

2025

PORTFOLIO

Joseph Chahine

Mechatronics Engineer

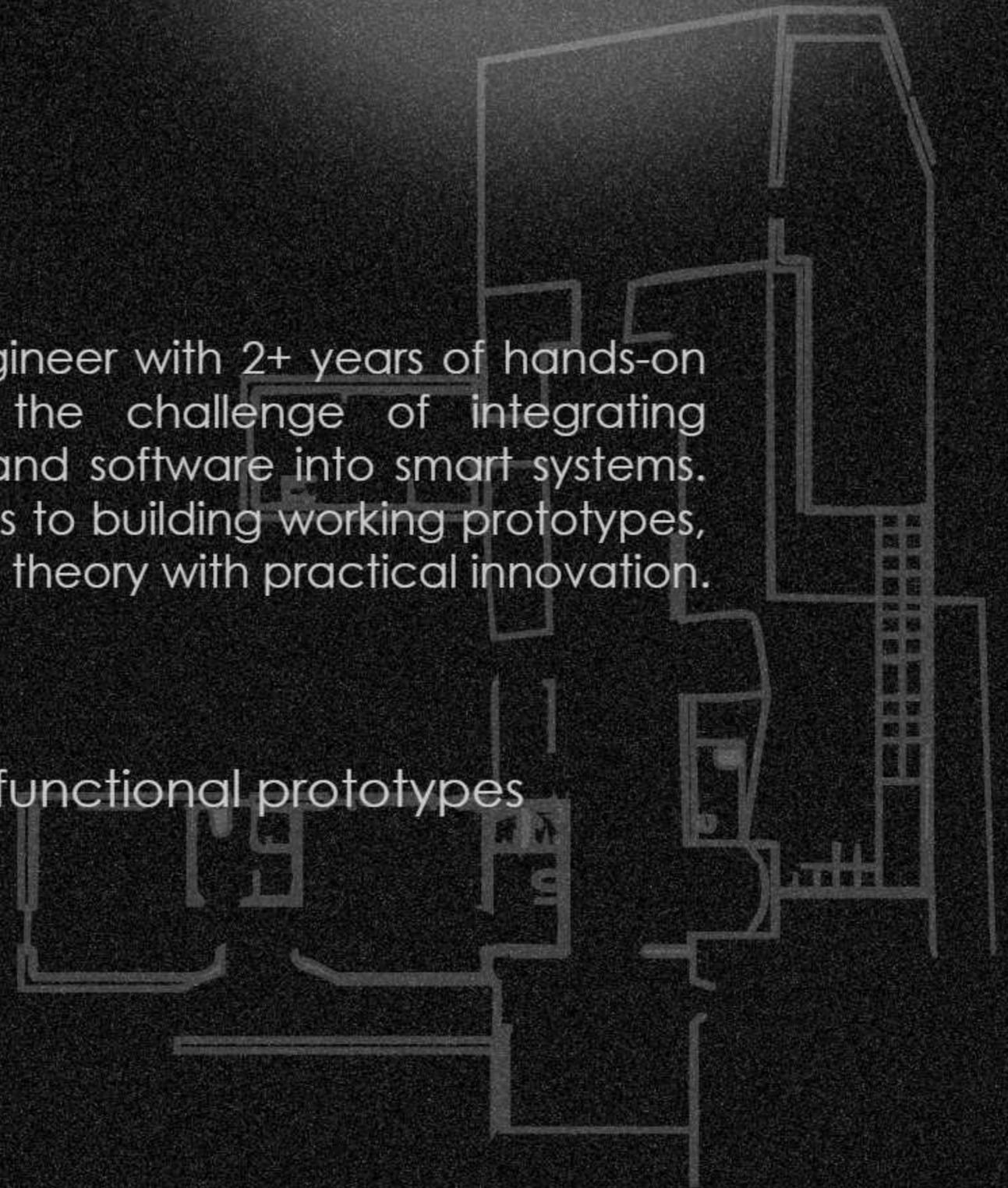


ABOUT

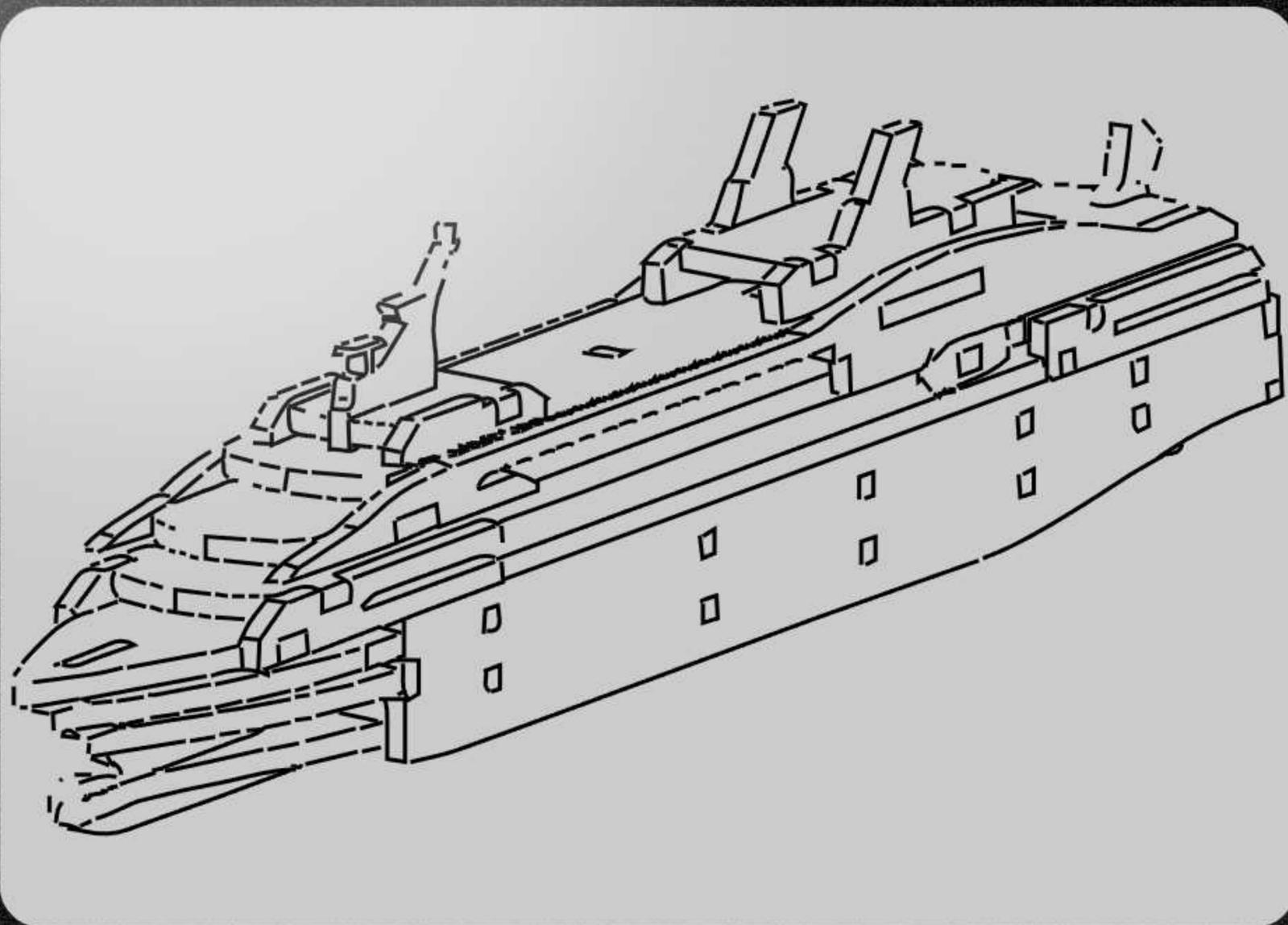
I am a mechatronics engineer with 2+ years of hands-on experience, driven by the challenge of integrating mechanics, electronics, and software into smart systems. From designing 3D models to building working prototypes, my passion lies in bridging theory with practical innovation.

PHILOSOPHY

Turning concepts into functional prototypes



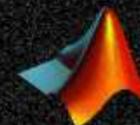
SKILLS



Mechanical & CAD



Programming



Electronics & Control

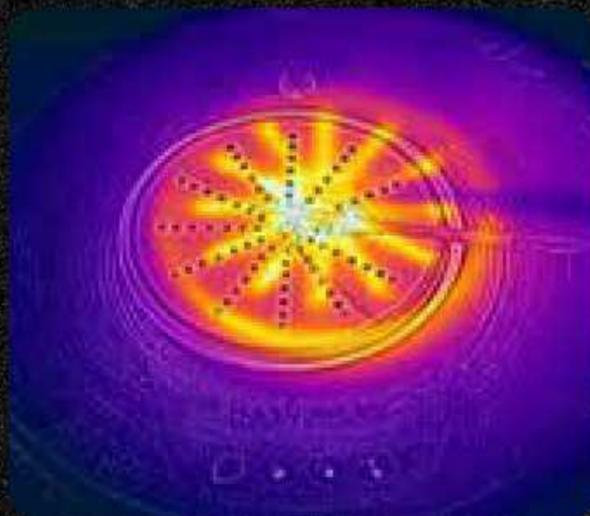
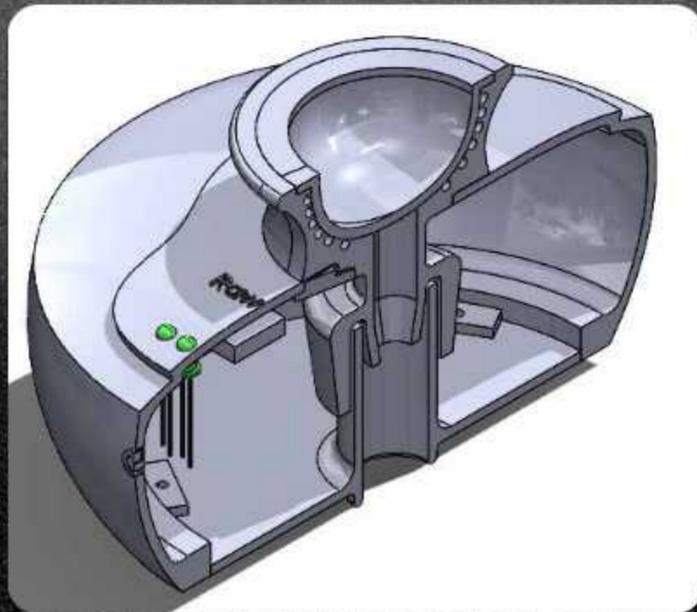


PLC
SYSTEMS INC.

Others

CNC Laser Cutting 3D Printing

RAWAYA - Electric Hookah



DESCRIPTION

Developed a patented first-of-its-kind electric hookah that replaces traditional tobacco with natural herbal blends proven to be 80% healthier than conventional tambak. Instead of burning coal, the system uses a precision-controlled heating resistance, eliminating harmful smoke and offering a cleaner, safer experience.



TECHBOX

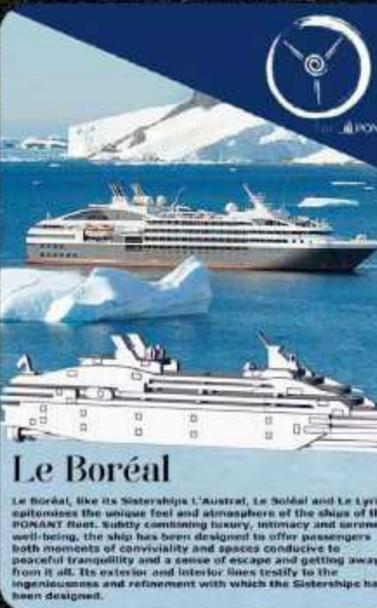
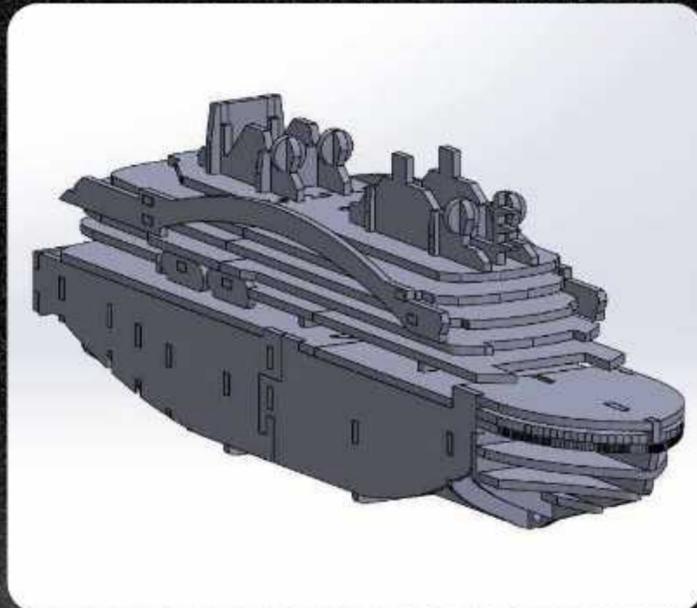
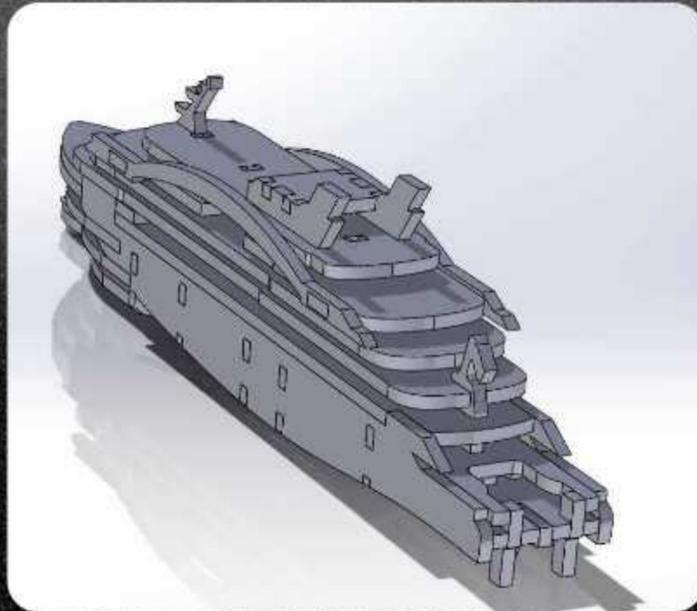
Tools: SolidWorks, 3D Printer, Arduino

Highlights: PLA, Nichrome Wires, Batteries, LEDs, Controller

Outcome: working prototype for object handling

Major Clients & Innovations

PONANT - Luxury Cruises



Le Boréal

Le Boréal, like its Sisterships L'Austral, Le Soleil and Le Lyrial, cultivates the unique feel and atmosphere of the ships of the PONANT fleet. Subtly combining luxury, intimacy and serene well-being, the ship has been designed to offer passengers both moments of conviviality and spaces conducive to peaceful tranquility and a sense of escape and getting away from it all. Its exterior and interior lines testify to the ingenuity and refinement with which the Sisterships have been designed.



DESCRIPTION

Designed and produced a miniature cruise ship puzzle as a cadeau de retour for PONANT's clients. The puzzle featured the ship's exact trajectory route, combining creative design with precision manufacturing to deliver a unique, memorable gift.

TECHBOX

Tools: SolidWorks, Laser Cutting, Autocad, Photoshop

Highlights: Wood, Engraving, Boxes, 2500+ Pcs Manufactured

Outcome: Memorable, elegant return gift that elevated the client's experience

Major Clients & Innovations

RESIDENTIAL HOUSE - Electrical Project



2 Floors Apartment Voltage: 230 V Frequency: 50 Hz JOSEPH CHAHINE

CIRCUIT REF	Pole (nb)	Rate (A)	Wire (copper) (mm ²)	LOAD (va)	Description
M.C.B.	2	63	3x16		
	2	25	3x6		
L1	1P+N	6	3x1.5	900	Entrance
L2	1P+N	6	3x1.5	200	Living Room
L3	1P+N	6	3x1.5	300	Dining Room
L4	1P+N	6	3x1.5	400	Kitchen
L5	1P+N	6	3x1.5	100	Laundry room
L6	1P+N	6	3x1.5	200	Guests WC
L7	1P+N	6	3x1.5	400	Outdoor lamps (SOUTH)
L8	1P+N	6	3x1.5	300	Outdoor lamps (NORTH)
SPARE	1P+N	10	3x1.5		
SPARE	1P+N	10	3x1.5		
L9	1P+N	6	3x1.5	700	Corridor
L10	1P+N	6	3x1.5	300	Master Bedroom
L11	1P+N	6	3x1.5	100	North Bedroom (1)
L12	1P+N	6	3x1.5	900	South Bedroom (2)
L13	1P+N	6	3x1.5	200	Master Bedroom WC
L14	1P+N	6	3x1.5	200	Bedrooms WC
L15	1P+N	6	3x1.5	300	Office
L16	1P+N	6	3x1.5	200	Balcony
SPARE	1P+N	10	3x1.5		
SPARE	1P+N	10	3x1.5		
	2	63	3x16		
S1	1P+N	16	3x2.5	1200	Living + Dining Rooms
S2	1P+N	10	3x2.5	800	Kitchen + Laundry Room
S3	1P+N	16	3x2.5	800	Entrance
S4	1P+N	16	3x2.5	600	Single Door Fridge
S5	1P+N	16	3x2.5	2000	Washing Machine
S6	1P+N	16	3x2.5	2000	Microwave
S7	1P+N	16	3x2.5	1500	North Outside Sockets
S8	1P+N	10	3x2.5	1500	South Outside Sockets
S9	1P+N	10	3x2.5	600	Corridor
S10	1P+N	20	3x2.5	600	West Bedrooms
S11	1P+N	20	3x2.5	800	Master Bedroom + Office
S12	1P+N	20	3x2.5	400	Bathrooms
S13	1P+N	20	3x2.5	800	UPS
S14	1P+N	20	3x2.5	800	Balcony
Spare	1P+N	20	3x2.5		
	2	32	6		
M1	1P+N	20	3x4	1200	AC 9000 BTU
M2	1P+N	20	3x4	1200	AC 9000 BTU
M3	1P+N	20	3x4	1200	AC 9000 BTU
M4	1P+N	20	3x4	1200	AC 9000 BTU
M5	1P+N	20	3x4	1200	AC 9000 BTU
SPARE	1P+N		3x4		

	Circuit Breaker Rate (A)	Connected Load (VA) Total	Diversity Factor	Required Load (VA)
Frame		2400	1	2400
LIGHTING		9600	0.15	1440
SOCKETS		4600	0.5	2300
KITCHEN		6000	1	6000
MECHANICAL		6000	1	6000
MAIN SWITCHES	63	22600		12800

DESCRIPTION

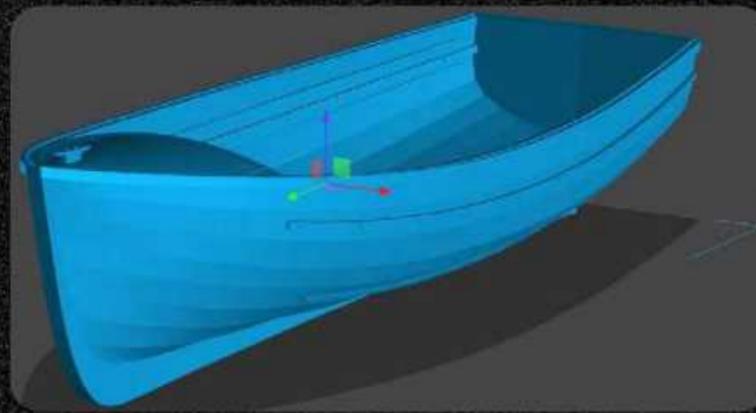
Handled the complete electrical design and installation for a two-level residence, including panel board setup, lighting layout, switches, and distribution.

TECHBOX

Tools: AutoCAD, circuit testers, panel wiring equipment
 Highlights: Full load distribution planning, safe wiring installation, optimized switch and lamp positioning
 Outcome: Delivered a fully functional, safe, and efficient electrical system meeting residential standards

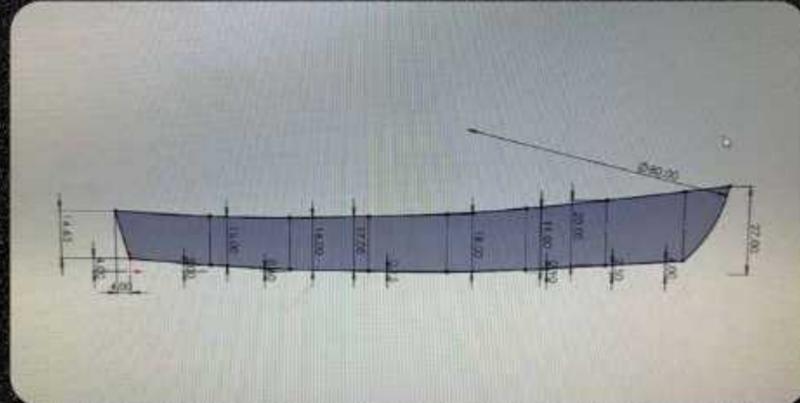
Major Clients & Innovations

WHY NOT. WOOD - Kids Floating Boat



DESCRIPTION

Designed and built a small wooden boat for children, crafted entirely from interlocking wood components. The ribs were precision-cut on a CNC machine and assembled without screws or metal fasteners.

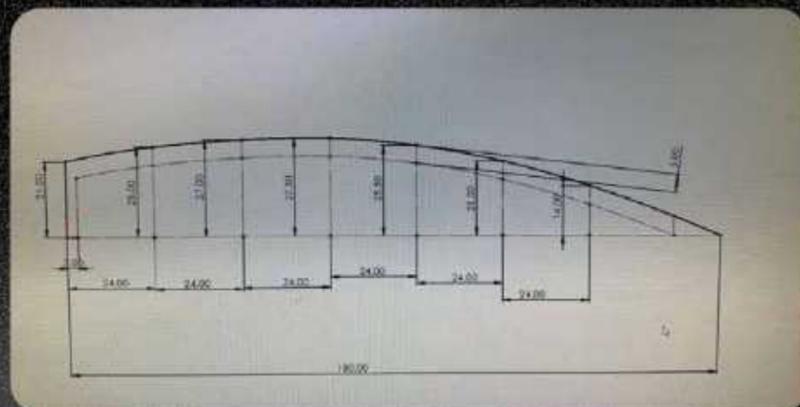


TECHBOX

Tools: CNC machine, Catia4, Autocad, woodworking tools

Highlights: Precision rib cutting, interlocking wooden joints, child-safe design

Outcome: Delivered a durable, eco-friendly boat that showcased craftsmanship and CNC precision while ensuring safety for children



Major Clients & Innovations

CONTACT

[Jaymchahine@gmail.com](mailto:jaymchahine@gmail.com)



+961 81 446 146



[linkedin.com/in/josephmchahine](https://www.linkedin.com/in/josephmchahine)



[@josephmchahine](https://www.instagram.com/josephmchahine)

