DANIEL BISHAY

Selected Projects - 2025

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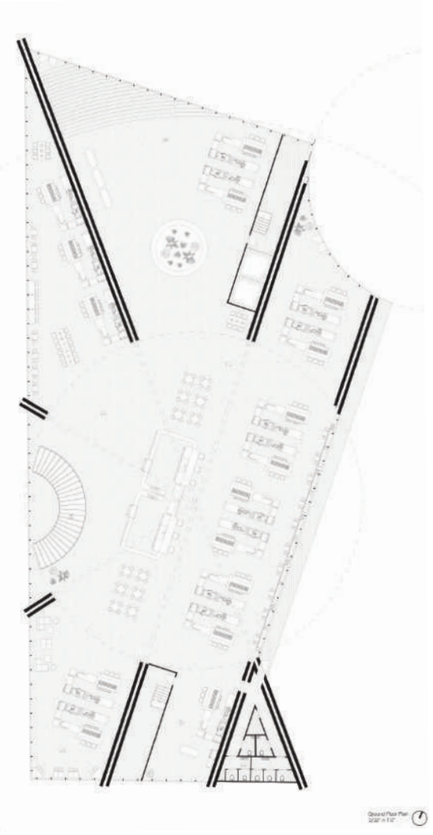
DANIEL BISHAY

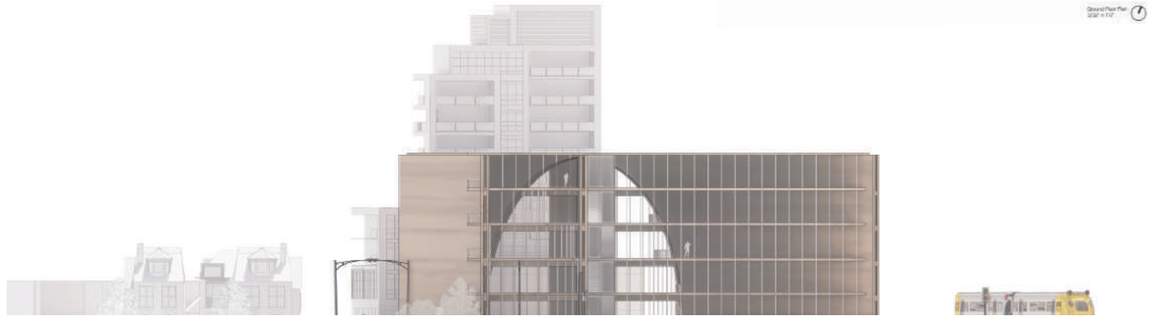
CATHEDRAL MARKET

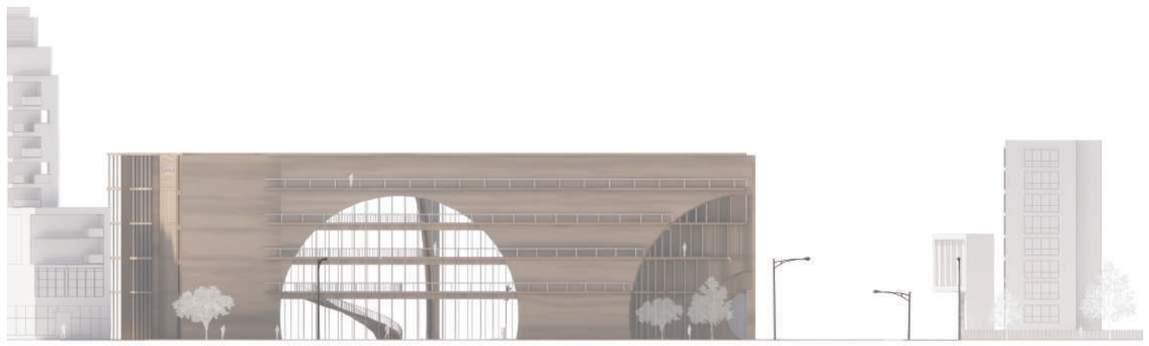
Type - Academic
Instructor - Christopher Cornecelli
CORNECELLI

This project proposes a five-story building located at Bloor St W and Perth Avenue, designed to integrate a two-story all-season market at the base with three stories of artist studio spaces above. The architectural concept revolves around the voiding of spherical forms to create open, flexible spaces that balance structural integrity and spatial openness. A large central sphere serves as the primary void, with the intersecting walls supporting floor plates and providing radial views both within the building and outward to the city. The transparent quality of the design gradually shifts towards greater privacy as one moves upward, with the structure becoming more enclosed on higher levels.

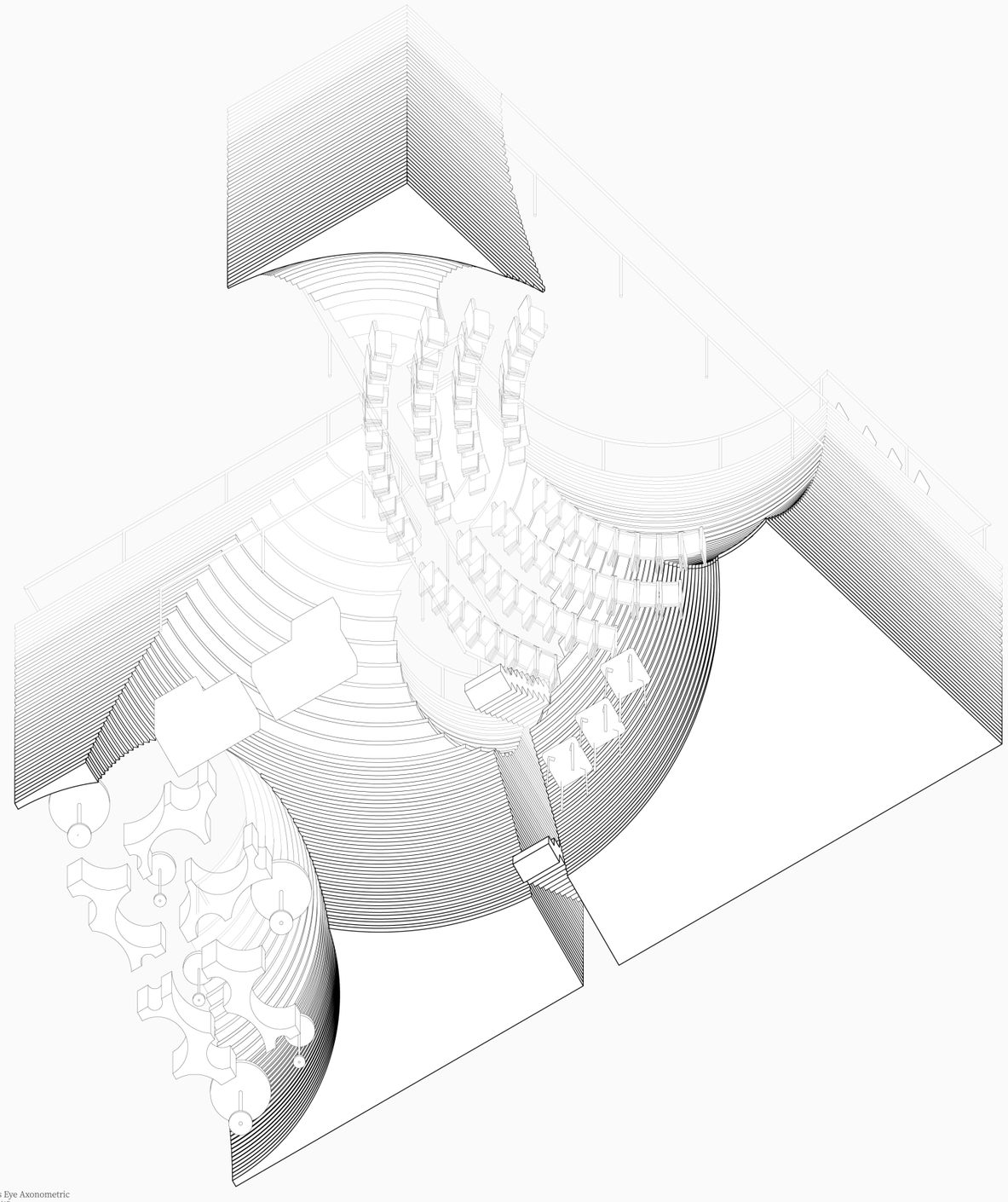
The load-bearing walls are doubled, with a beam system extending through the centroid of the building to support the underbelly of the floor plates. This beam network forms a mutually supportive relationship with the walls, distributing loads efficiently. The central void facilitates openness, offering clear sightlines and creating visual connections both within and beyond the building. To emphasize this design philosophy and enhance the public experience, two additional spheres are introduced, one at the northeast corner of the site to create an inviting public space and another on the west side of the building, forming an atrium and the foundation for a monumental staircase.



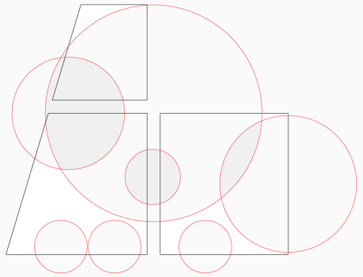




SUNKEN THEATRE

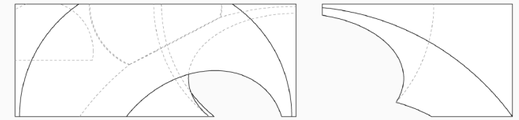


Worms Eye Axonometric
1/4" = 1'0"

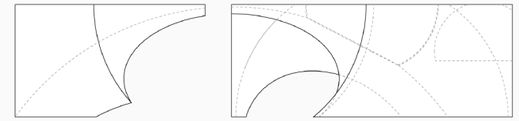


Type - Academic
Instructor - Christopher Cornecelli
CORNECELLI

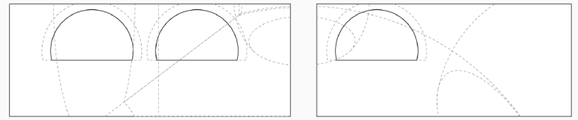
The project evolved from a foundational square form, which I intentionally transformed into a more asymmetrical, geometric shape to contrast with the organic, spherical elements that would define the interior. I focused on three key design principles cuts, etches, and voids to shape the architectural language and spatial relationships. These voids became functional spaces, connected by two spheres that link the upper and lower levels. The larger sphere creates a focal point for the lower floor, while the smaller one bridges the two levels, resulting in open, communal areas that encourage movement and interaction. To evoke a sense of cavernous depth, I used stacked planar surfaces to create a dense, subterranean atmosphere, contrasted by lightness above ground.



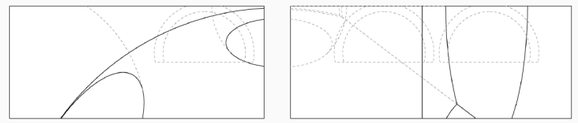
North Facade Form



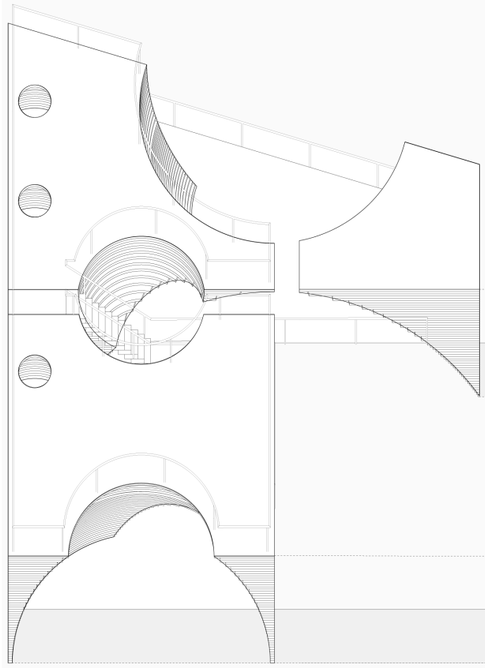
South Facade Form



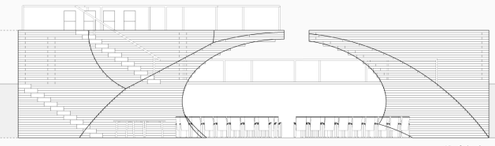
East Facade Form



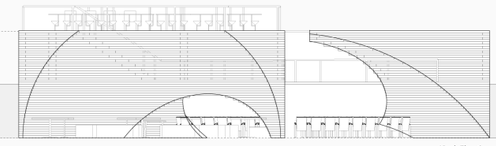
West Facade Form



The varying floor plates, supported by smaller structural elements, allow for a shifting gradient of natural light throughout the day. Below ground, the two spheres house the movie theater and congregation spaces for small groups, while the middle spheres act as connective hubs, ensuring fluid circulation between spaces.

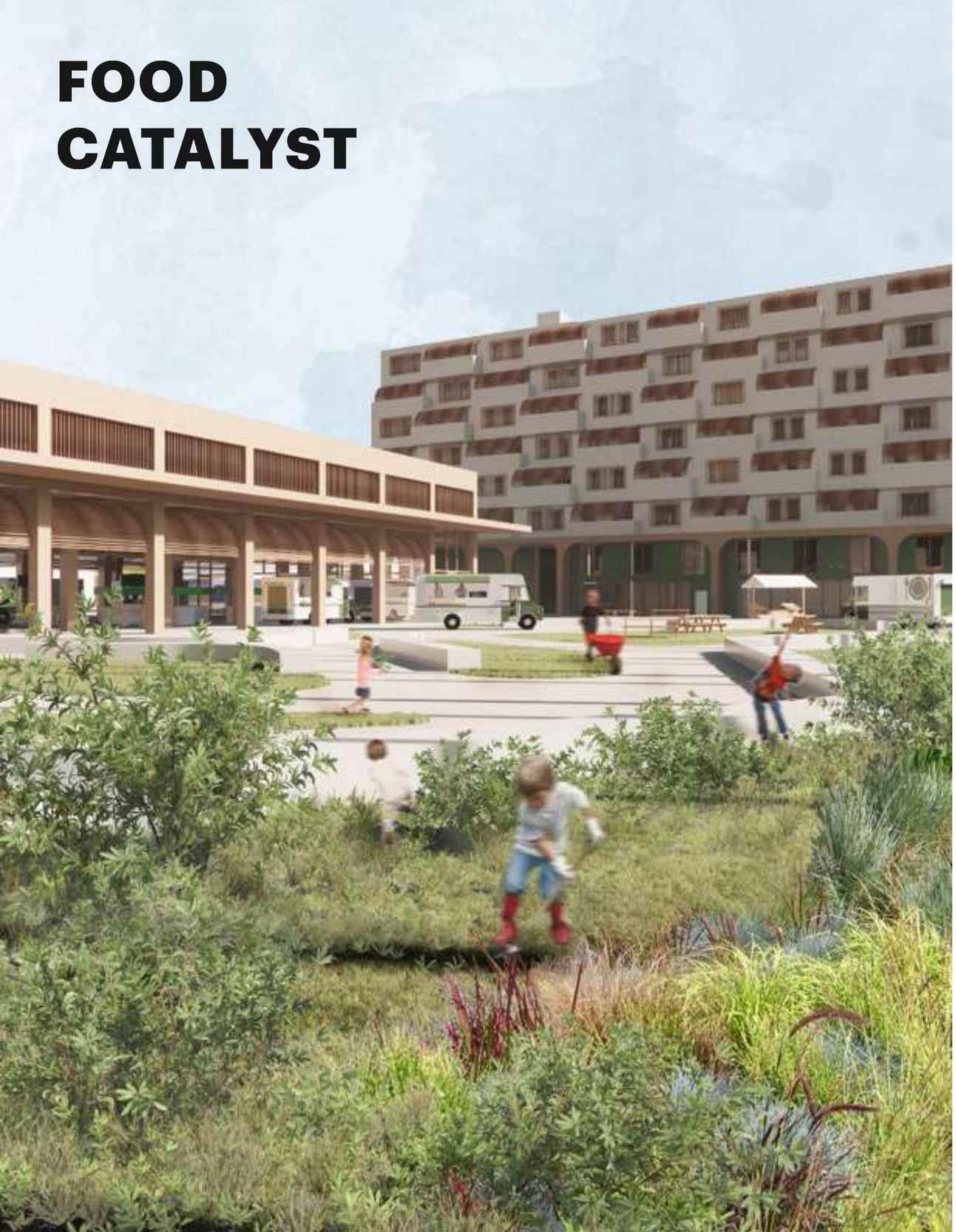


North Section



North Elevation

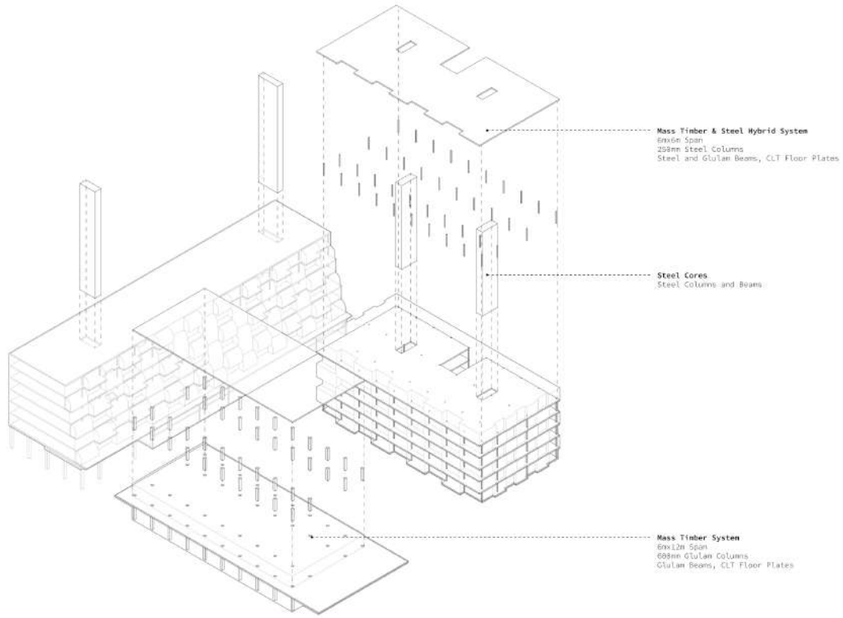
FOOD CATALYST



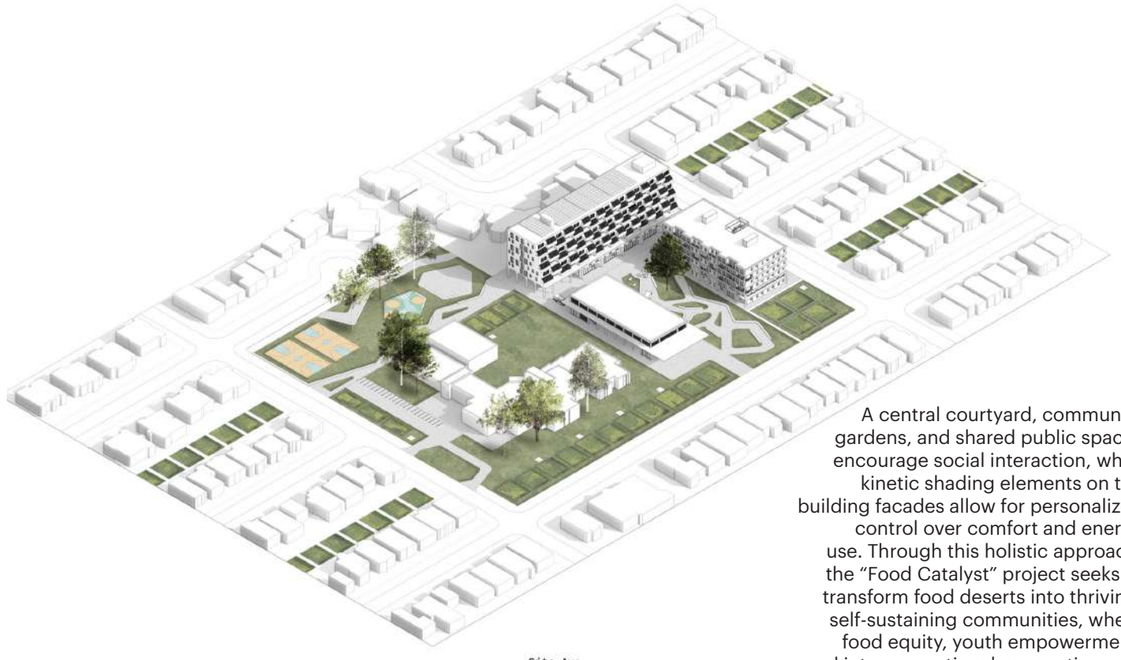
Type - Academic
Instructor - Brigitte Shim
Shim-Sutcliffe Architects

This project attempts to address food insecurity in a designated food desert, promoting community engagement and youth leadership. Located in a diverse, underserved area, the project envisions a sustainable and inclusive environment where residents have equitable access to fresh food, while fostering intergenerational connections. Drawing inspiration from successful models like The Ron Finley Project and Grow Dat Youth Farm, the project aims to create public markets, community gardens, and youth-operated spaces that serve as hubs for economic activity and community cohesion.

These spaces are designed to empower residents, particularly youth, by providing opportunities for leadership, hands-on involvement in food production, and cultivating a deeper understanding of food systems. The architectural design prioritizes sustainability and community integration, with features such as a U-shaped massing to maximize sunlight, flexible public market spaces, and energy-efficient systems like ground-source heat pumps and solar panels. The residential buildings offer diverse unit typologies, including co-op housing, intergenerational units, and live-work spaces, to accommodate various family structures.



Structural Diagram



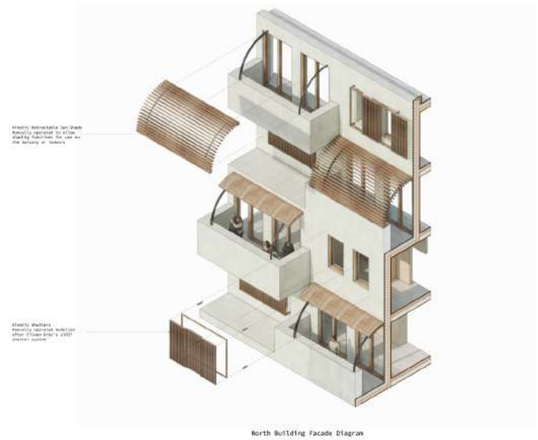
Site Axo

A central courtyard, community gardens, and shared public spaces encourage social interaction, while kinetic shading elements on the building facades allow for personalized control over comfort and energy use. Through this holistic approach, the “Food Catalyst” project seeks to transform food deserts into thriving, self-sustaining communities, where food equity, youth empowerment, and intergenerational connections are central to the neighborhood’s success.

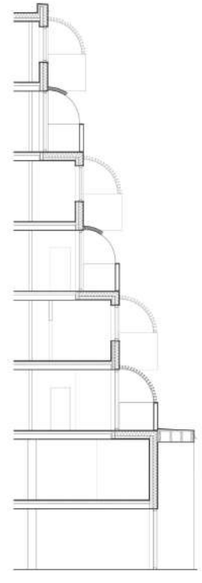
Courtyard During the Summer Farmer’s Markets

Courtyard During the Winter

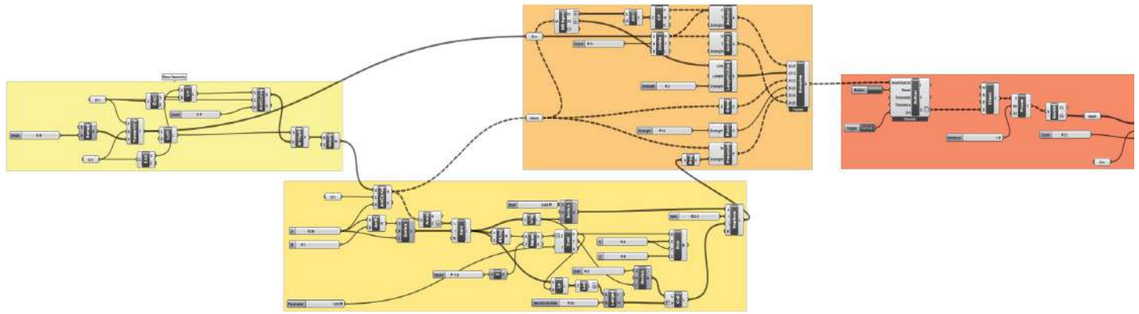
Market Building Facade Diagram



North Building Facade Diagram

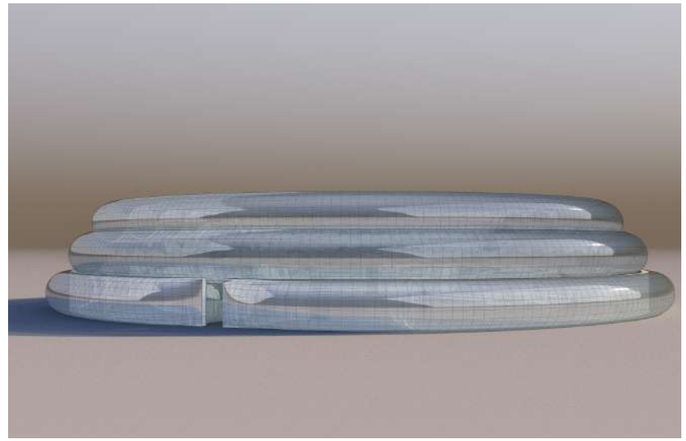


BUBBLE PAVILION

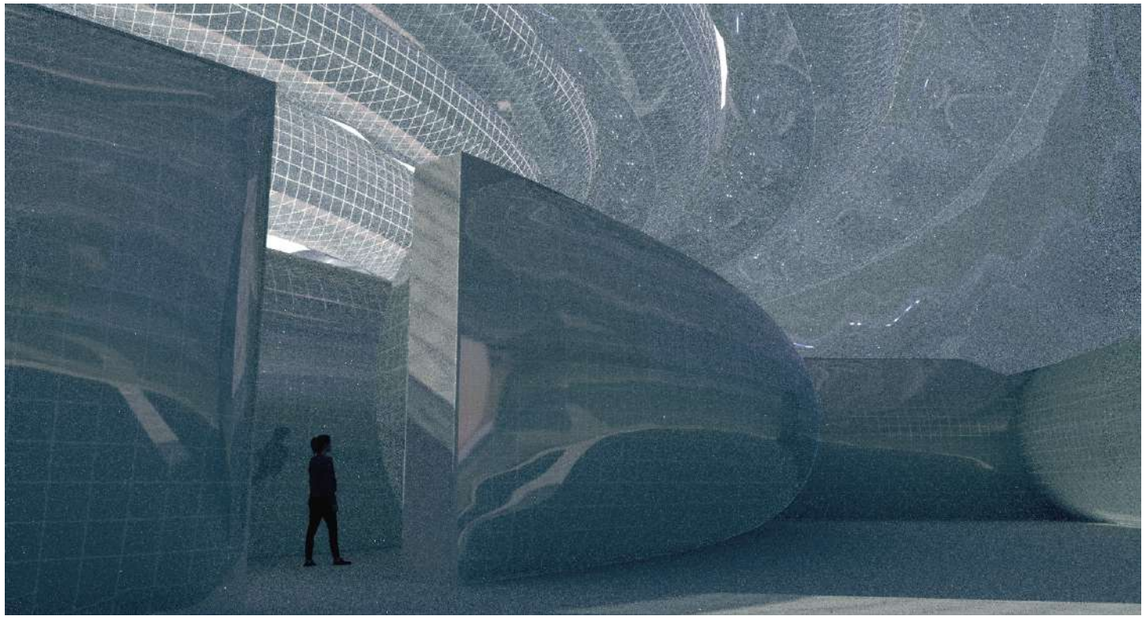


Type - Academic
Instructor - Salman Khalili-Araghi
ERA Architects

The design proposal leverages pneumatic structures powered by compressed air, incorporating a technological approach that dynamically responds to the human body through the use of sensors. This innovative concept explores a network of interconnected, yet individually responsive, inflatable units that inflate and deflate based on user presence and movement within the space. The project utilizes parametric design principles in Grasshopper to create a flexible and complex system, allowing each air pocket to react autonomously, inflating or deflating in response to real-time data gathered from the users. By utilizing sensors embedded in the structure, the design becomes an interactive environment where the inflatable elements adjust their form and volume according to the proximity and behavior of the individuals within the pavilion.



This responsiveness aims to create a highly personalized, sensory-rich experience, where each user interacts with the space in a unique way. The pavilion fosters intimate moments by actively engaging the senses, potentially altering social dynamics by modifying how users relate to their environment and to one another.



FIRST NATIONS COLLEGE

“Beadwork is an advanced system of knowledge production and transmission in which beaded artifacts “become animate, gifted with spirit, representative of the ways of teaching, learning and knowing of Indigenous women in celebration of their resilience and wellness”

Type - Academic
Instructor - Behnaz Assadi
Ja Architecture Studio

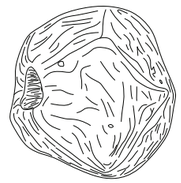
Team Member - Yipeng Huang

This project delves into the cultural and historical significance of beadwork within Indigenous communities, recognizing it as an essential medium for visual storytelling, memory preservation, and the re-establishment of connections. Beadwork, a practice deeply embedded in the fabric of Indigenous identity, has long served as a method of communication, especially in the aftermath of the trauma inflicted by the residential school system.

The narrative of an Athapaskan woman, who learned to bead as a way to reconnect with her mother after losing the ability to speak her language, is central to our understanding of beadwork as both a personal and communal act of cultural restoration. This project aims to frame beadwork not merely as a craft but as an intricate and evolving system of knowledge, where each bead and stitch serves as a symbol of resilience, healing, and cultural continuity.

Bone Bead

Onöndowa'ga:' (Seneca) Haudenosaunee Archaeological Materials, circa 1688-1754



Gemstone Bead

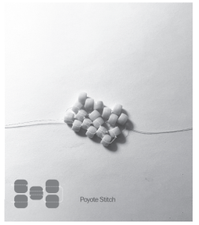
Onöndowa'ga:' (Seneca) Haudenosaunee Archaeological Materials, circa 1688-1754

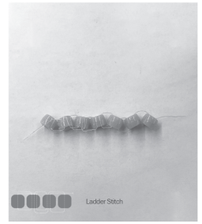
Shell Bead

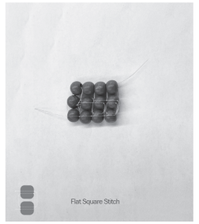
Onöndowa'ga:' (Seneca) Haudenosaunee Archaeological Materials, circa 1688-1754

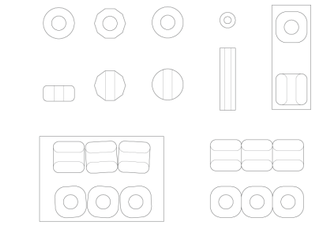
Groundstone Bead

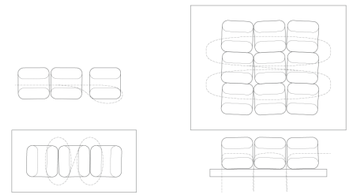
Onöndowa'ga:' (Seneca) Haudenosaunee Archaeological Materials, circa 1688-1754

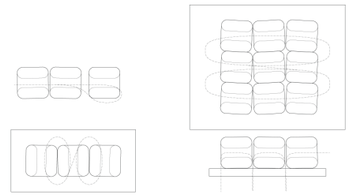


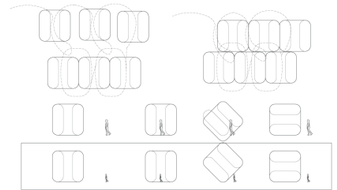


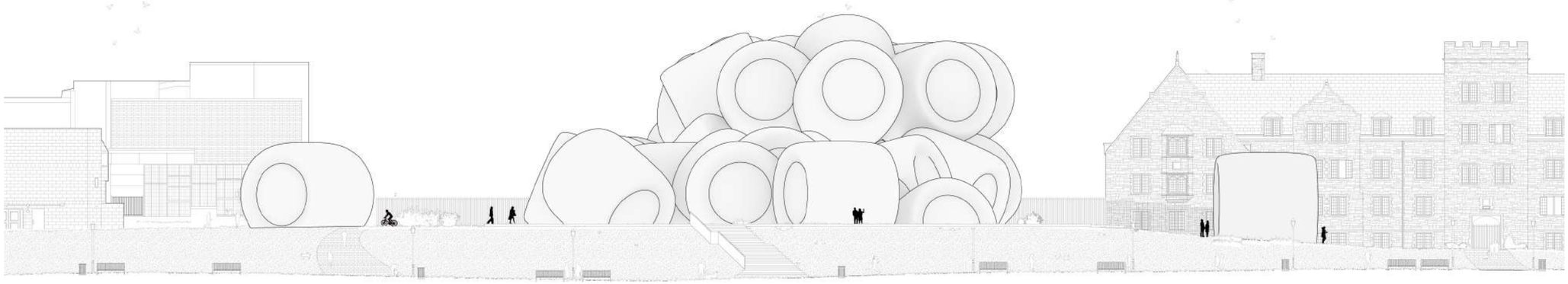


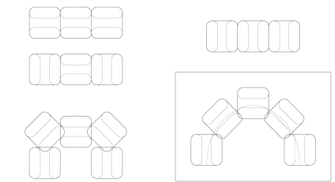










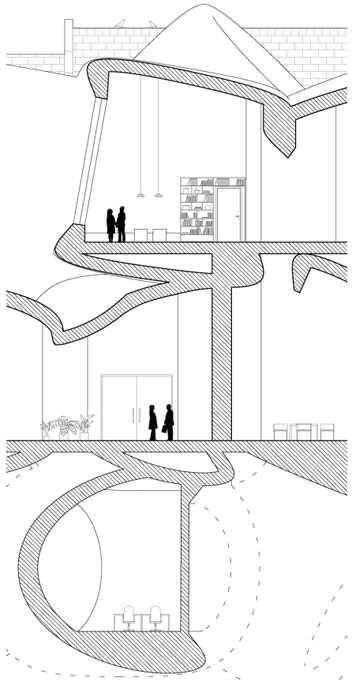


Focusing on beadwork as both a preservation of tradition and a living practice that carries forward Indigenous knowledge and values. Through extensive research into various beading techniques, stitches, and the formal qualities of beadwork, we began to recognize the architectural potential within the practice. Beadwork, in its structure and rhythm, shares similarities with architectural design, with each bead serving as a building block that contributes to a larger, cohesive whole. This realization led us to explore how beadwork can be translated into architectural form, reflecting the ways in which Indigenous knowledge systems are passed down through generations and continue to evolve.

South Section

ARC1012-Site Matter, Ecology, and Indigenous Storywork
Beading the Plains

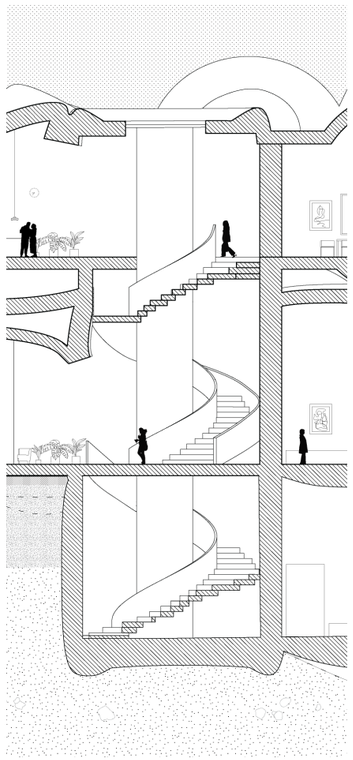
SCALE 1 : 200 — 5m — 10m — 25m — 50m



North Section

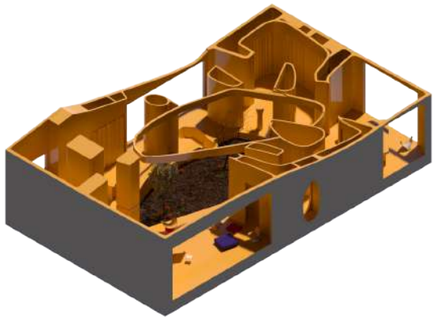
ARC1012-Site Matter, Ecology, and Indigenous Storywork
Beading the Plains

SCALE 1 : 200 — 5m — 10m — 25m — 50m



The project centers on the idea that beadwork is never truly finished until the last bead is securely in place, symbolizing the ongoing process of cultural repair and knowledge transmission. This concept of an unfinished, in-progress work aligns with the fragmentation and disintegration of Indigenous knowledge systems that have occurred due to colonization, but also highlights the potential for healing and reconstruction. Our design integrates beadwork into architectural form, creating spaces that flow into one another with a sense of intimacy and connection to the land. The mass of the structure, anchored to the ground, mirrors the grounding nature of beadwork as a practice that ties people to their culture, land, and community.

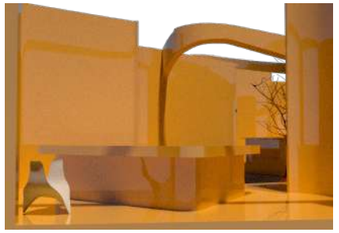
HOUSE OF THE FUTURE



Type - Academic
Instructor - Miles Gertler
Common Accounts

House of the future by Alison and Peter Smithson was designed in 1956 to showcase what a house could look like 25 years in the future. The home was displayed in the Olympia Exhibition Centre for just under a month. Focusing on the piece's temporality as it only existed for a short period of time and was almost never seen again. However, with the exception of its images, the piece goes on to live forever. The exhibition was a performance that displayed domesticity and futurism as a spectacle for the public.

Its documentation through images becomes a form of artifact carrying on its history, but also future. With that, this project aims to showcase not only a piece of architecture but an event that is being excavated for you, the viewer. My goal was to re envision the exhibit using the colour and intensity originally used to capture its essence although fragmented by time and an inherent loss of information. The project reconstructs the space through our understanding of its remains, using 3D modeling and rendering to recreate each piece of furniture and room from archival materials and imagery.



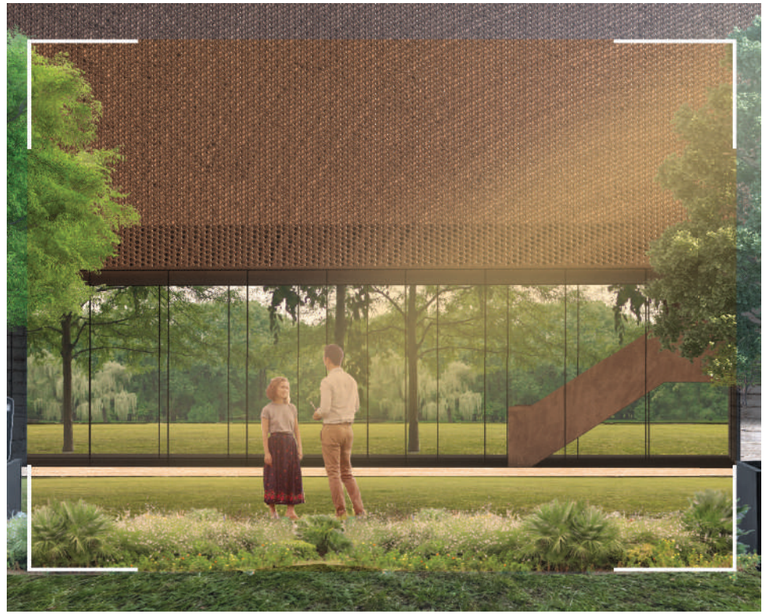
LITTLE VILLAGE STUDIOS

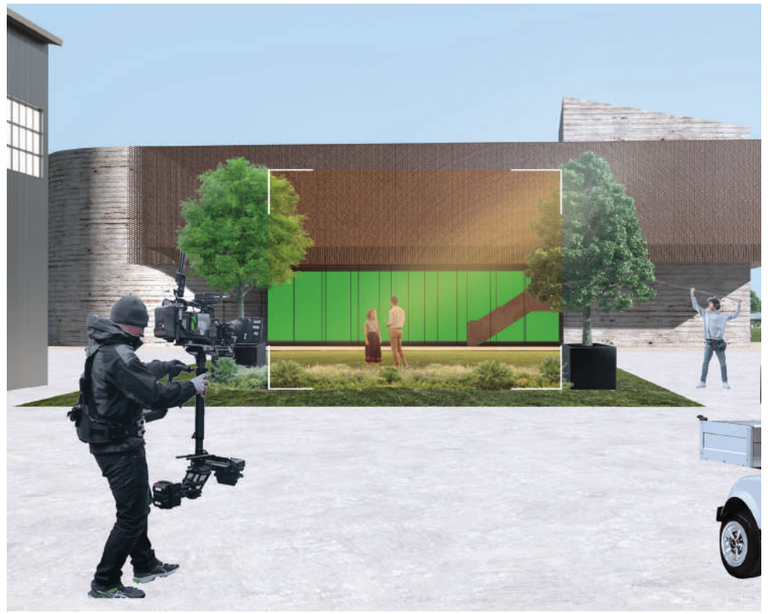
Type - Academic
Instructor - Florian Idenburg, Jing Liu
SO - IL

Team Members - Sonia Mataj, Negar Mashoof

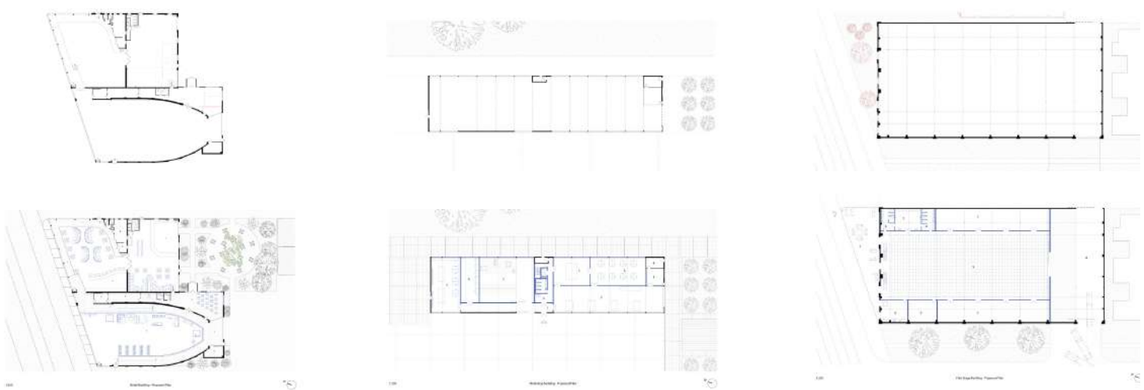
Revitalizing post industrialist Detroit by transforming former industrial spaces into a hub for film production and artistic activity. The project draws inspiration from successful creative spaces like Powerhouse Arts in Brooklyn and the Prada Foundation in Milan. It aims to blur the lines between film and architecture, where the built environment becomes a stage for storytelling and the visitor becomes an active participant in the unfolding narrative.

Alongside Brooklyn based firm SO - IL we were asked to study Detroit's unique qualities including its industrial heritage, diverse culture, and recent resurgence of interest in film production. Our site is located in Detroit's East Village, specifically in the emerging artistic corridor called Little Village where our professors are proposing their own project for a decommissioned marina.

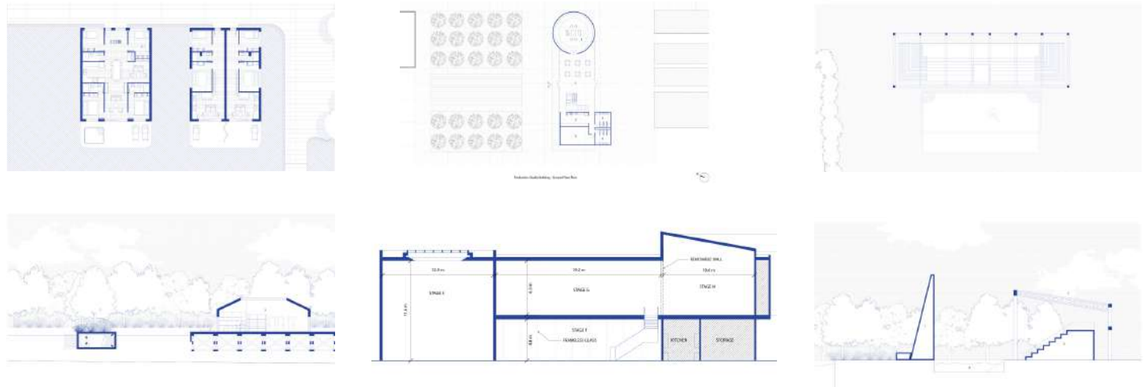




Our proposal features a range of facilities including film stages, workshops for set design and fabrication, post-production studios, and flexible event spaces. The project will also include retail spaces, a restaurant, an outdoor amphitheater, and short-term house boats for film professionals. One of the key goals of our project is to support the growth of Detroit's film industry by providing training and apprenticeship opportunities for aspiring filmmakers. The project will partner with local educational institutions and employ a diversified economic model that includes event space rentals, membership-based access to equipment, and partnerships with various institutions. Engaging creatives through architectural design that can be used to shape perception, direct attention, and create a sense of narrative, much like the techniques used in filmmaking.

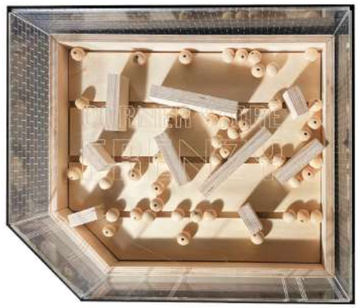


The role of the camera has shifted dramatically, reshaping our perception of what constitutes a film set. Traditional boundaries have dissolved, giving rise to unconventional props, experimental materiality, and fluid scenography that defy classical staging. In this new paradigm, the set becomes less about replicating reality and more about constructing dynamic, layered environments that interact with the lens in unexpected ways. Architecture and set design become seamingly one as both disciplines embrace storytelling, material innovation, and the redefinition of space. Architecture, much like set design, can serve as a powerful narrative tool, shaping how people move through and interact with a space. Just as a film or theater set frames the action and evokes emotion, architectural design can construct narratives through spatial configurations.



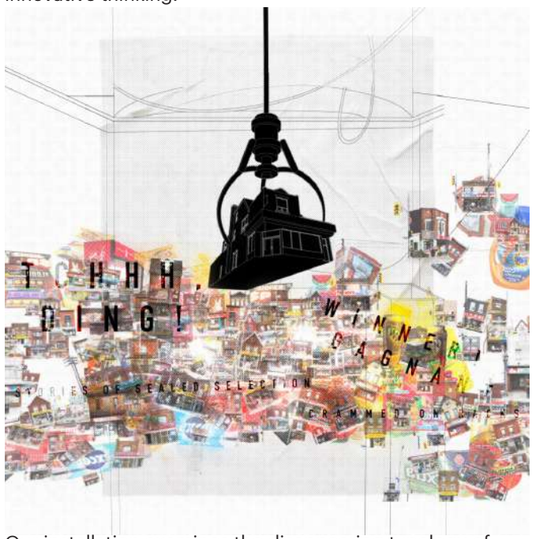
CORNER STORE FRENZY

Central to the exhibit is the creation of a curtain crafted from discarded packaging waste from convenience store products. This intervention reimagines waste management by aligning with goals of community engagement, visual merchandising, and storefront activation. The curtain features pockets designed to be filled by the store and its customers, fostering processes of borrowing, sharing, and storytelling. As items are contributed and rearranged, the curtain evolves into a dynamic display and a forum for community interaction. It also serves as a tool for collecting customer suggestions and requests for new products, enabling store owners to adapt to the needs of their community. This self-sustaining model allows stores to continuously revitalize themselves, engage with creative youth, and remain relevant within their neighborhoods.



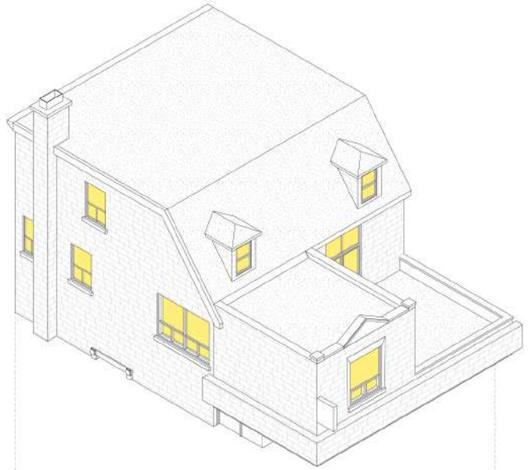
Type - Academic
Instructor - Reza Nik
SHEEEP Studio

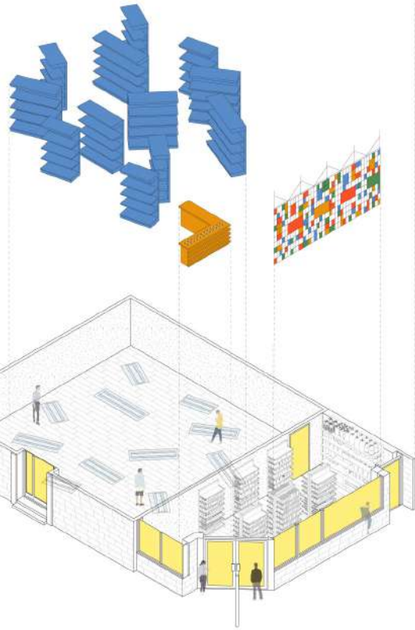
Exhibition at Collision Gallery exploring experimental processes to address socio-political issues in the city, focusing on the lack of informal, affordable, and temporary spaces for youth. Through parameter-based experiments emphasizing abstraction, chance, indeterminacy, and failure, it encourages innovative thinking.



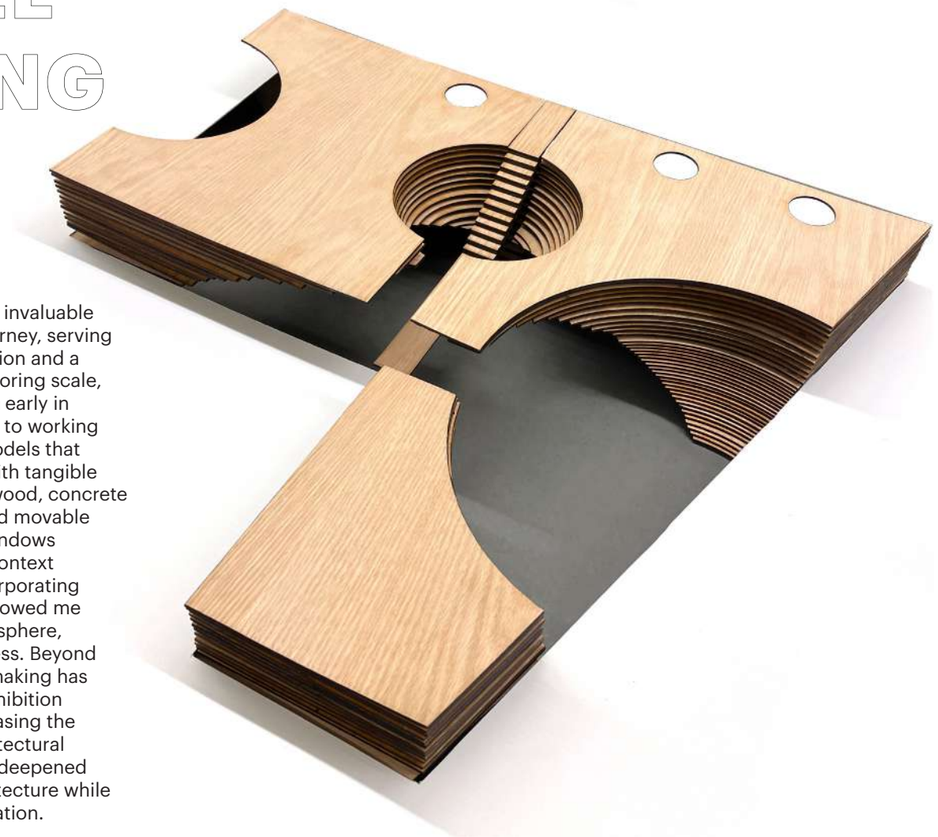
Our installation examines the disappearing typology of convenience stores in downtown Toronto, cataloging all remaining stores and highlighting their socio-cultural significance as informal community hubs. Microinterventions explore alternative materials and techniques to push beyond traditional architectural approaches.

Team Members - Kathryna Cuizon, Keith Kim, Sarah Janelle

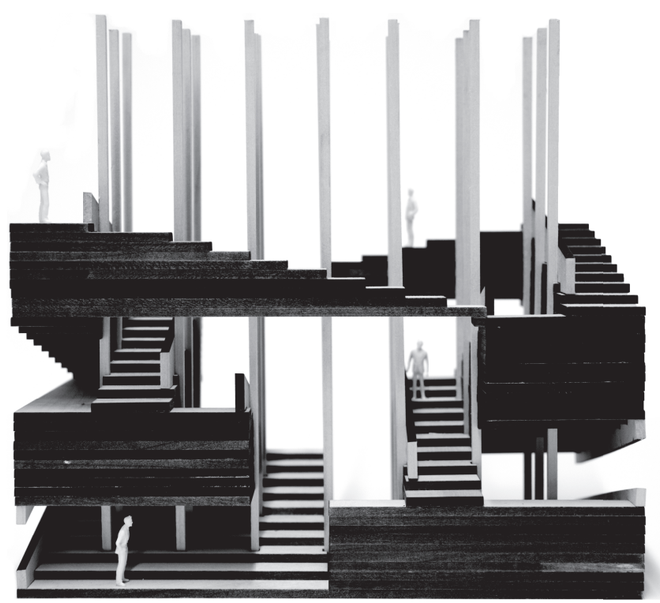


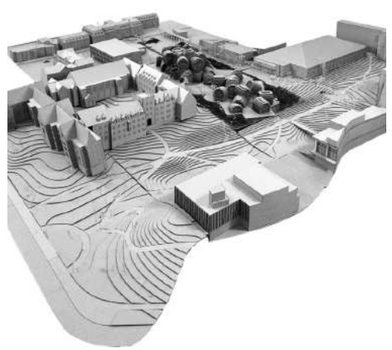


MODEL MAKING



Model making has been an invaluable tool in my architectural journey, serving as a medium for collaboration and a hands-on approach to exploring scale, materiality, and form. From early in my career, I've been drawn to working with my hands, crafting models that bridge conceptual ideas with tangible outcomes. I've employed wood, concrete casts using molds, clay, and movable elements like doors and windows to better understand site context and spatial dynamics. Incorporating lighting into models has allowed me to study shadow and atmosphere, enriching the design process. Beyond its functional role, model making has also been a medium for exhibition and gallery spaces, showcasing the narrative and craft of architectural thought. This practice has deepened my understanding of architecture while fostering creative collaboration.





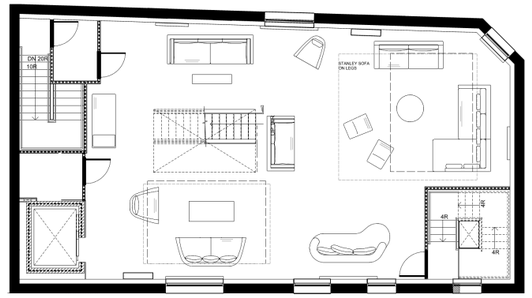
Custom Furniture

At Montauk Sofa, I worked at the intersection of creative vision and real-world application, serving as a key liaison between the creative director, interior designers, architects, and private clients. Specializing in high-end, custom furnishings, I developed a deep familiarity with the construction, detailing, and sourcing standards that define contemporary luxury. My role demanded fluency in both spatial planning and material understanding, as I translated conceptual direction into tailored design solutions; whether through floor plan development, visual merchandising, or on-site coordination with external trades.

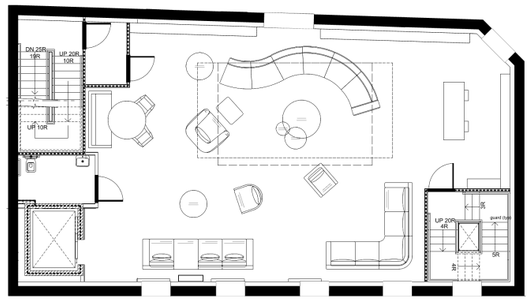
This experience, paired with my formal training in architecture, has shaped a comprehensive understanding of the design industry; from the nuances of client relationships to the execution of complex interiors. This role strengthened my ability to work across concept and implementation, and reinforced my passion for interiors as a space where every detail plays a role in shaping meaningful, livable environments.

Type - Professional
MONTAUK SOFA

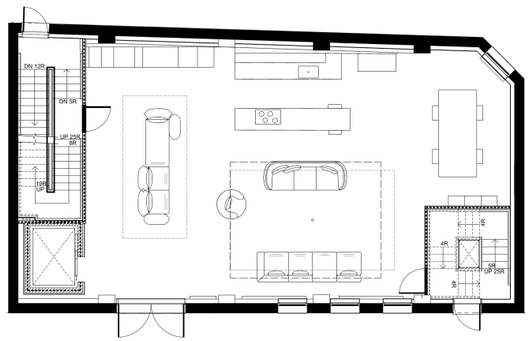
Store Layout



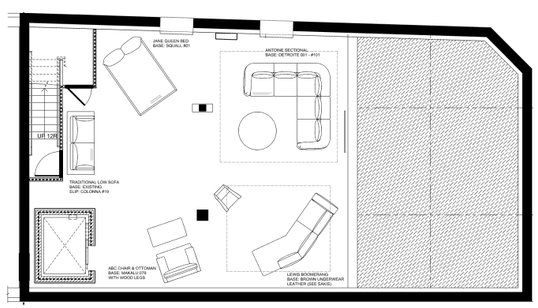
THIRD FLOOR



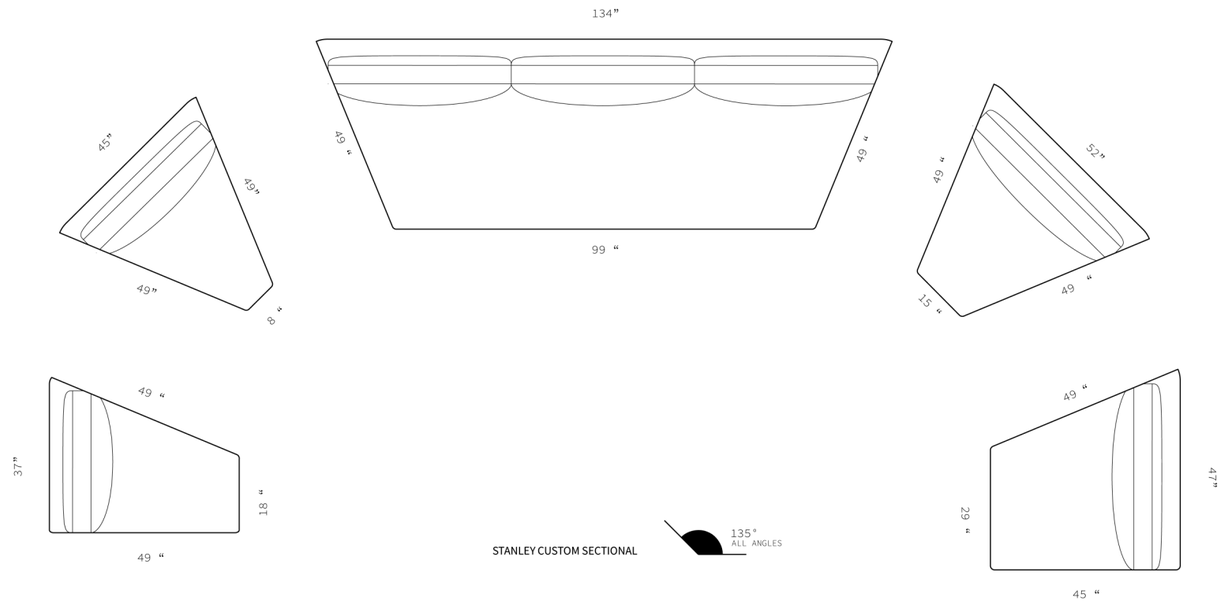
SECOND FLOOR - PROPOSED



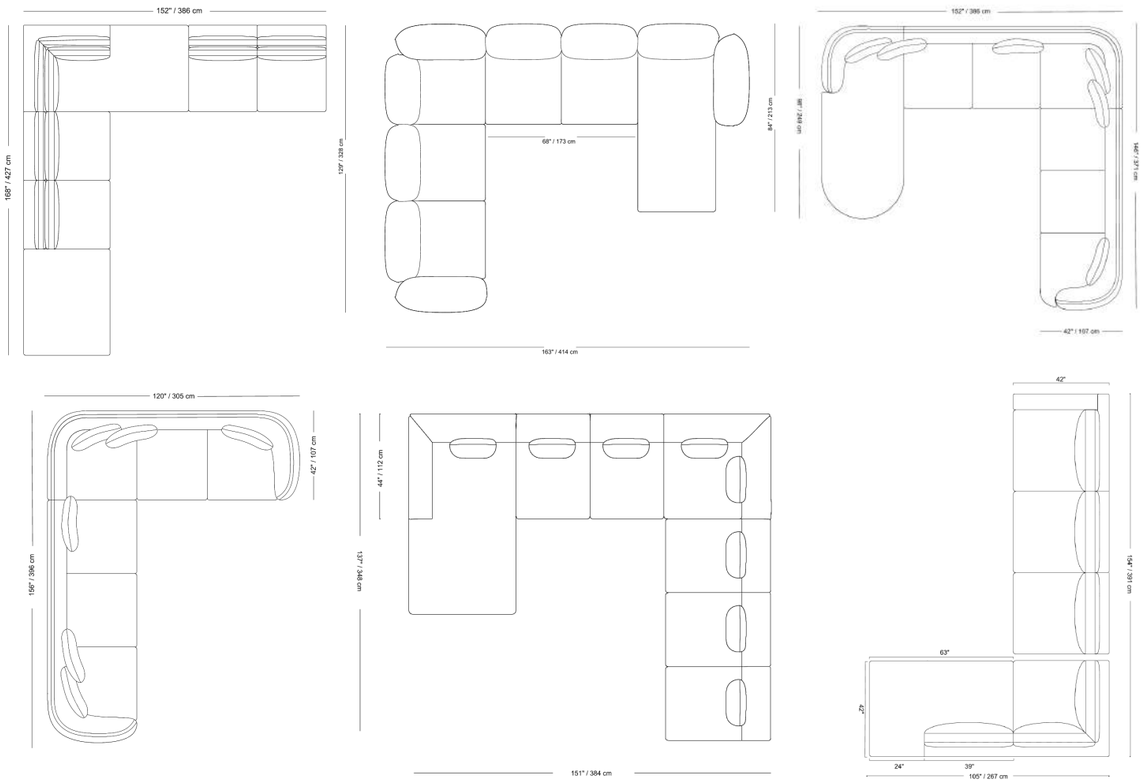
FIRST FLOOR - PROPOSED



BASEMENT - PROPOSED



From initial concept through to final installation, I was deeply involved in drafting specifications, coordinating construction details, and refining designs as spatial and material constraints emerged. I gained a comprehensive understanding of the production process, working closely with both internal teams and external fabricators to ensure alignment at every stage. This hands-on, detail-oriented process taught me how to navigate complex timelines and evolving site conditions with precision and adaptability. Over the course of my time at Montauk, I contributed to the successful completion of dozens of high-end residential and commercial interiors across North America.

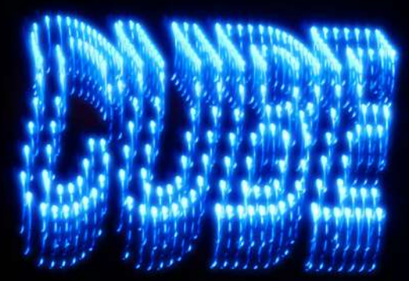


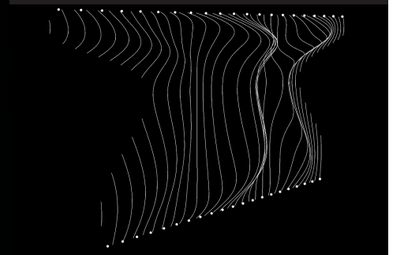
ROBOTIC ARM CONTOURS

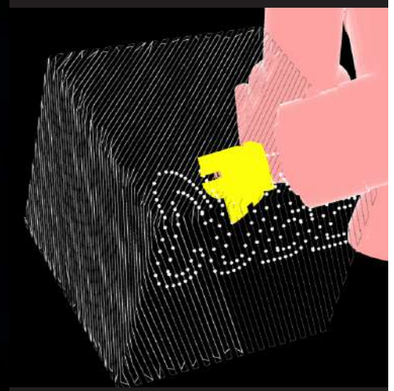
Type - Academic
Instructor - Maria Yablonina
Designing with Machines

Team Member - Yegor Konechnyy

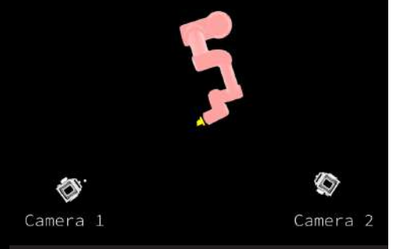
This project explores creating light drawings with a robotic arm, focusing on stippling techniques and documenting dynamic movements. By orienting a light source towards and away from the camera, we developed a tool to draw paths and stipples through precise rotations of the robot's end effector. We captured the robot's movement from a perpendicular vantage point, experimenting with contours and paths to reveal layered forms within the drawings.

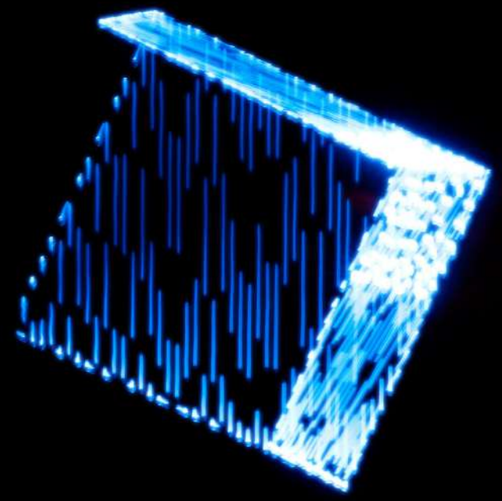






To address issues with unintentional arcs, we designed a dual-light end effector with shades to integrate distinct lineworks seamlessly. Refining the robot's motion by rotating the wrist along the Z-axis, allowing one LED to face a primary camera while the second LED created stipples for a secondary perspective. Using Grasshopper, we mapped intersecting curves and precise points for stippling, applying this method to create geometric forms like a cube, captured from multiple angles.



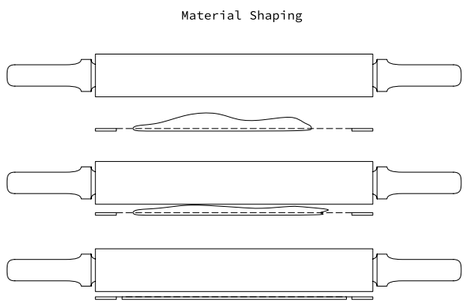


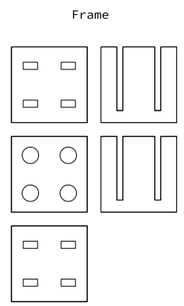
The project emphasizes the intersection of robotics, design, and visual storytelling, exploring how a robot can highlight and interact with different sets of information through light and movement. This project lays the groundwork for my thesis to be completed in the following term.

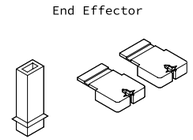
SOFT LOGIC

Material-Led Fabricated Formwork Using Robotic Reconfigurable Pin Tooling

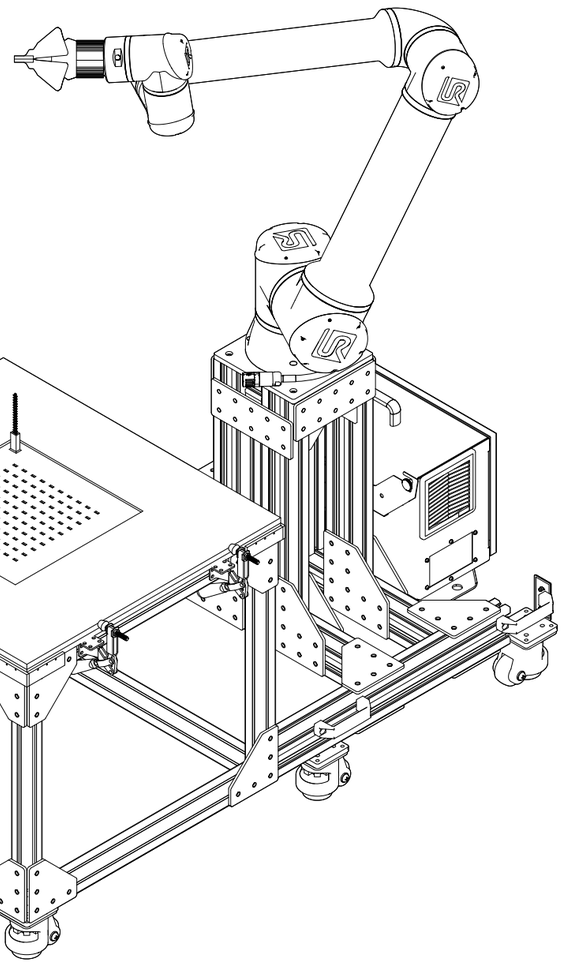
Tools





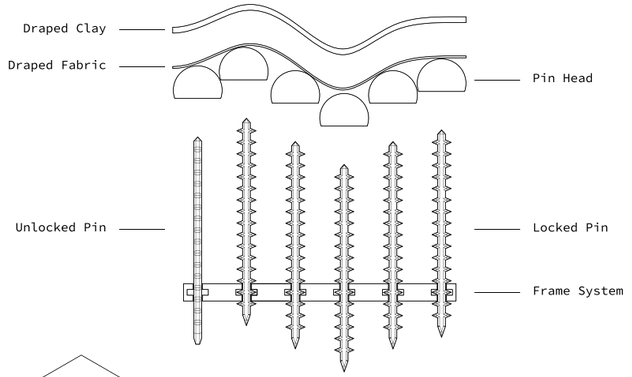


Soft Logic proposes a new methodology in architectural fabrication that positions material behavior, softness, unpredictability, and variability as an active and generative force. Rather than seeking rigid control or precise replication, this thesis explores how digital suggestion, robotic actuation, and human-material interaction can co-produce emergent forms. Soft fluid surfaces, while often confined to temporary installations or intensive casting processes, are reimagined through a hybrid workflow where material agency shapes design outcomes. Topographies simulated in digital space are translated into physical conditions leveraging robotic actuation and reconfigurable pin tooling, to form adaptable molds for clay to settle and express its natural tendencies. This process does not privilege automation alone; technique and manual craft are integrated, framing fabrication as a negotiation between human, machine, and material.

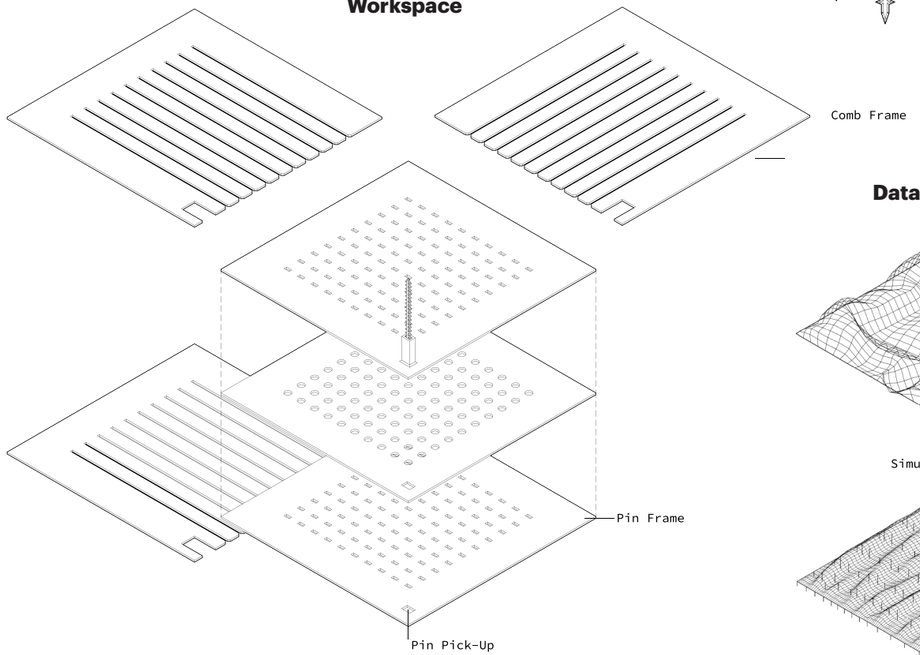


The technical development of Soft Logic integrates digital simulation, material testing, and robotic fabrication into a cohesive system for emergent form-making. The process begins with modeling fabric behavior in Kangaroo Physics, using parameters such as mesh resolution, perimeter scaling, anchor conditions, and gravity to simulate draping. These digital topographies are sampled into topographic point clouds, which inform the design of reconfigurable pin fields actuated through robotic pick-and-place sequences.

Tool Configuration

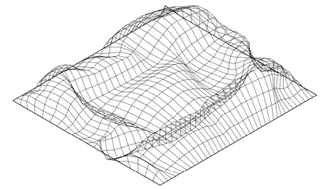


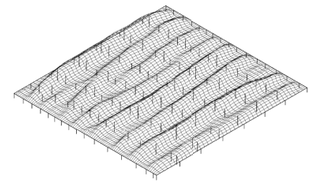
Workspace

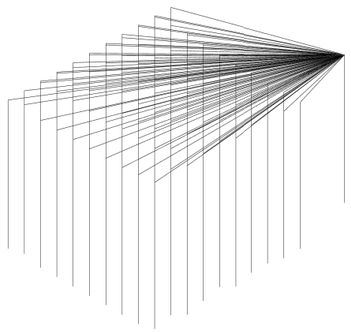


Clay, selected for its ability to mimic fabric-like behavior, is manually rolled and scaled to match the digital input, then gently draped over the pin arrays. A series of material studies testing hydration levels, shrinkage rates, and perimeter conditions guided refinements to the forming process. The tooling system evolved through iterative prototyping, incorporating 3D-printed locking pins, comb stabilizers, and a laser-cut frame mounted to a modular MDF base. Across multiple case studies, the system demonstrated its ability to register large-scale surface gestures as well as fine-tuned, localized interventions. The final outputs include interlocking clay panels formed through partial automation, human intervention, and material responsiveness—underscoring the project's central premise: that emergent form can be achieved through the interplay of system design, material intelligence, and process adaptability.

Data Translation



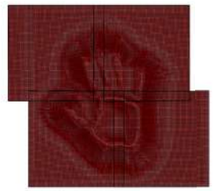


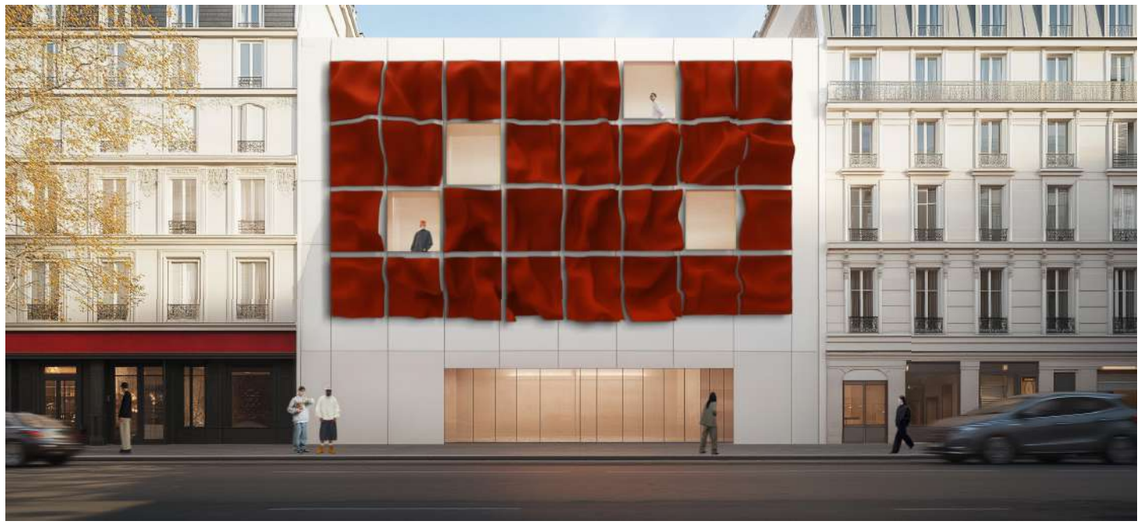


Supported by modular, reusable tooling, the system advances a resource-conscious approach to surface formation. It eschews single-use molds in favor of continuous tuning and the reduction of waste, enabling a process where one adaptable framework can support multiple outcomes. The tooling was developed to accommodate both robotic input and manual intervention, allowing topographic fields to be rapidly reconfigured while remaining responsive to material behavior. This approach repositions tooling not as a fixed constraint but as a flexible instrument in dialogue with clay's inherent tendencies.

Beyond its technical contributions, Soft Logic engages the tension between digital precision and physical variability as a fertile design space. The work embraces difference, unpredictability, and slippage between model and material as opportunities rather than errors. Aligning with contemporary visual culture, where softness and imperfection increasingly shape aesthetics, the project proposes emergent surfaces as new architectural expressions. These materially intelligent forms challenge conventional logics of assembly, offering possibilities for facades, interiors, and public installations that embrace adaptability, resilience, and process-driven making. In doing so, Soft Logic expands the role of fabrication from replication to exploration, situating softness not as a failure of form, but as a method for generating it.

Prototypes





DANIEL BISHAY