Architectural Portfolio

Selected Works 2022–2026



Abubeker Musa

abubekermusa105@gmail.com | +251974671431

About Me



About me

I am an architect and visualizer based in Addis Ababa, working between research, design, and the construction site. My graduation thesis on dynamic façades, named Best Graduation Thesis of 2026, investigated how a building skin can respond to its conditions, and I developed a kinetic prototype to test the idea.

Internships at Abba Architects and Arcsole Consultancy introduced me to stadiums, housing, and interiors. Most recently, supervising interior works on a G+18 commercial building with Upleveling Designers showed me how drawings meet structure, materials, and construction technique. I am drawn to large-scale projects, where form, performance, and construction must be resolved together.

ABUBEKER MUSA

abubekermusa105@gmail.com

+251974671431

www.linkedin.com/in/Abubeker-Musa

https://t.me/+fL4iQ_YizS0xZjQ0

https://portfolio-abubeker-musa.webflow.io/#gallery-section

Professional Experience

July 2026: – cont..
Upleveling Designers (Site Supervisor, Interior Designer, Visualizer)
Led interior works on site for a G+18 commercial building, alongside residential house and apartment projects. Combined design development and visualization with day-to-day site supervision. Gained direct knowledge of how structure, materials, and construction techniques come together in built work.

Jan – Mar 2026:
ASTU Department of Architecture (Volunteer Tutor)
Taught Blender to beginner students over two months and received a certificate of recognition from the department.

June – Aug 2025:
Arcsole Consultancy (Internship)
Contributed to the design and visualization of an apartment building and prepared the design and presentation of a school stadium. Worked on the exterior and interior design of residential projects.

June – Aug 2024:
June 2024: Abba Architects (Internship)
Contributed to the design and documentation of a stadium. Supported the design and rendering of a luxury apartment project and the interior design of a VVIP lounge.

Education

2021 – 2026
Adama Science and Technology University, Ethiopia

B.Sc. Architecture and Urban Planning, with distinction

Cumulative GPA: 3.33 | Major GPA: 3.67

Graduation Thesis: Dynamic Façade Design for Commercial Buildings in Addis Ababa

Selected as one of the Top 3 Best Graduation Theses of the Year (2026).

Project Experience

2026
G+18 Commercial Building, Interior Works (Upleveling Designers)
Residential House Interior Works (Upleveling Designers)
Apartment Building (Upleveling Designers)
Dynamic Façades for Commercial Buildings (Graduation Thesis, Best of the Year)
Kinetic Façade Prototype (Thesis Defense, 7th Annual Exhibition)

2025
School Stadium (Arcsole Consultancy)
Apartment Building (Arcsole Consultancy)
Residential Exterior and Interior (Arcsole Consultancy)

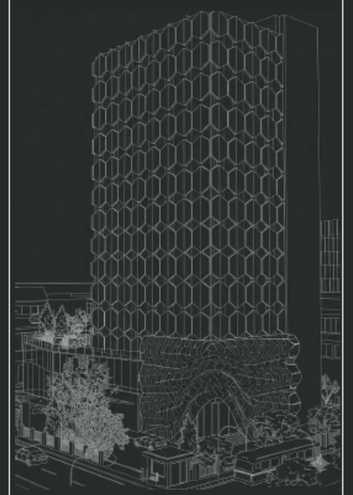
2024
Stadium (Abba Architects)
Luxury Apartment (Abba Architects)
VVIP Lounge Interior (Abba Architects)

Software Skills

Drafting and BIM :	3D Modeling :
Revit	SketchUp
AutoCAD	Blender
Archicad	Unreal

Rendering :	Presentation :
D5 Render	Illustrator
Twinmotion	Photoshop
3Ds Max	Indesign
Lumion	

Contents:



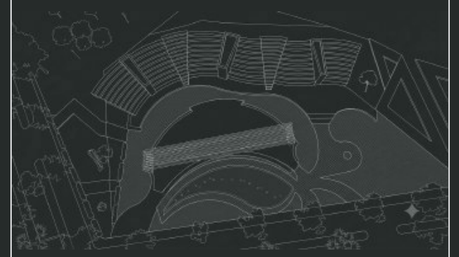
01 Dynamic Facade as my graduation Project



02 Apartment Designs



03 Bāb al-Nūr Mosque



04 Public open space and landscaping Design



05 Rift vally university Campus Design



06 ASTU Auditorium Acoustic design

01

Dynamic Façades for Shading, Ventilation, and Media Architecture

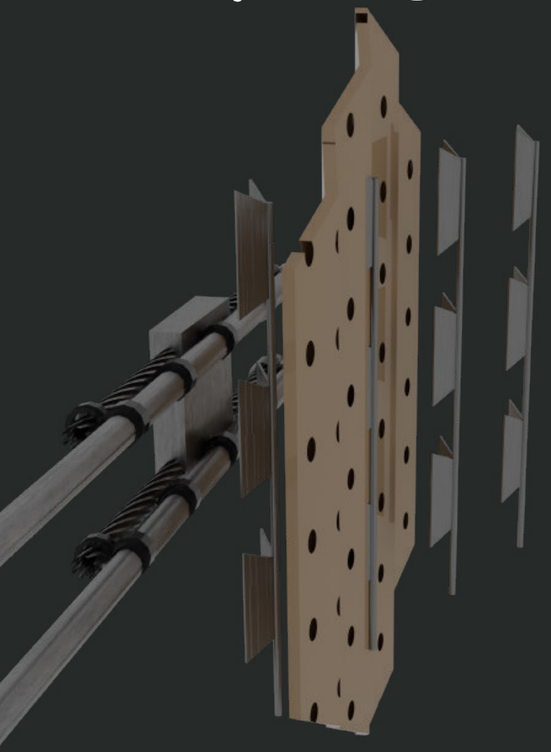
Graduation Thesis · Commercial Office Building, Addis Ababa

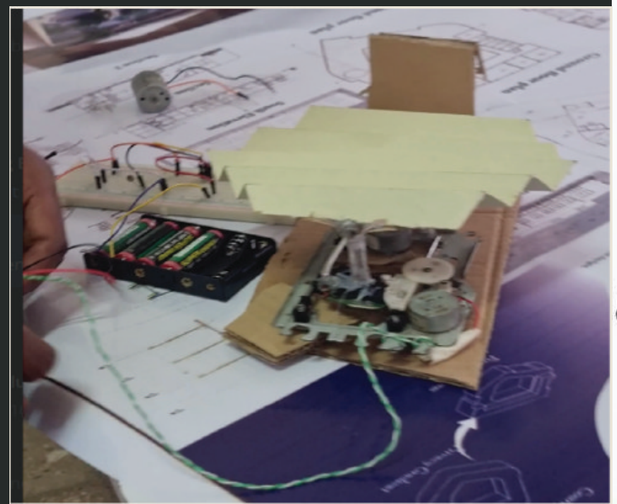
My five-year thesis asks how a commercial building in Addis Ababa can respond to its climate instead of resisting it. Office towers in the city often rely on fixed envelopes that leave occupants exposed to glare and heat. I proposed a dynamic façade that works as a shading device, a ventilation strategy, and a surface for media architecture at once. The research on adaptive façade systems was set against a real commercial office program, and the floor plans were developed alongside the skin. Spatial organization, circulation, and daylighting were resolved so that the interior and the façade support each other. The aim was one design decision where environmental performance, occupant comfort, and architectural expression meet.

The façade is made of hexagonal panels, each folding in three sections around three types of pivot. When harsh sunlight strikes part of the building, the panels in that area slide horizontally, stretch, and unfold to cover the opening like an umbrella, keeping the interior comfortable and free of glare. To test the logic, I built a working prototype for my defense using light-dependent resistors, a breadboard, transistors, and small chips, which let the panels fold and unfold in response to light the way the full façade would. The project was named Best Graduation Thesis of 2026, ranked among the top four graduation projects of the year, and exhibited at the university's seventh annual architecture exhibition. A video of the prototype is linked on the last page of this portfolio.

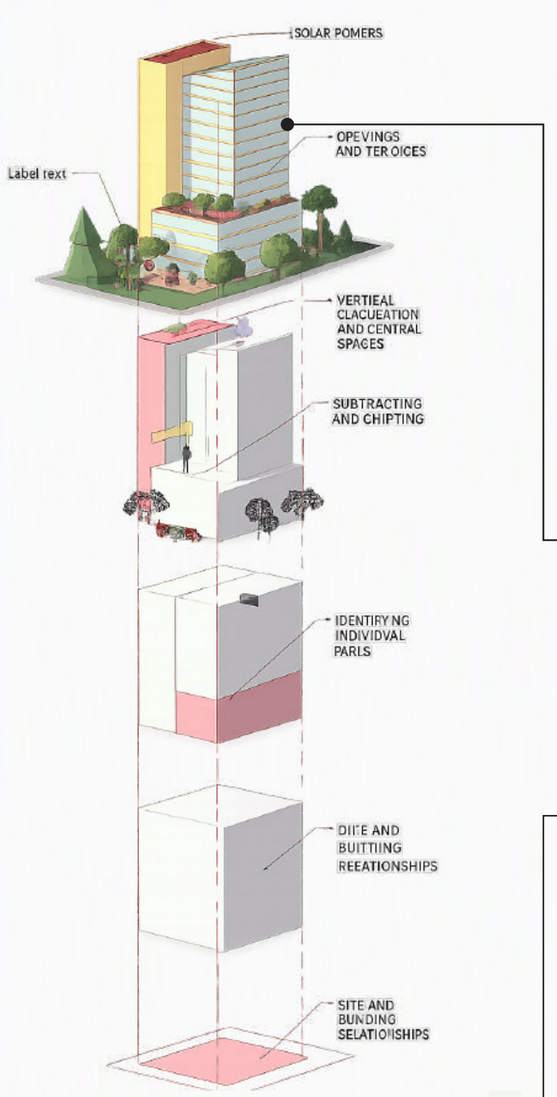


Form Development & Kinetic Façade Integration



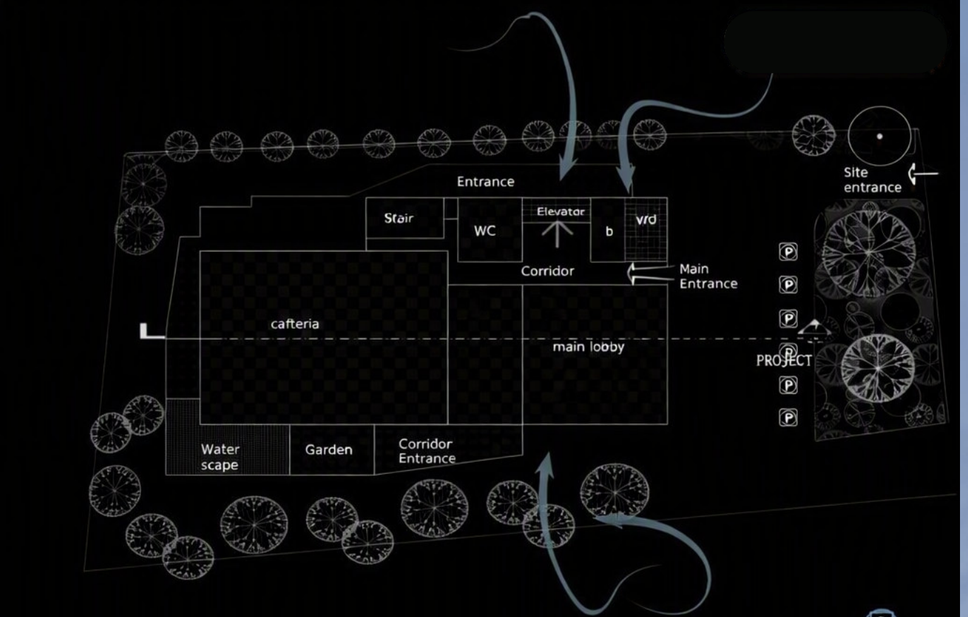


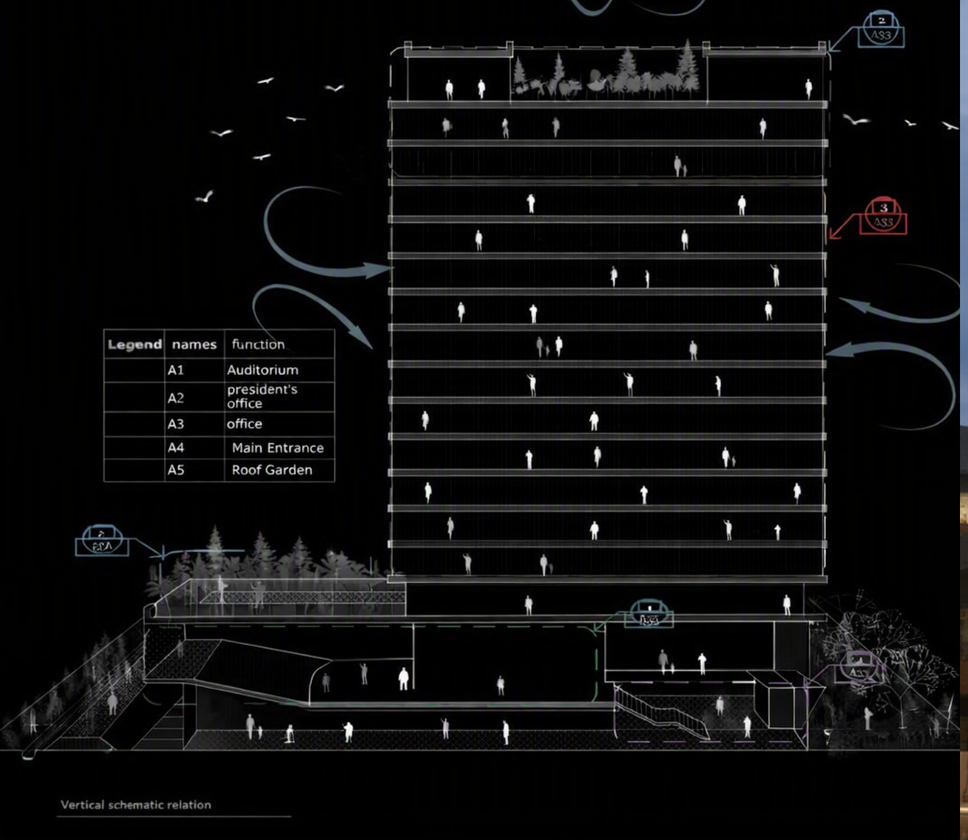
Kinetic Façade System – Prototype Demonstration









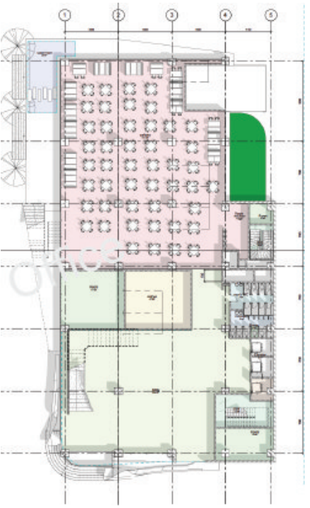


Legend	names	function
	A1	Auditorium
	A2	president's office
	A3	office
	A4	Main Entrance
	A5	Roof Garden

Vertical schematic relation



Floor Plans:



Ground Floor Plan
Scale: 1:50

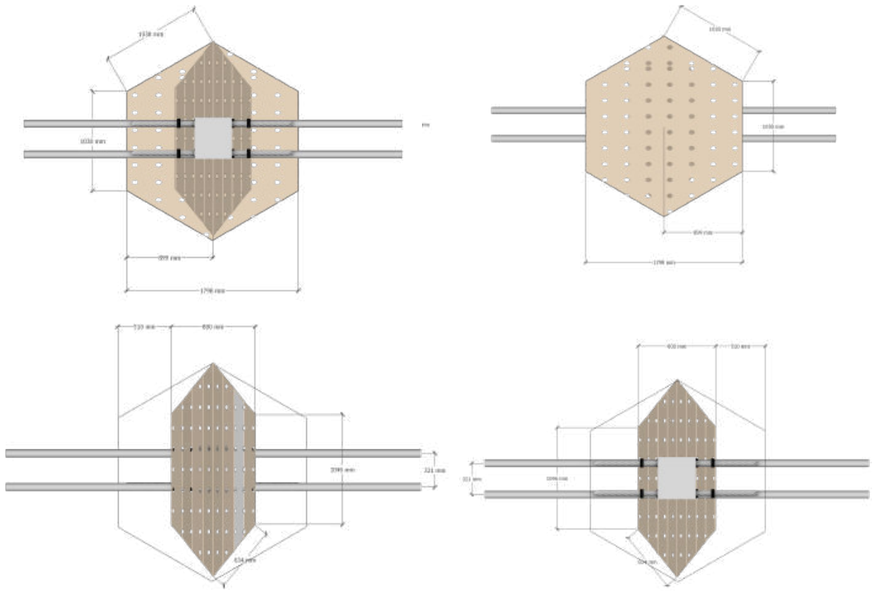


4th Floor Plan
Scale: 1:50

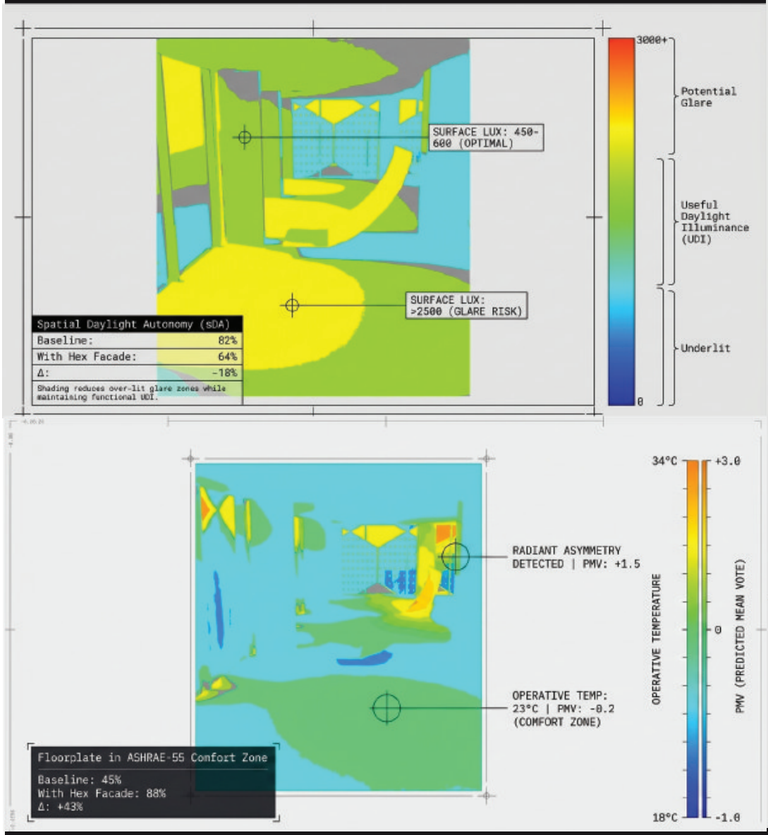


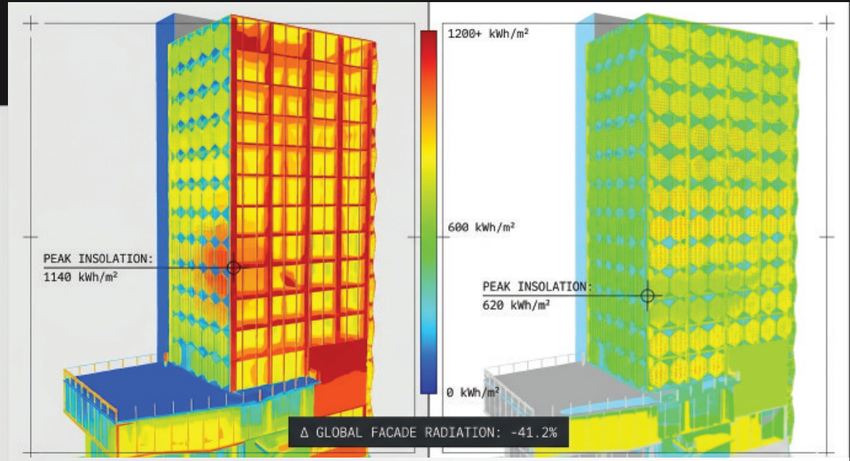
5 Floor Plans:
Scale: 1:50

Facade Dimensions:



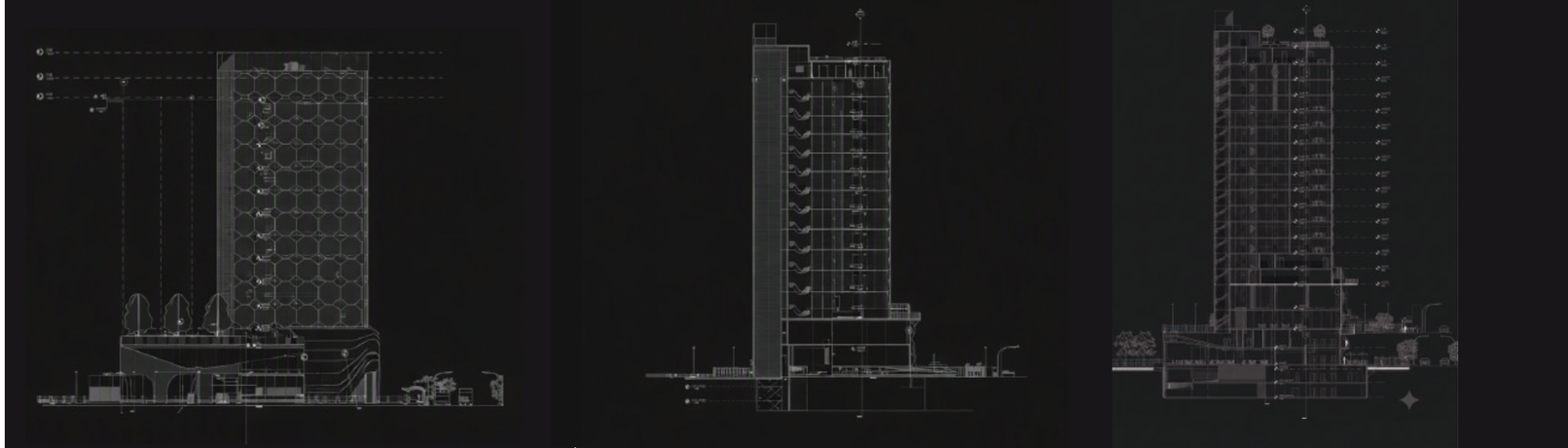
Performance Analysis Data:





	EXTERIOR RADIATION	ILLUMINANCE (LUX)	INTERIOR RADIATION	THERMAL COMFORT (PMV)
Baseline Envelope	1140 kWh/m² Peak	82% sDA (High Glare)	420 kWh/m² Peak	45% Comfort Zone
Hex Shading Applied	620 kWh/m² Peak	64% sDA (Optimal)	185 kWh/m² Peak	88% Comfort Zone
	Δ -45.6%	Δ -18.0% (Glare Mitigated)	Δ -55.9%	Δ +43.0% (Compliance Achieved)

Elevations & Sections:





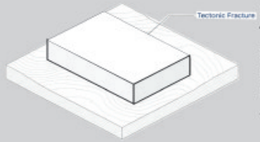
02

The Tectonic Bifurcation · Campus Design · Group Academic Project 3500sqm

This campus was developed as a group academic project around a single idea: one land-mass that splits in two. The initial form was shaped by the site's topography, a compact mass that makes efficient use of the land and grounds the project in its setting. That mass then bifurcates, and the two resulting wings open onto a protected central plaza, which is treated as a design element of equal weight. The void is as important as the mass. The wings rotate, align, and stretch toward views and daylight, and their green roofs rise and fall with the land, so the buildings read as part of the landscape and not as objects placed on it. Winding paths and stepped crossings on the roofs invite people to walk over the building as well as through it, and small timber-clad pavilions give those routes places to pause. Skylight openings cut into the roofs bring light down into the interior.

Circulation follows the logic of natural branching networks. Paths spread from the central plaza to the football field, swimming pool, and parking, much as a living system distributes nutrients, which gives the campus a clear and efficient structure. Bright red structural accents mark the edges of the wings and help orient visitors. The project was developed as a team, and it taught me how a large-scale scheme depends on shared decisions about form, movement, and landscape. The project tells a story of contextual harmony: a structure born from the valley, splitting to let light and people flow through its core while staying rooted in its

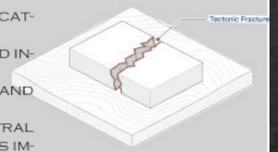
Initial Mass

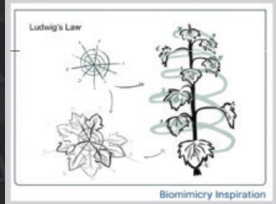


Inspired by site topography, the compact form maximizes land use efficiency and spatial grounding.

The Central Void

The concept is rooted in the idea of a single land-mass that has "bifurcated" (split into two) to create a protected internal ecosystem.
The interplay of positive and negative space (the buildings vs. the central plaza) defines the "void" as important as the "mass".





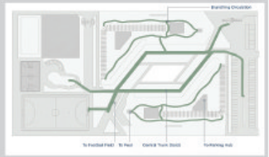
Biomimicry Inspiration

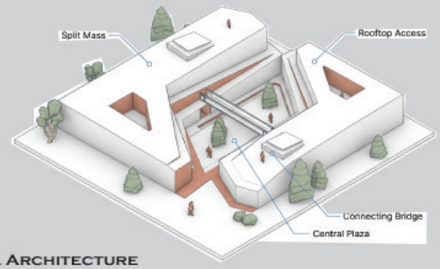
Biomimicry: Ludwig's Law

Drawing from Biomimicry, the circulation mimics Ludwig's Law. The pathway functions as the "nutrient delivery system" of the campus, branching out from the central void to the football field, swimming pool, and parking hubs. It proves the layout is mathematically and biologically efficient, not just aesthetic.

Oriented Form

Masses rotate and stretch to engage views, optimize daylight, and align with circulation along the spine.





Final Architecture

Integrated design with green terraces and shaded nodes ;a communal convergence of knowledge, nature, and sustainability.

Floor Plan Organization

Ground Floor Plan



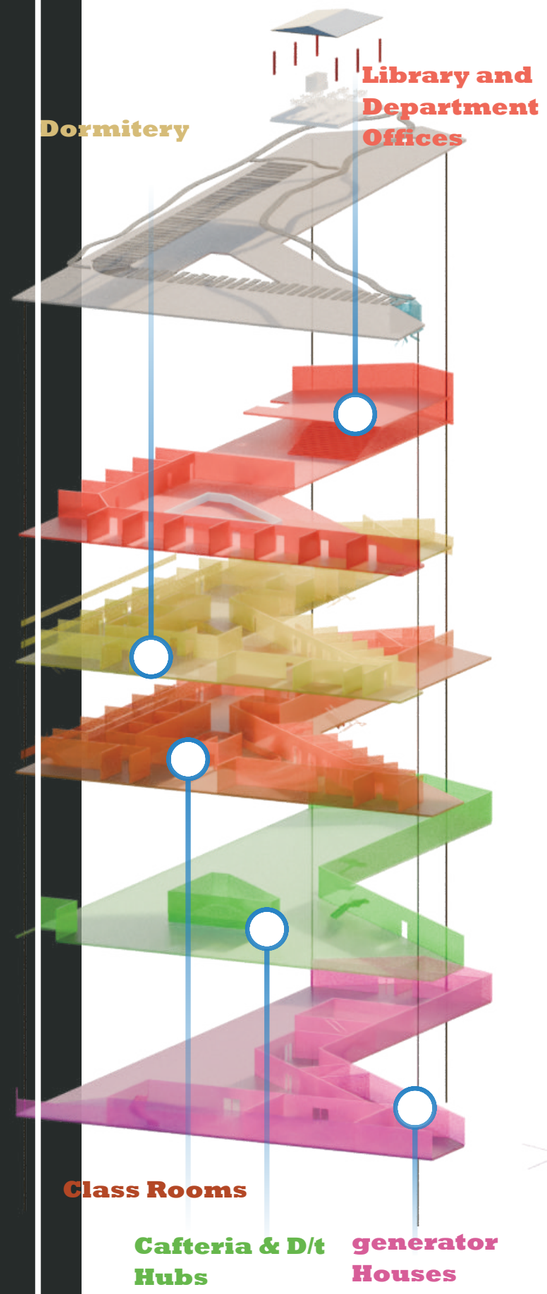
- ATM Lobby
- Bank
- card
- Class Room
- Class room
- Clinic
- Coffee place
- Coffee Shop
- Copy printing
- Dining Hall
- Enterance
- Entrance Lobby
- female
- Female Locker Room
- Female Toilet
- Finance
- Greenary
- Kitchen
- Labratory
- Lecture Hall
- Lounge
- Male Locker Room
- Male Toilet
- Managment office
- MEN
- Office
- OPD
- Open Kitchen
- Reception Office
- Reception's Office
- Registration
- Rental

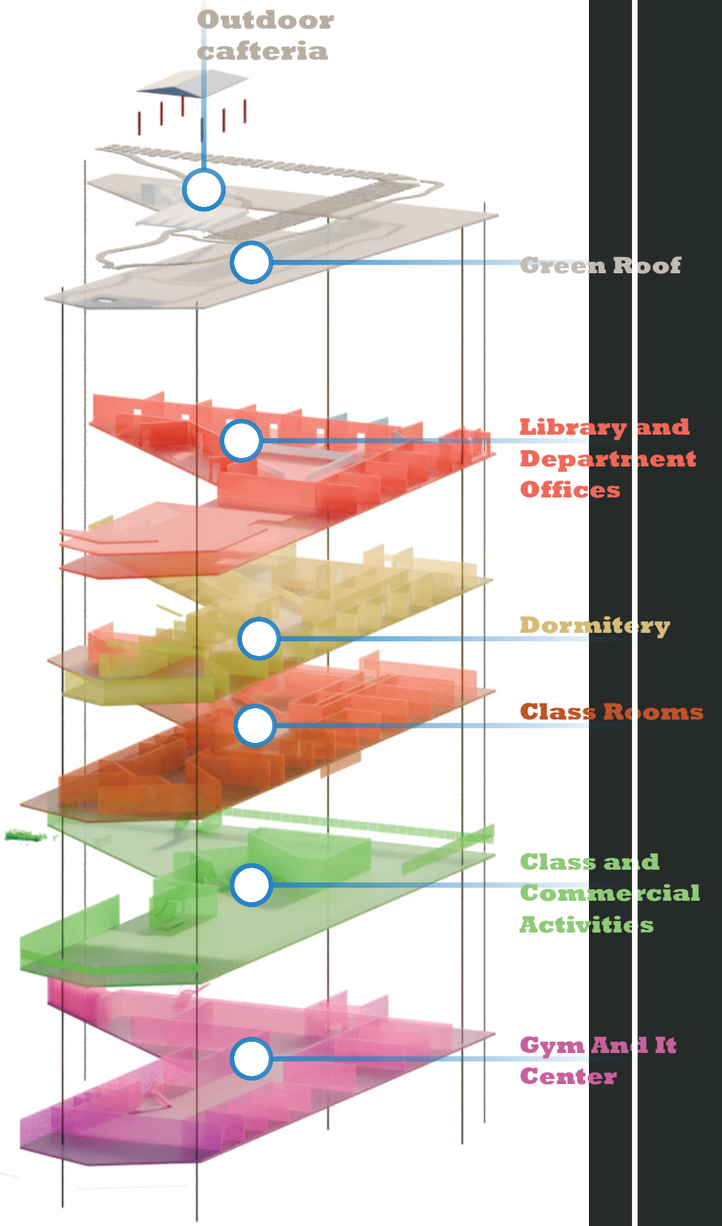
1st and 2nd Floor Plan



- Barber Shop
- Beauty Saln
- Caks room
- Class Room
- Class room
- Department Office
- Digital Learning
- Equipment storage
- Female Toilet
- Greenary
- Janitery
- Kitchen
- Lecture Hall
- Lounge
- Male Toilet
- MEP
- Recreational
- Student Club
- Wash room

VERTICAL PROGRAM ORGANIZATION





03

Residential House · G+1 · 400 m²

This is my first residential project, developed in an academic setting as an exercise in domestic scale, proportion, and atmosphere. The design begins with a simple idea: a house should feel composed from the street and generous from within. Two pale volumes are stacked with a deliberate offset, and a long cantilevered slab runs across the façade, shading the ground floor and giving the upper level a terrace that looks out over the garden. Warm timber cladding marks the entrance and the private rooms, setting them apart from the cool white planes around them and giving the façade a clear hierarchy. Full-height glazing, softened by light curtains, draws daylight deep into the living spaces and keeps them in constant dialogue with the planting, the pool, and the stepping-stone path outside. The result is a house that reads as one continuous composition, where interior, terrace, and garden are experienced together rather than as separate rooms.

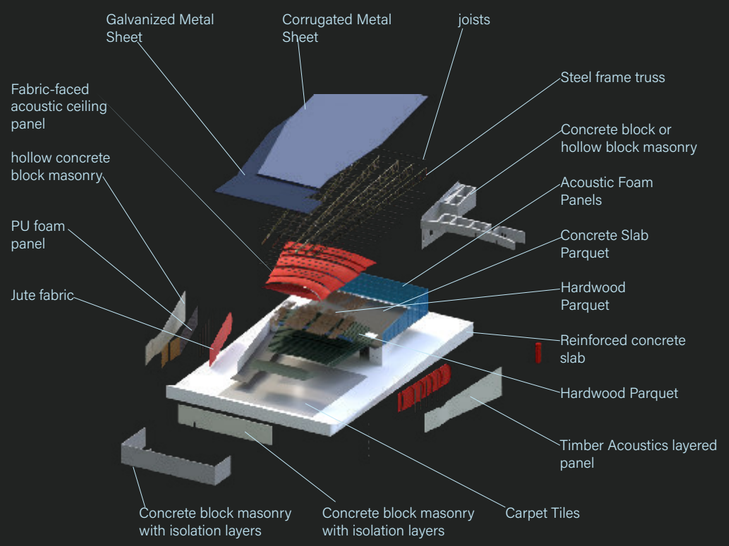
The project was modelled and visualized in D5 Render, then refined through post-production in Photoshop. I used the visualization to design the experience as much as to present the building: warm interior light is set against the cool tones of the façade, the figures give the architecture its human scale, and the planting, terrace greenery, and path frame the house and lead the eye toward the entrance. Together, these choices show how I think about a residence, as a place to be lived in and not only a form to be admired.



04

Auditorium Design :
4th Year Academic Project

This auditorium was my fourth-year acoustics project, designed to answer one question: how can a room perform as well as it looks? On a 2,000 m² site in Adama, Ethiopia, 60% of the land is built up, a 1,200 m² footprint that leaves 800 m² for approach and landscape. A transparent glazed volume forms the foyer and public face, while a quieter solid mass shelters the hall behind it. Acoustic performance is resolved in the construction: insulated concrete block walls, fabric-faced ceiling panels, acoustic foam, and layered timber panels, with hardwood parquet floors and a steel truss roof. An exploded diagram shows how each layer contributes to the room's insulation and sound quality.



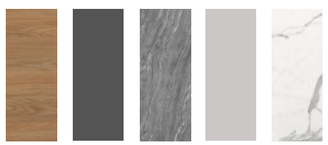


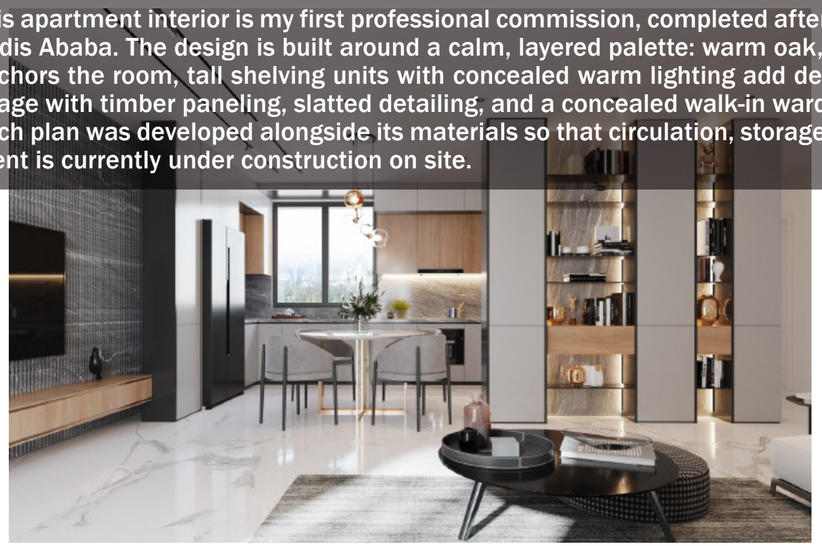
Apartment Interior · G+6 Residential Building · Meskel Flower, Addis Ababa · Upleveling Designers

05

This apartment interior is my first professional commission, completed after graduation with Upleveling Designers for a client in a G+6 residential building in Meskel Flower, Addis Ababa. The design is built around a calm, layered palette: warm oak, charcoal, stone grey, and white marble. In the living and dining area, a dark fluted feature wall anchors the room, tall shelving units with concealed warm lighting add depth, and polished marble floors carry daylight across the space. The bedrooms soften this language with timber paneling, slatted detailing, and a concealed walk-in wardrobe, while cove lighting draws a clean line along the ceiling and lets the textures read at night. Each plan was developed alongside its materials so that circulation, storage, and finishes work together. The interior was modeled and visualized in 3ds Max, and the apartment is currently under construction on site.



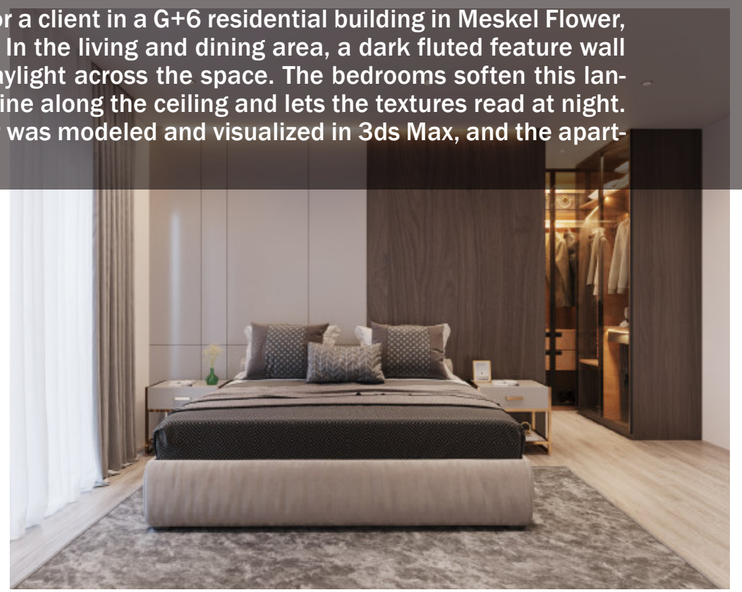




APARTMENT



















06

Bedroom Interiors · Freelance Redesign · Two Private Clients

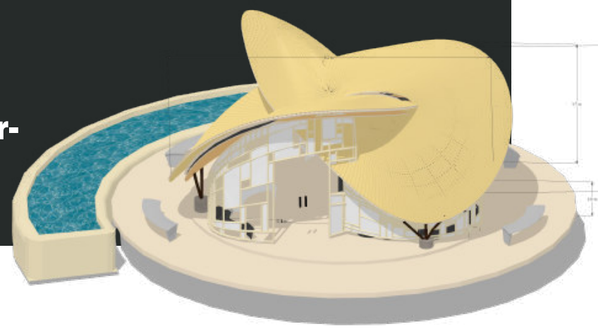




These two bedrooms are freelance redesigns for two different private clients, both found online and both developed from the existing rooms. Each client had a different idea of rest. The first room is built on contrast: dark timber flooring and a pale paneled wall, with a row of ink-style framed panels above the bed and a sculptural spiral pendant to set the mood. A glass-fronted wardrobe in warm timber and a compact work desk keep storage and daily use within the same composition. The second room is quieter and more tonal, with a slatted panel wall, a built-in headboard with overhead storage, and sheer curtains that soften the daylight. Both interiors were modeled in Coohom and 3ds Max, and rendered in 3ds Max.

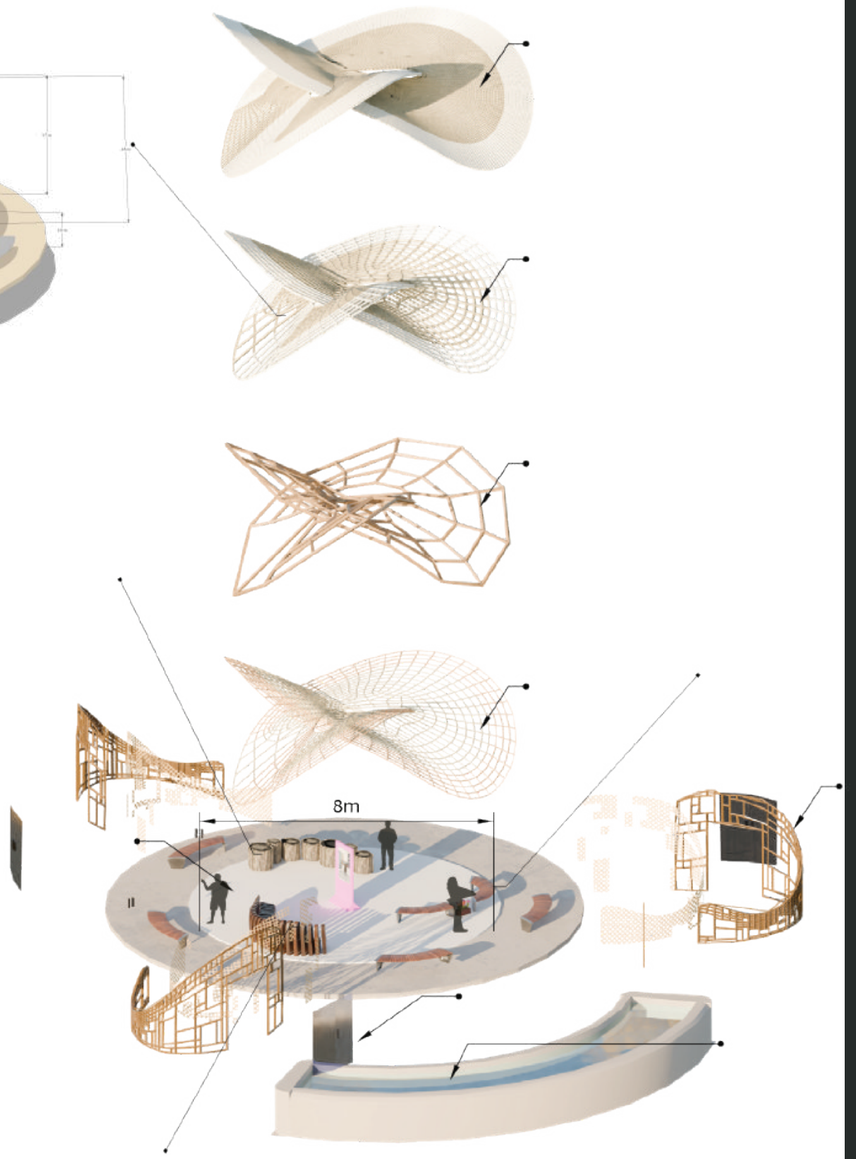
07

Flow: Pavilion Competition · Netherlands Embassy · Addis Ababa



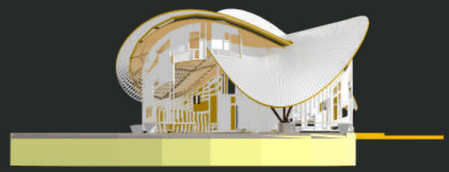
Flow is a competition pavilion for the Netherlands Embassy, imagined as a living landmark of exchange between Ethiopia and the Netherlands. Its form begins with the trifolium clover, native to both countries, which is abstracted into a trefoil knot and stretched into a single flowing roof. Its three interwoven loops stand for the Past, Present, and Future, each marked by a different way of sitting: raw tree trunks, a curved timber bench, and a sculptural slatted seat. Set in Entoto Natural Park and about eight meters across, the pavilion is built from layers of bamboo, a renewable, low-carbon material, with a façade grid inspired by Mondrian. Though it did not win, the competition taught me to turn a cultural story into structure, material, and furniture at every scale.

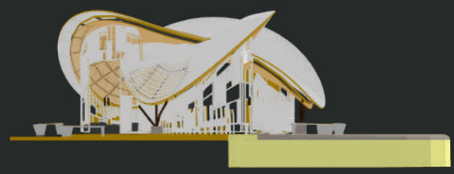




Exploded views

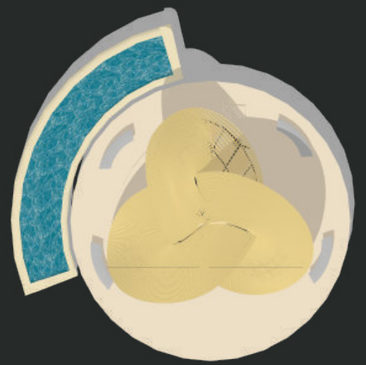
A	001	*Material Detail*



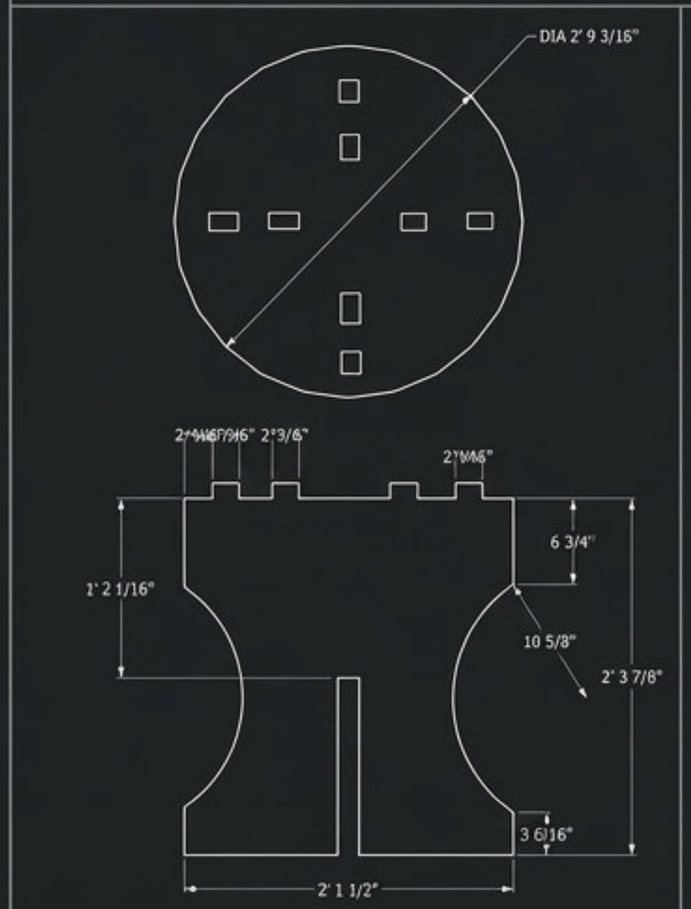


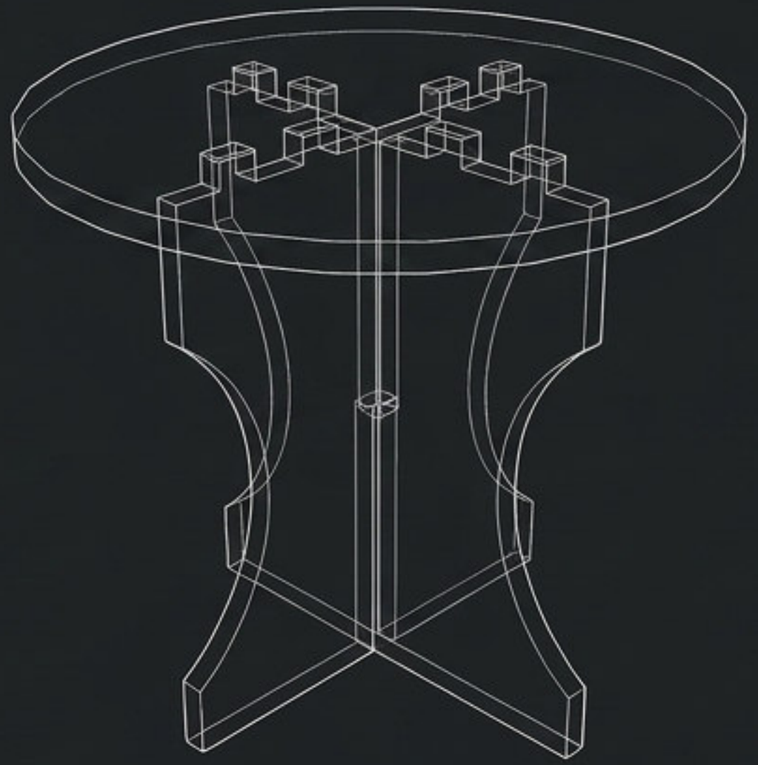


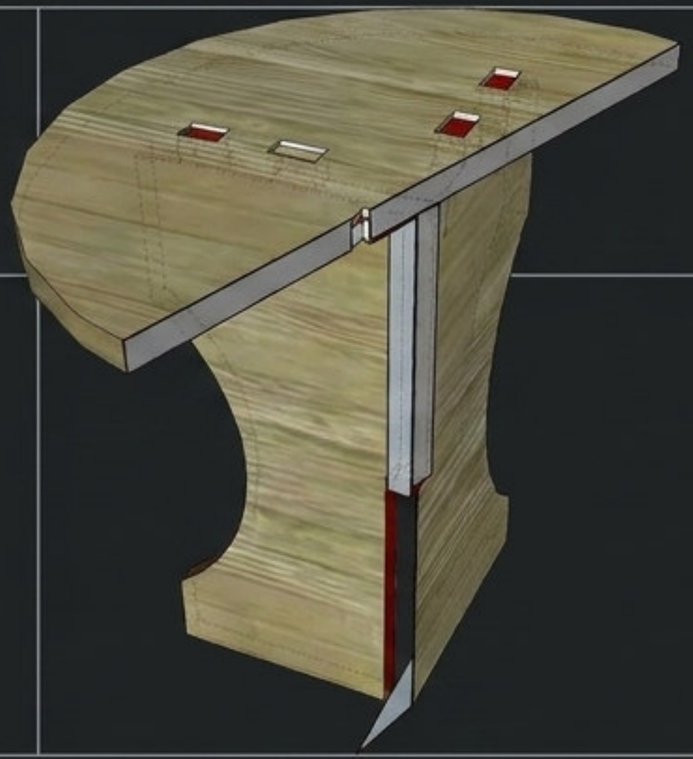




08 Micro-Scale Detachable Table







- Precision-cut joints requiring zero glue or fasteners.
- Interlocking tenon-and-mortise style connections.
- Allows easy assembly and disassembly.
- Functional solution for compact living (structural stability + space efficiency).

09

Private School Playground : Bole, Addis Ababa · Arcsole Consultancy Internship

This stadium was designed during my internship at Arcsole Consultancy for a private school in Bole, Addis Ababa. The pitch follows standard football dimensions and is ringed by a running track, so the school can use it for training, matches, and sports days. Two red-roofed stands frame the field and give spectators shade, while a glazed ground-floor frontage opens onto the street and holds outdoor cafeterias. These spaces let the stadium earn its own income beyond school hours and draw the neighborhood to its edge, with palms and paved terraces to invite people to linger. The project taught me how a sports facility has to serve its users and its operators at once.

Thank YOU

