

# **Squama: Technique as a Generative System in Body Jewelry**

Squama explores how fabrication technique can operate as a generative design system, transforming flat silver into a responsive body landscape through parametric kerf bending.

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# **Christmas Sparks in Envigado: City-Scale Lighting Through Digital Design**

A city-scale Christmas lighting project in Envigado, Colombia, where Rhino was used as the central platform for 3D modeling, dimensional control, structural coordination, and fabrication documentation of complex illuminated elements inspired by Art Nouveau.

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# **Designing Dignity: Modular Shelter Systems Informed by**

# Lived Experience

How can modular systems support dignity, privacy, and adaptability in shelter environments? This project uses Rhino to translate lived experience into a flexible, fabrication-ready design that rethinks how transitional housing spaces can evolve.

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## **Digikala Flagship Store: A Physical Prototype for the Future of Online Retail**

Digikala's first flagship store reimagines online retail as a physical and immersive spatial experience: a 400 m<sup>2</sup> prototype where portals, interactive environments, and a continuous spiral transforms passive browsing into active participation.

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## **Epicycloid Blossom: A Parametric Lighting Piece Shaped by Geometry, Python, and AI-Assisted Design**

Epicycloid Blossom is a digitally developed sculptural lighting piece generated from the mathematical behavior of the

epicycloid curve. Although the piece was not physically fabricated, the project reached full production-ready documentation and stands as a refined example of AI-assisted parametric design.

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## **Silverback Grizzly 21 LE: Data-Driven Design for Law Enforcement on the Water**

A high-performance patrol vessel designed with Petestep's Spray Deflector Technology and refined through Rhino and Orca3D Marine CFD. The Silverback Grizzly 21 LE sets a new benchmark for speed, efficiency, and crew comfort in law enforcement marine craft.

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## **The Peanut Bench: Free-Form Coopering on a CNC Robot**

The Peanut Bench reimagines the traditional coopering technique through computational design. Using Rhino, Grasshopper, and CNC machining, Stephen Thrasher crafted a free-form wooden bench that bridges craftsmanship and digital fabrication.

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# **The Brick Screen: A Parametric Reinterpretation of the Traditional Jali**

The Brick Screen, designed by Muhammad Talha Muftee and Shaikh Abdul Basit for the Arts Council of Pakistan Karachi, reimagines the traditional jali through parametric design. Using Grasshopper, the architects combined local masonry craft and digital precision to create an environmentally responsive brick façade that has set a new precedent for computational design in Pakistan.

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# **Parametric Sculptures for PUMA: Digital Precision in Antofagasta**

A pair of monumental parametric pumas, installed at PUMA's Antofagasta store, showcases how digital design, CNC fabrication, and meticulous layering can transform feline anatomy into striking sculptural forms.

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# **Adaptive Fashion: Designing with Body Data**

Adaptive Fashion is a design research project by Laura Civetti that transforms body data into generative garment patterns using Rhino and Grasshopper. By translating information such as posture, curvature, and stress zones into computational rules, the project prototypes adaptive clothing systems with 3D printing, paving the way for highly personalized, high-performance fashion.