# Waffle-Structured Chair: Exploring Robotic Manufacturing in Design Education

A team of DIA Master’s students at Hochschule Anhalt explored computational design and robotic manufacturing by creating a full-scale, waffle-structured ergonomic chair, combining efficiency, ergonomics, and sustainability. Exhibited at Campus Fest 2025, the project showcased the potential of digital workflows and robotic fabrication in architectural education.

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# Digital Shingles: Interactive Robotic Shingle Facade Assembly

The project “Interactive Robotic Shingle Facade Assembly” explores how traditional Swiss woodcraft can be reimagined through digital technologies. This interactive installation invites visitors to customize shingle facade patterns via an intuitive interface and watch a robotic arm assemble their designs in real-time. The installation showcases the potential of robotics and parametric design to revive craftsmanship while promoting sustainable, adaptable architecture.

# NEXUS: From Machine Learning to Manufacturing

NEXUS by ENCODE Studio explores the fusion of machine learning, generative design, and additive manufacturing to create intricate, morphing geometries showcased during Cairo Design Week. Using Rhino and Grasshopper, the team translated AI-generated patterns into full-scale 3D-printed architectural elements, redefining possibilities for design and fabrication.

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# Designing Adventure at Sea: A Student’s 100-Meter Luxury Superyacht

SCAD senior Holladay Crook designed a 100-meter luxury superyacht concept that blends sculptural form with refined functionality. Developed in Rhino and brought to life through a 1-meter 3D-printed prototype, the project showcases advanced modeling, meticulous fabrication, and a narrative-driven design approach.

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# Thinking in Code: First-Year Towers from Ain Shams University

First-year architecture students at Ain Shams University utilized Grasshopper to design and fabricate parametric towers, learning to think like system designers from day one. The course emphasized algorithmic logic, data structures, and generative workflows to build not just models, but design intelligence.

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# Bio Corallo: A New Biomaterial for Digital Craft and Architecture

Bio Corallo is a lightweight, bio-based ceramic composite developed by Ana Bridgewater that merges digital craft with ecological material research. Made from porcelain and tapioca starch, the project explores how computational design and sustainable thinking can reshape the future of lighting, architecture, and modular fabrication.

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# TV Head Guy: From Digital Sketch to Life-Sized Installation

Brooke Pennington’s TV Head Guy is a larger-than-life sculptural piece brought to life through a fusion of digital design, CNC fabrication, and character storytelling. Developed as an independent study, the 6-foot figure showcases Brooke’s skill in Rhino, RhinoCAM, ZBrush, and physical prototyping.

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# Unroll, Design, Reroll: Creating Ceramic Textures with Rhino

Jenna Richards developed a custom ceramic texture roller using Rhino’s modeling tools and 3D printing, transforming precise digital patterns into tactile clay impressions. The project explores the challenges of wrapping geometry around cylindrical forms and refining prints for hands-on ceramic use.

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# Speculating Futures: DeNile’s

# Vision for a Water-Adapted Egypt

DeNile is a speculative design project by students at Coventry University Cairo that envisions adaptive futures for Egypt in response to rising sea levels. Through floating farms, vertical aquaculture, and digitally modeled hybrid systems, the project reimagines survival in a water-transformed landscape.

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# Resonant Landscapes: Architecture in Tune with Sound and Place

In Resonance, architect Diana Fox transforms Antwerp’s Theatreplein into a public soundscape where architecture acts as both stage and instrument. The project explores how spatial form, acoustic tools, and nature converge to create a living theatre district.