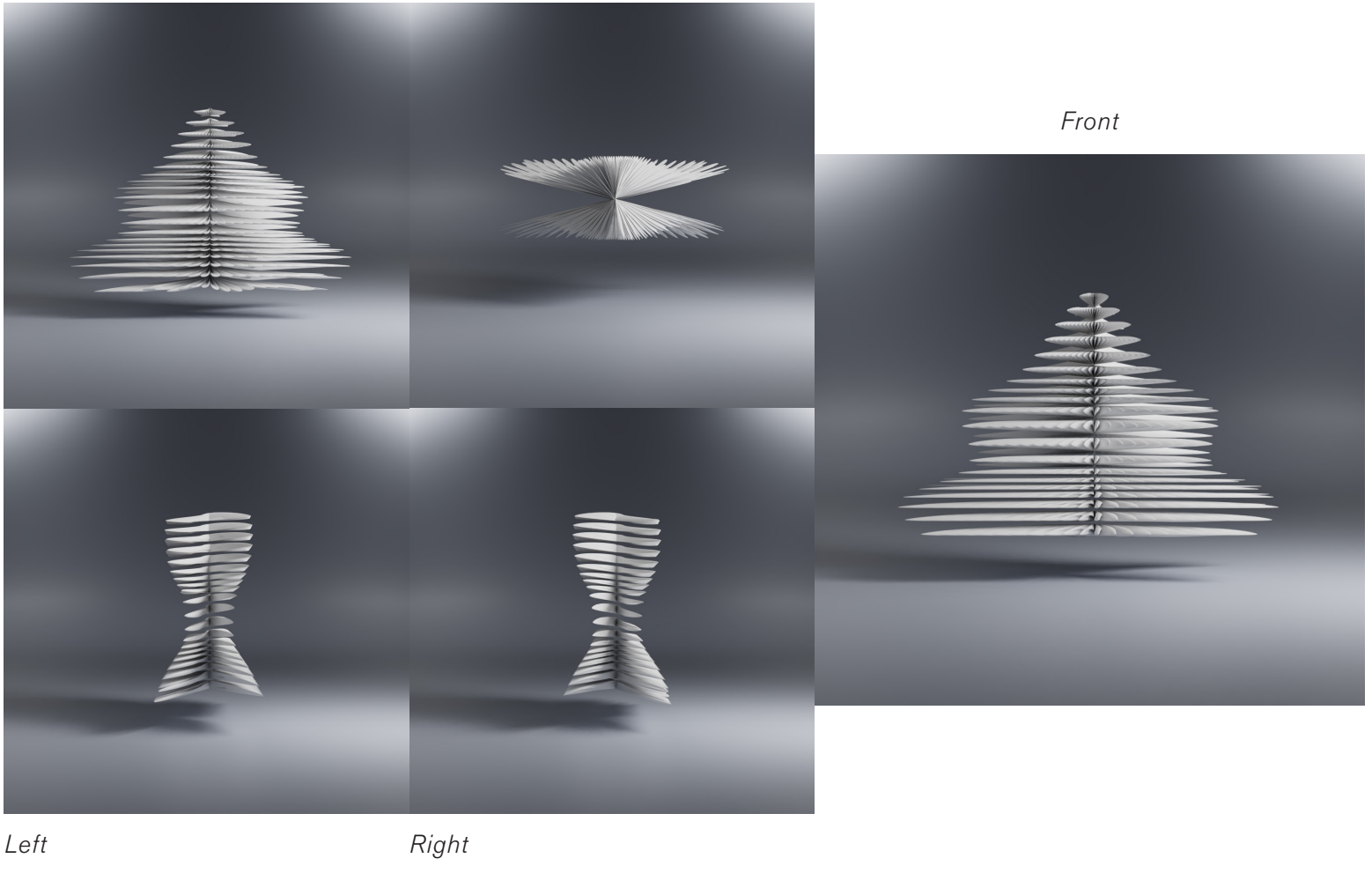


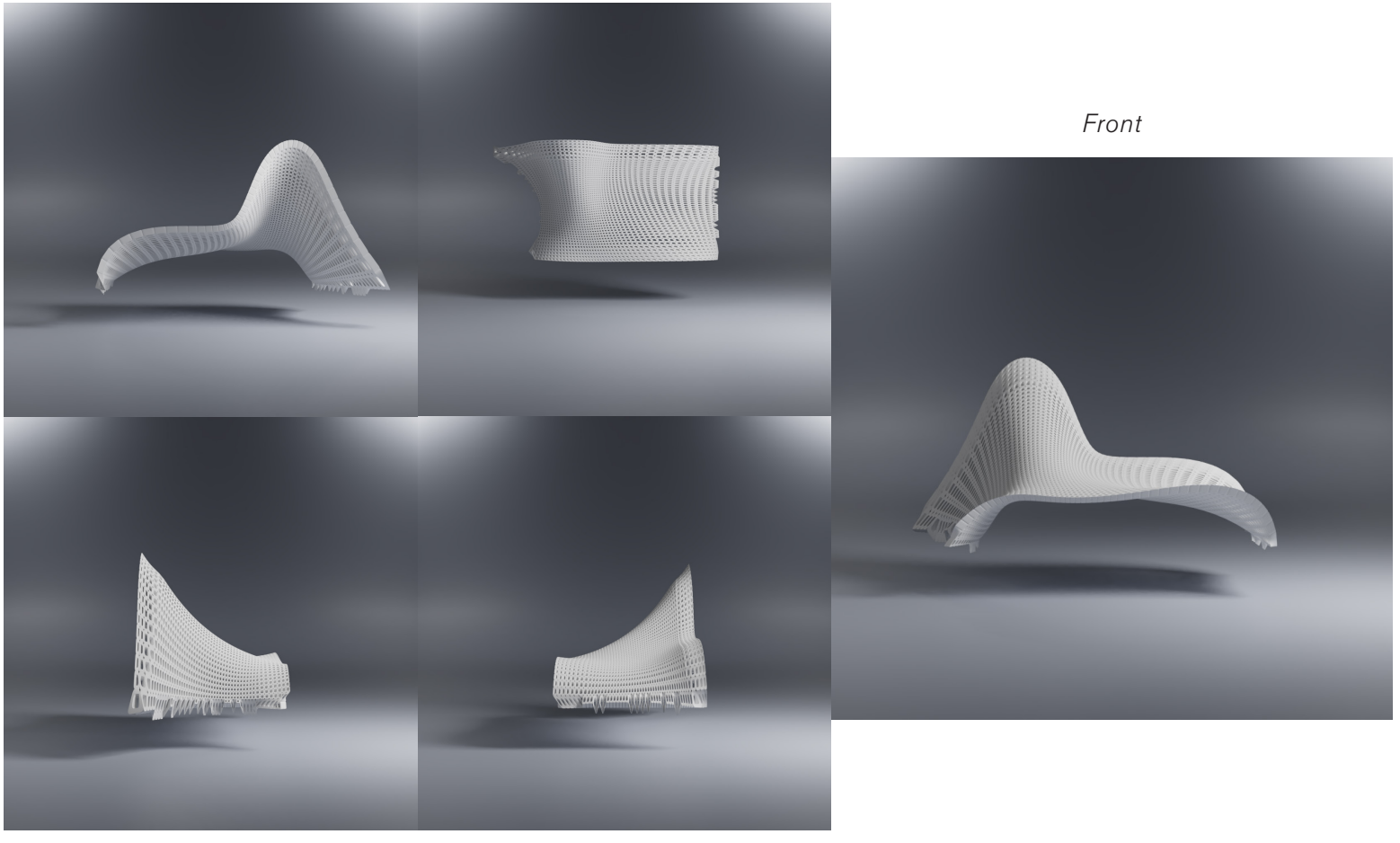

Figure 9

# Form Exploration, Panelling Tools

*Back*

*Top*

*Front*

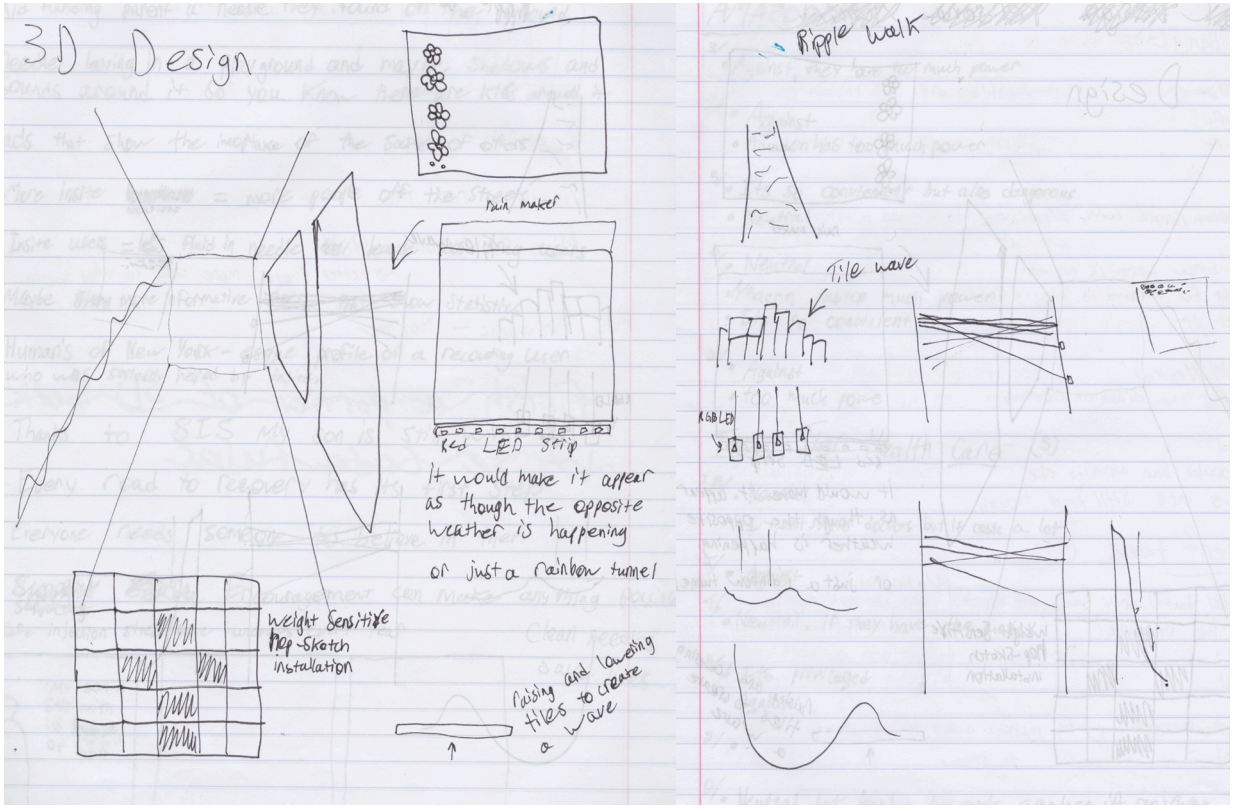


*Left*

*Right*

*Figure 10*

# Process Work - Initial Ideas




• Interactive hopscotch game that would be played with interactive floor tiles that contained weight sensors and LED lights.
• Grid of strings that were attached to rails on either side of each string so that the strings could slide up and down the canvas to create different patterns.
• Series of installations across a whole hallway, they would be attached to the windows and create a false sense of the weather and time of day. Using rain machines and dimming filters, the device would make it appear as though it was dreary and rainy outside when it is actually warm and sunny, and vice versa when dark and rainy.
• Hallway of tiles that shifted and moved around to create a ripple effect and various noise based generative patterns, they would also clear a pathway and settle down as users walked through.