



AMOLJOT SINGH  
PORTFOLIO

SELECTED WORKS EARLY 2024

# Amoljot Singh ARCHITECTURE STUDENT | B. ARCH | FIFTH YEAR | 2024

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## Professional Summary

Motivated and highly creative young architect adept at designing residential, hospitality & commercial projects. Extensive knowledge of multiple architectural software (Concept Development, 3D modelling, Graphic Illustration, 3D Rendering and photo-realistic Architectural visualization), Computational Design Algorithms, Building Information Modelling & Artificial Intelligence leveraging design toolsets. Problem solving approach and mindset.

## Experience

INTERN ARCHITECT | NOOR ARCHITECTS CONSULTANTS | CHANDIGARH June 2023 – December 2023  
India's First Architecture Studio in Metaverse | noorarchitects.com

- Role - Computational Designer (Rhino7 & Grasshopper) for India's first 3D Printed Concrete Pavilion (3DCP) for EVage Motors. 3DCP buildings are sustainable have low carbon footprint and are cost efficient.
- Interior Design for Radisson Phagwara (Hospitality Interiors), Homeland Regalia Show Apartment interior (Residential Sales Interiors) and CP67 Café with the NOOR Team.

## Education

Bachelor of Architecture | Chitkara School of Planning & Architecture August 2019 - June 2024

## Licenses

Council of Architecture (The Architects Act, INDIA– 1972) Student Enrolment Number – COA-164520

## Certifications

- Structure, Form & Architecture – IIT Roorkee
- Contemporary Architecture & Design – IITH
- Interpersonal Skills & Business Communication
- BIM with Revit, Dynamo & Navisworks – Udemy
- Parametric Design with Grasshopper – Udemy
- Form Finding with Kangaroo Physics – Udemy

## Software

- Autodesk AutoCAD LT 2024
- Rhino8 & Grasshopper
- Autodesk Revit 2024
- Python Programming
- Microsoft Office Suite
- Lumion and Twinmotion Render Engines
- Adobe Creative Suite (Photoshop & Adobe Firefly Ai)
- Stable Diffusion (SD 1.5 w/ LoRA & Embeddings)
- Generative Design & Parametric Modelling
- Blender 3D and procedural modelling

## Skills

- Client Relationships
- Construction Drawings
- Team Collaboration
- Site Co-ordination
- Technical Design Skills
- Conducting Research
- Sustainability Analysis
- Simulation Driven Design
- Presentation Skills
- Time and Deadline Management Skills
- Project Management Skills & managing project teams
- Design feasibility, alterations and renovations
- Building codes Compliance & safety standards
- Regulatory Standards
- Construction Administration
- Day Light and Solar Study
- Illustration and graphics
- Digital Fabrication

## Languages

- Punjabi: Native
- English: Fluent
- Hindi: Bilingual



Academic - Thesis

Under **Graduation**  
PortfolioEarly  
2024

## Sector 62 Mixed Use

Mixed use space thesis project includes Commercial Retail, Office Space and Suite Apartments. The Site has 14.47 Acres area.. Project aims at designing a mixed use space which has high economic impact.

Please note that not all drawings have been included in the portfolio for simplicity, please feel free to contact to access all such drawings

Please note that the drawings provided here are Not To Scale, to access on scale drawings, working drawings, specifications, please feel free to contact



Professional - NOOR Architects Consultants

## Popup Pavilion 3DCP

Popup Pavilion India's first 3D Printed Concrete Pavilion featuring Fabric Curtain like Pleats built for EVage motors headquaters, Banur, Pb, IN. The project is nearing completion on site as of March 2024.



Thesis - Computationa component

## Parametric Facade Panels

Facade panels with integrated plantings offer a harmonious blend of nature & built environment. These panels serve both aesthetic & functional purposes, transforming conventional building exteriors into living, breathing structures.

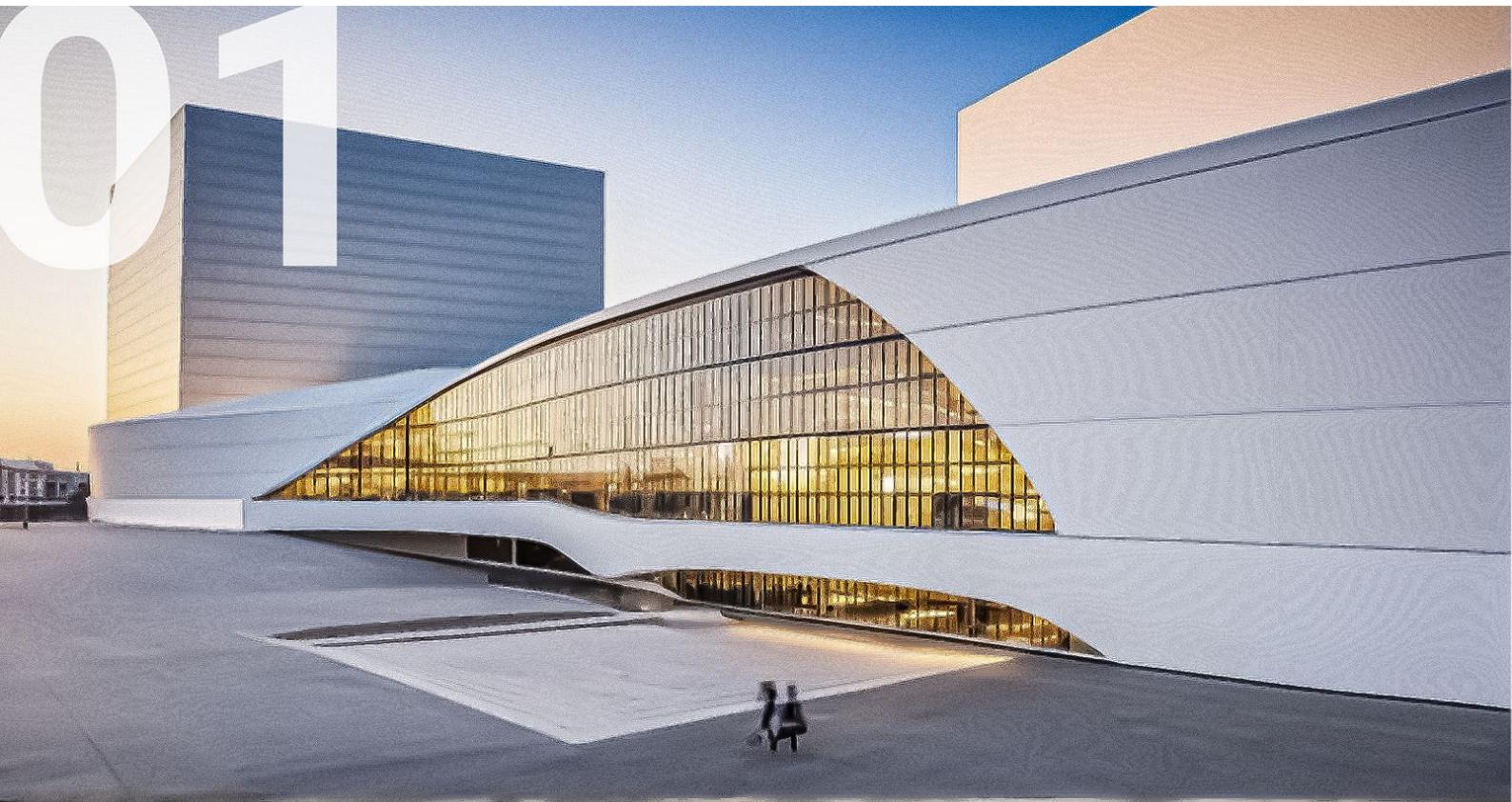


Design Studies - Abstract Sculptures

## Hephaestus

A series of Design Study Experiments I did some time ago for my instagram @acantheсти The series features fluidic design sculptures rendered in realtime during live sketches leveraging Artifical Intelligence tools.

# 01



In this architecture thesis, we embark on a journey into the realm of fluidic design, where the boundaries between form and function are reimagined through the lens of fluid dynamics. Inspired by the graceful twists and cross sections of tweens, the concept of fluidic design seeks to transcend rigid architectural conventions, embracing fluidity, dynamism, and adaptability.

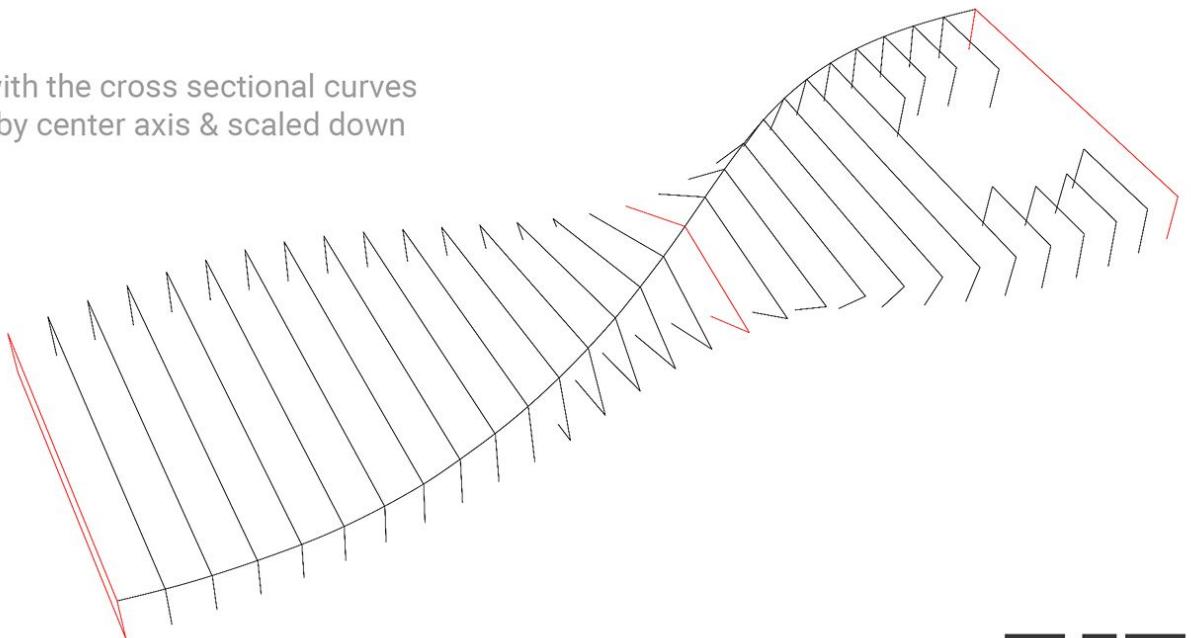
Site Area: 14.47 Acres

Maximum Ground Coverage: 45%

F.A.R allowed: 1:3.0 (44.1 Acres)

Please note that the thesis project as of 10th April 2024, is still under progress, the render shown is imagined using Prome A.I using the 3D massing created in Rhino 3D. The design facade is subject to change still.

Loft created with the cross sectional curves being rotated by center axis & scaled down

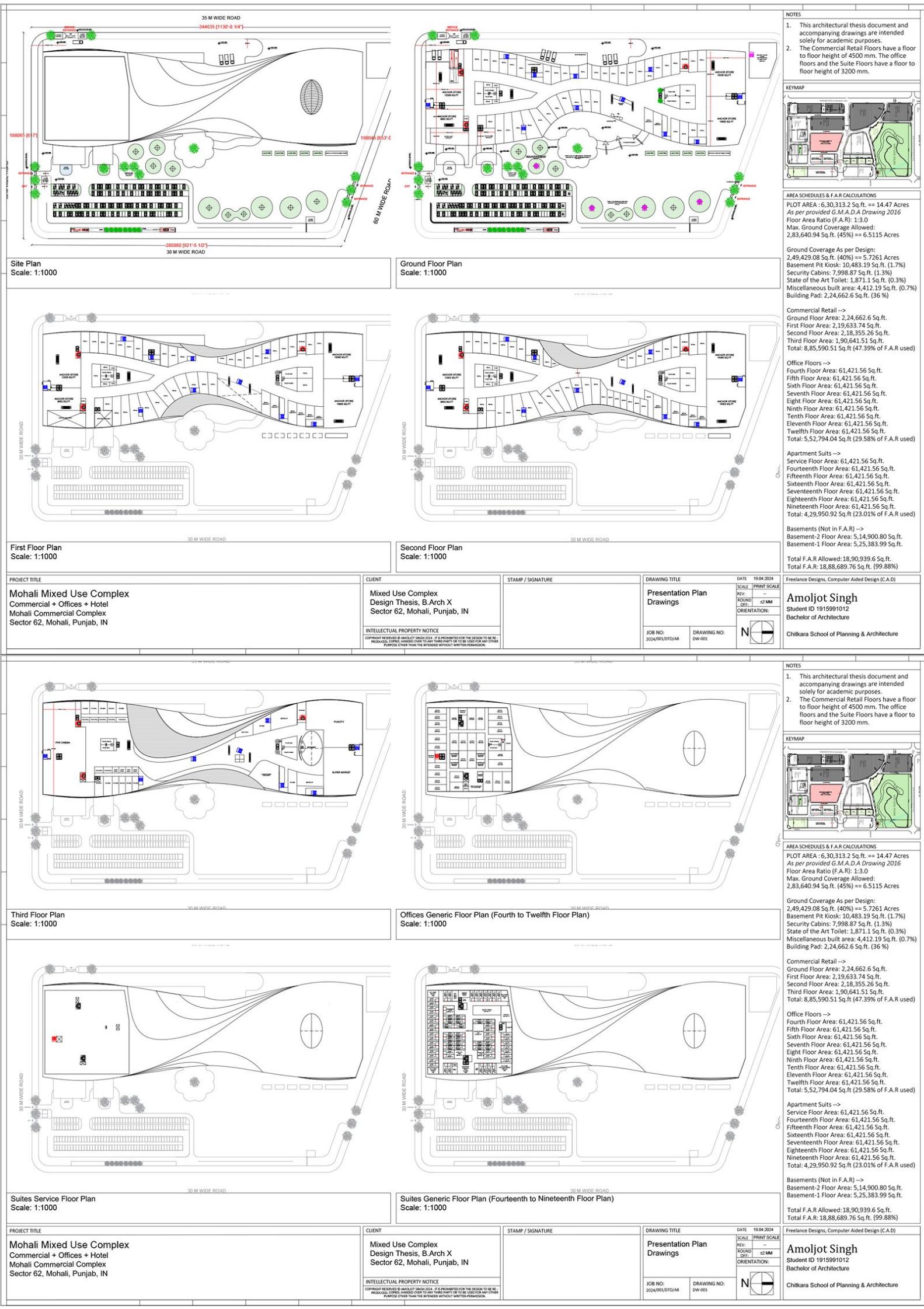


The Thesis project is still live and as of this stage i.e as of 10th April 2024, only single line plans have been drafted. Tentative single line floor plan have been added to indicate the form transition and form adaptability.

All the plans/sections/elevations & Renders will be uploaded by the end of May 2024 on my website -> [amoljotsingh.github.io](https://amoljotsingh.github.io)

To access all resources, kindly scan the QR code, thank you!







## Popup Pavilion 3DCP

NOOR ARCHITECTS CONSULTANTS x Amoljot Singh

It is a project I was highly involve in while working as an architectural intern at N.A.C. I was involved as a Computational designer working on Rhino 3D & Grasshopper, Blender 3D & Lumion. The project has reached its late stages of completion. 3DCP building technology might just be the future of building construction. 3DCP concept is new yet it looks promising. 3DCP projects have low carbon footprint and allow mass production in shorter time span while still making sure every project is unique.



# Popup Pavilion 3DCP

[noorarchitects.com](http://noorarchitects.com)

The project can be located digitally on NOOR website scanning the QR code.  
Working on this project offered its unique challenges.

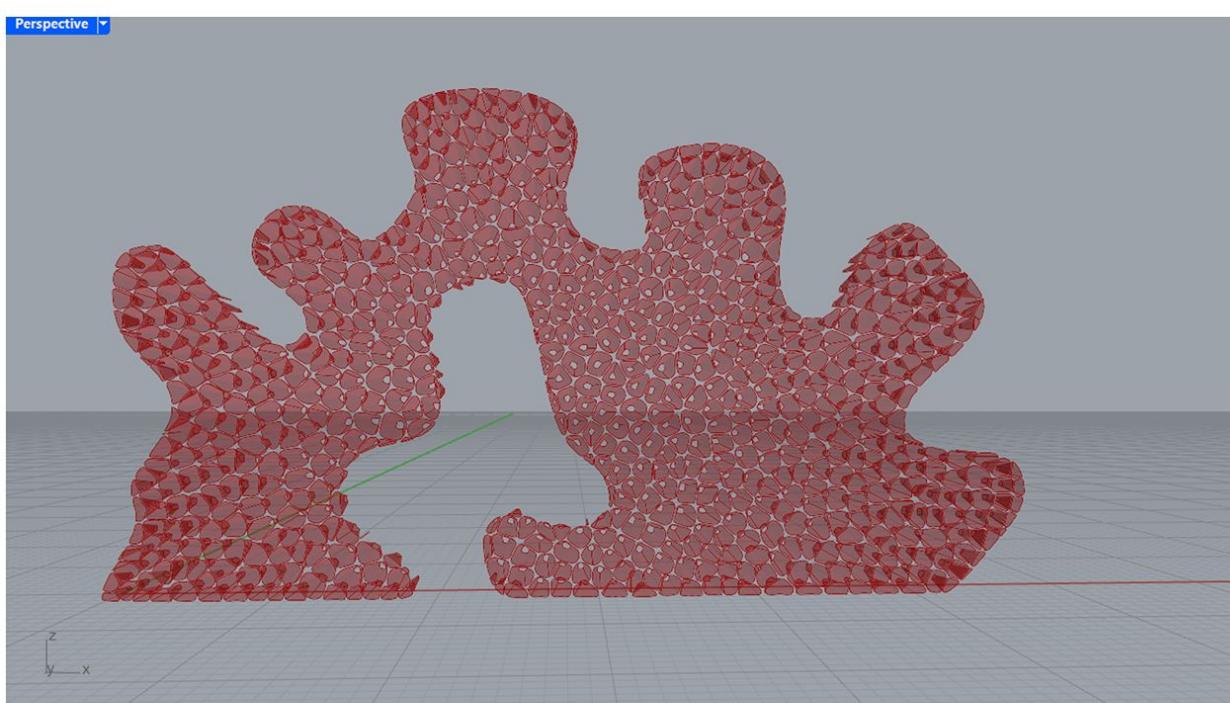
Beind a part of the NOOR team I had worked in close collaboration with the Principal Architect Noor Dasmesh Singh and the project had been a very fruitful and professionally satisfying experience.

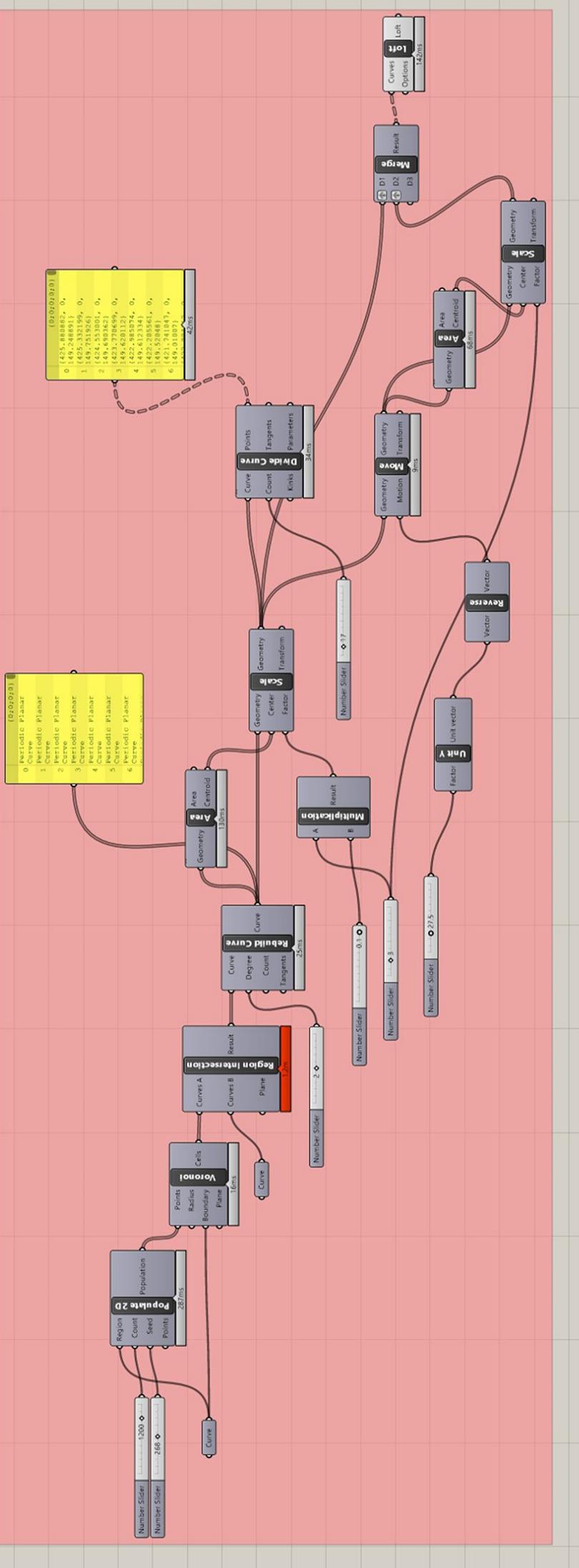


# 03



Facade panels with integrated plantings offer a harmonious blend of nature and built environment. These innovative panels serve both aesthetic and functional purposes, transforming conventional building exteriors into living, breathing structures. Computational panels created in Rhino 3D Grasshopper & prototype renders created with Prome A.i. The panel system is intended to be used in the thesis as well.





The Computational node setup I used to create the facade panelling system in Rhino 3D Grasshopper.

The facade panels distribute a set of random points on a rectangular surface.

The points then act as a host for voronoi cells, the points acting as the center of origination for the same.

The voronoi cells are the rebuilt as a degree 3 relaxed numbers curves.

The data structure at this point contains set of nurbs curves.

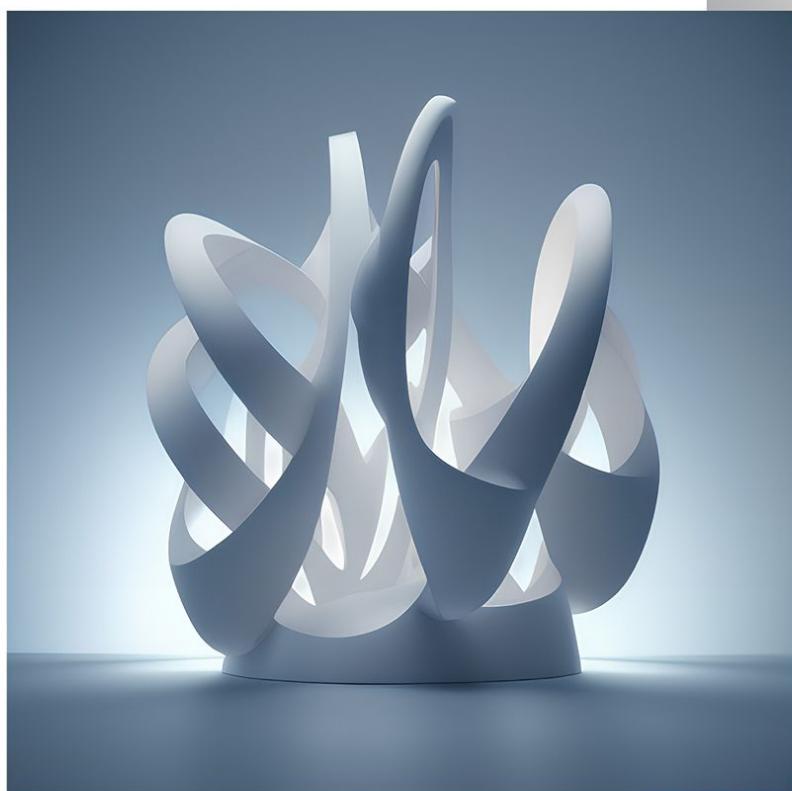
The said curves are then moved in the unit Y vector.

The original curves and the moved curves, both are scaled as a function to each other in range of 0.1 for the og curves to 3.0 for the moved up curves.

The curves are then lofted to create the panel surfaces.



Inspired by the principles of design and the organic patterns found in nature, these sculptures invite viewers on a journey of discovery, where every angle reveals a new perspective. Leveraging Stable Diffusion SLD1.5 - RealVision2.0 from Civit.ai with control net live sketch to generative ai render features run locally using Automatic1111



## Hephaestus



For more Design Studies, Kindly scan the QR code for my instagram page  
[@acanhesti](https://www.instagram.com/acanhesti)



