

# Vincent Šmíd

INDUSTRIAL DESIGNER · CONCEPT → PRODUCTION

I take products from the first concept to a production-ready result — 3D CAD, prototyping, visualization, electronics and design for manufacturing. I'm also a programmer — from a 3D web game played by 10,000+ people to enterprise applications. A selection of work that got built and used.

3D CAD Modeling · Prototyping — 3D Printing · Visualization & Rendering · Electronics & PCB · Design for Manufacturing · Mechanism Design · Programming — games & enterprise apps



# glo Rotating Display

RETAIL DISPLAY · GLO HILO (BAT)

SERIES PRODUCTION

200+

units in shops across the Czech Republic



IN STORE — Motorised rotation, in a shop

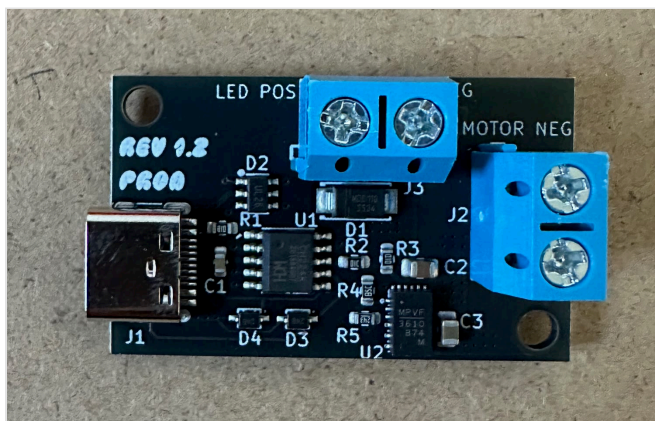
A motorized rotating retail display for glo HILO, engineered end to end — from the first concept all the way to series production. I owned the full mechanical design, built a custom control board, prototyped by 3D printing, and coordinated the woodworking supplier through to manufacturing. The display went into series production: 200+ units now run in shops across the Czech Republic.

## WHAT I DID

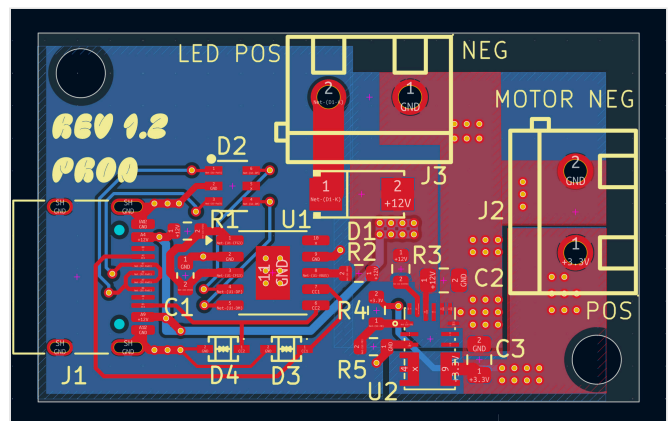
- Complete CAD design of the display
- Prototyping via 3D printing
- Custom PCB — motor & lighting control
- Coordination with the woodworking supplier
- Taken through to series production — 200+ units

## SKILLS

CAD · PCB · Production



PCB · REV 1.2 The assembled control board



PCB LAYOUT Custom PCB, designed in KiCad

# Netflix Prop Mechanism

FILM PROP · CONCEALED MECHANISMS



IN USE — The Iris opens to reveal the hidden card

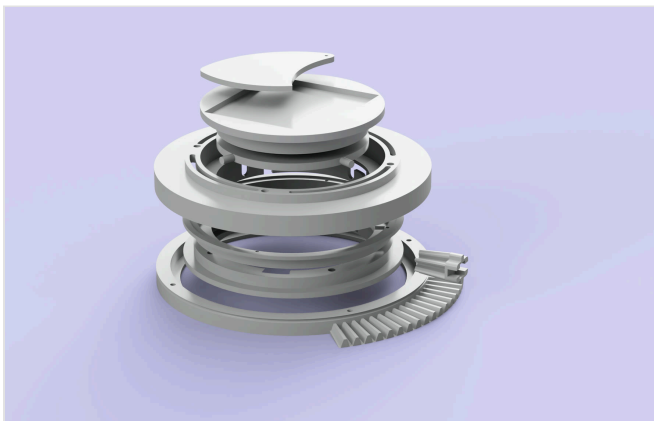
Two concealed mechanisms for a Netflix prop, designed inside a very tight space envelope: an iris that opens to reveal a hidden compartment, and a second mechanism that rotates and lifts a card into view. Both had to disappear into a laser-engraved box and work reliably on set.

## WHAT I DID

- Two mechanisms designed to strict spatial limits
- Iris opening mechanism
- Card rotate-and-lift mechanism

## SKILLS

Mechanism design



CAD Iris blades with geared drive



PROTOTYPE 3D-printed iris prototypes

# Competition Robot

FUNCTIONAL ROBOT · CAD TO FABRICATION



▶ VIDEO

IN USE — Built and running — public demo

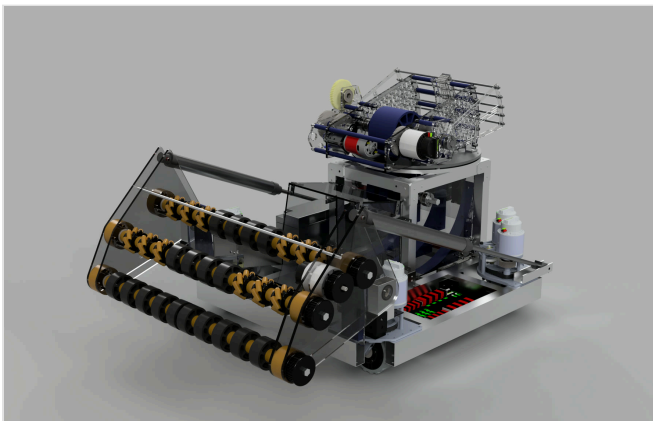
A fully functional competition robot designed to a given brief and built from the ground up — CAD through fabrication. Complex drivetrain, intake and a top-mounted mechanism, all integrated into one machine that was manufactured and run in public.

## WHAT I DID

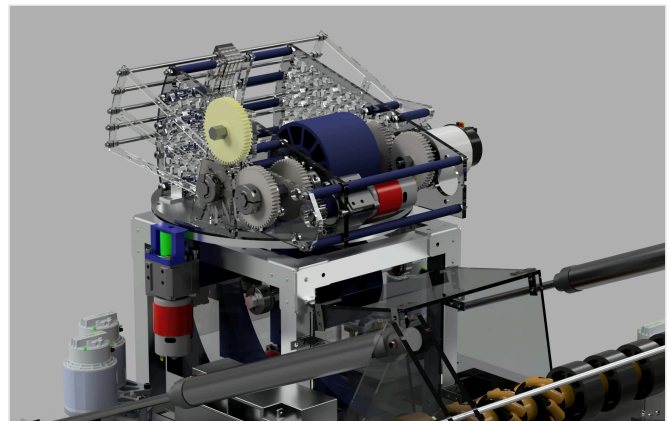
- Complete design of a functional robot to brief
- CAD → fabrication, from the ground up
- Built and operated

## SKILLS

CAD → fabrication



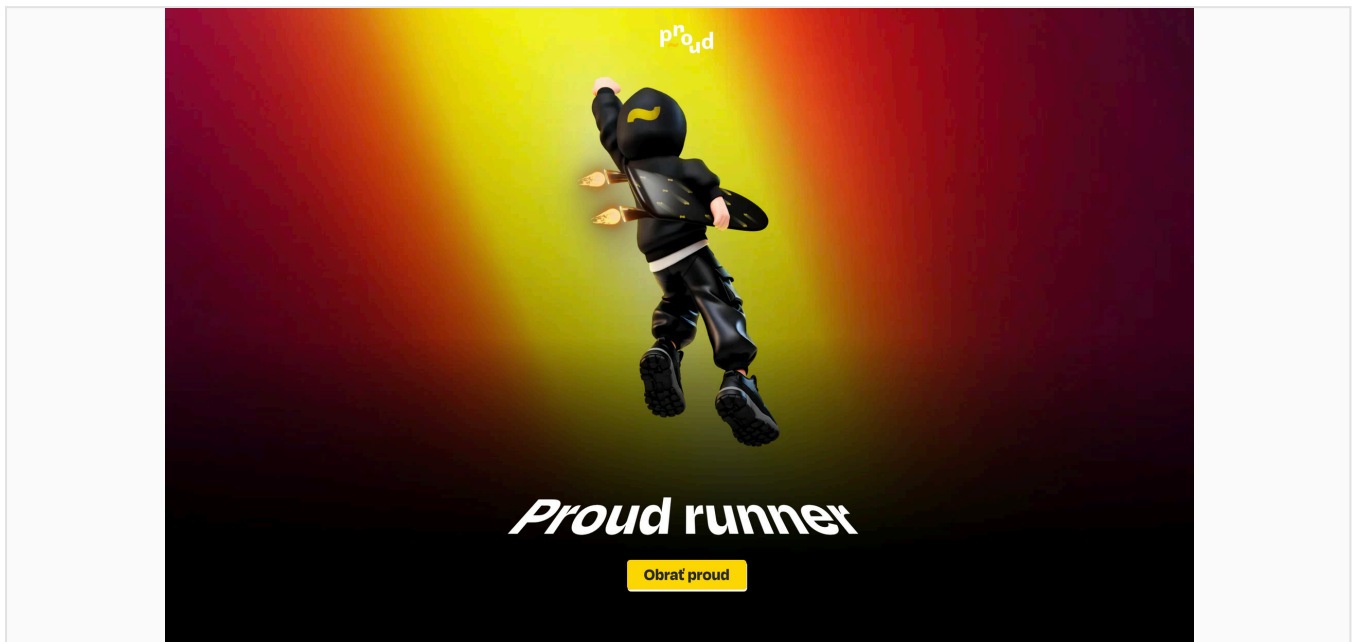
CAD Full assembly render



CAD Drivetrain &amp; top mechanism, close-up

# Proud Runner

PROMO WEB GAME · PLZEŇSKÝ PRAZDROJ (PROUD)

**10,000+**  
players and countingKEY ART — Title screen / key art *The 3D asset pictured is not my work.*

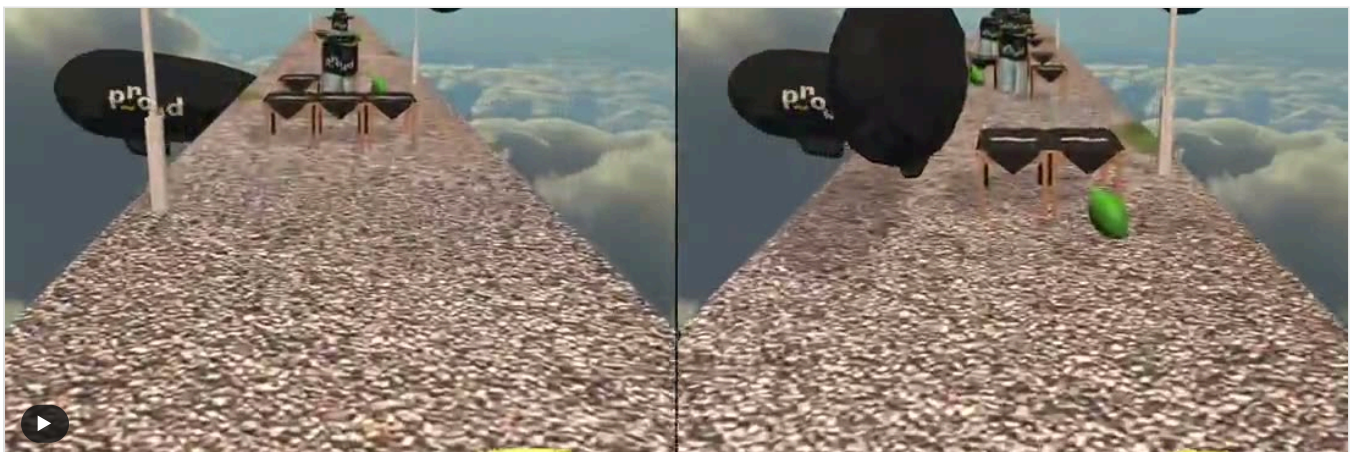
A branded 3D endless-runner web game for Plzeňský Prazdroj's Proud brand — a mobile-only, Subway Surfers-style runner. I coded the whole thing from the ground up in PlayCanvas, including a dedicated backend that logs scores and talks to a separate activations-and-prizes app. It has been played by 10,000+ people and counting.

## WHAT I DID

- Coded the entire game from the ground up in PlayCanvas
- Mobile-only, Subway Surfers-style endless-runner mechanic
- Custom backend — score logging + integration with a prizes / activations app

## SKILLS

PlayCanvas · Game · Backend



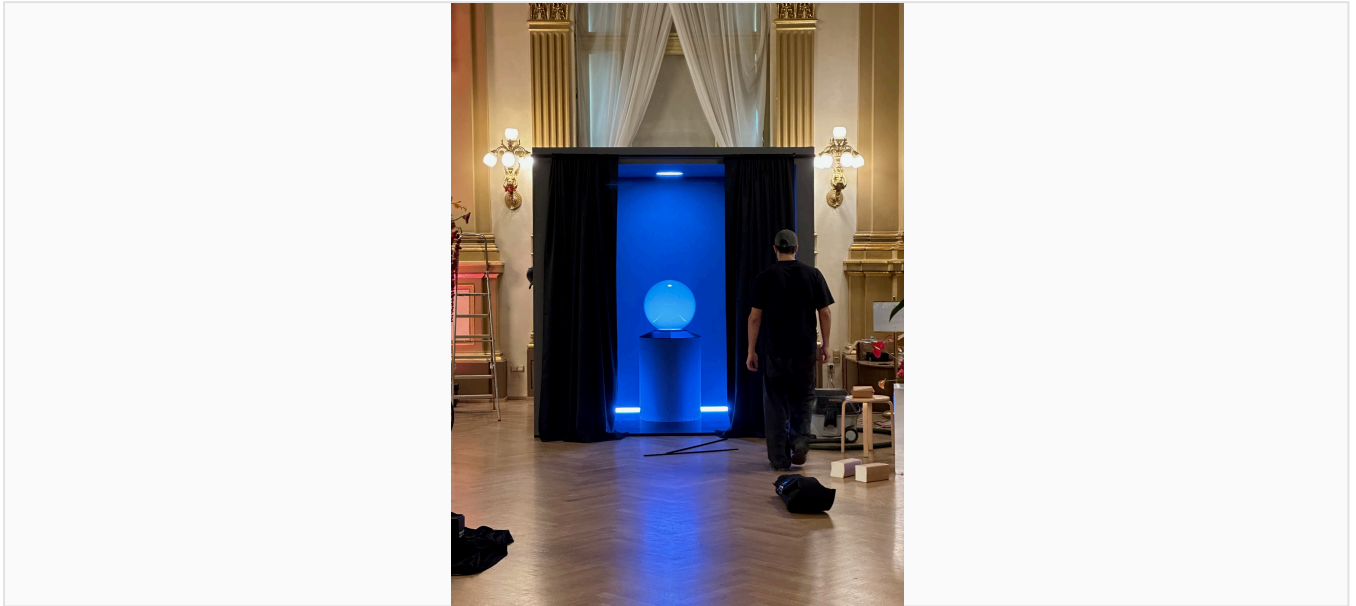
GAMEPLAY Endless-runner gameplay, leaderboard and results

# Interactive Sphere

EVENT INSTALLATION · NÁRODNÍ DŮM NA VINOHRADech

## 2 nights

at a live event, running back-to-back



INSTALL — Installed at Národní dům na Vinohradech

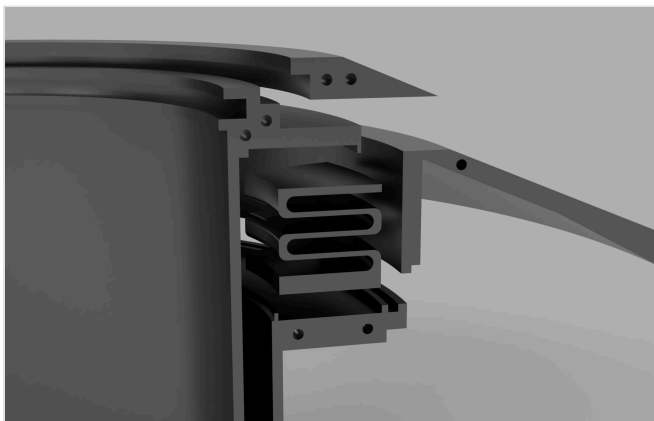
An interactive, illuminated sphere for a live event at Národní dům na Vinohradech — designed completely by me, from the ground up, from the first concept to the finished installation. Guests press the sphere to trigger it, so I designed the whole thing: the structure, the electronics and a custom press-switch mechanism built to survive a busy crowd. It ran two nights back-to-back.

### WHAT I DID

- ☐ Complete design from the ground up — concept to installation
- ☐ Structural / mechanical design
- ☐ Electronics design
- ☐ Custom press-switch mechanism

### SKILLS

Complete design · Electronics · Mechanism



CAD Section through the press mechanism

Vincent Šmíd



MECHANISM Custom press mechanism, 3D-printed

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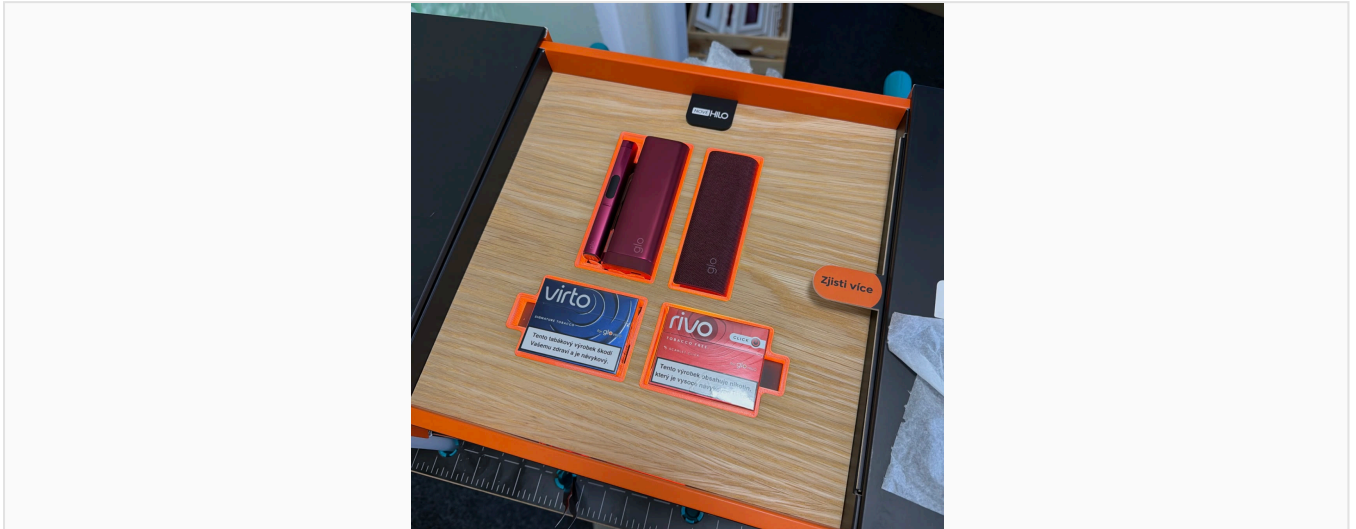
# glo Giftbox

PREMIUM PACKAGING · GLO HILO

SERIES PRODUCTION

## 250+

giftboxes produced



PRODUCT — Device and accessories seated in the box

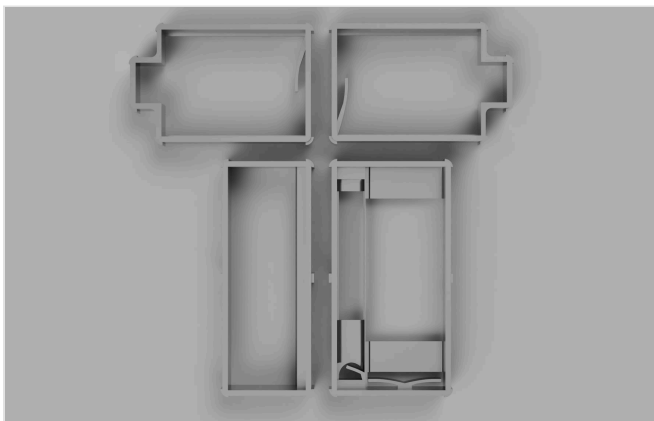
A premium giftbox set for glo HILO, made in a series of 250+ boxes. The smart part is a single 3D-printed insert that does two jobs at once — it diffuses the box's backlighting evenly, and its walls act as a compliant spring that grips the device and the accessory cards so nothing falls out. It prints as one piece, with no assembly, which is what made a run of hundreds practical. The outer box is laser-cut plywood, designed for series production.

### WHAT I DID

- One-piece 3D print — light diffuser and compliant spring in a single part
- Compliant walls grip the device and cards so nothing falls out
- Even, integrated backlighting
- Laser-cut plywood outer box, made in a series of 250+

### SKILLS

Compliant mechanism · Lighting



CAD Internal holding mechanism



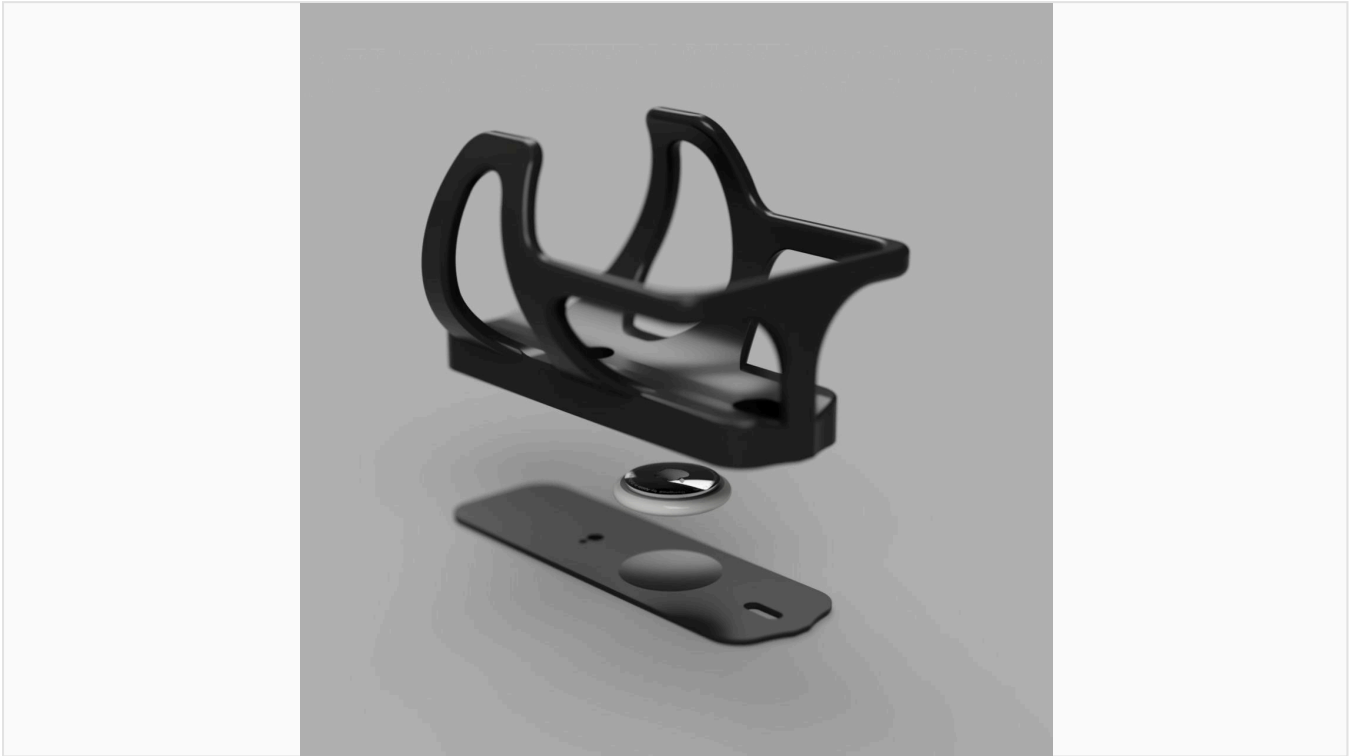
LASER CUT Laser-cut plywood, series production

# AirTag Bottle Cage

PRODUCT DESIGN · OPEN 3D-PRINT MODEL

**2000+**

on 3D-print sharing platforms



EXPLODED — Concealed AirTag compartment

A bicycle bottle cage with a concealed AirTag compartment, designed for home 3D printing. Released as a free download, it has been downloaded more than 2,000 times on 3D-print sharing platforms.

## WHAT I DID

- ☐ Product design of the cage
- ☐ Hidden AirTag compartment

## SKILLS

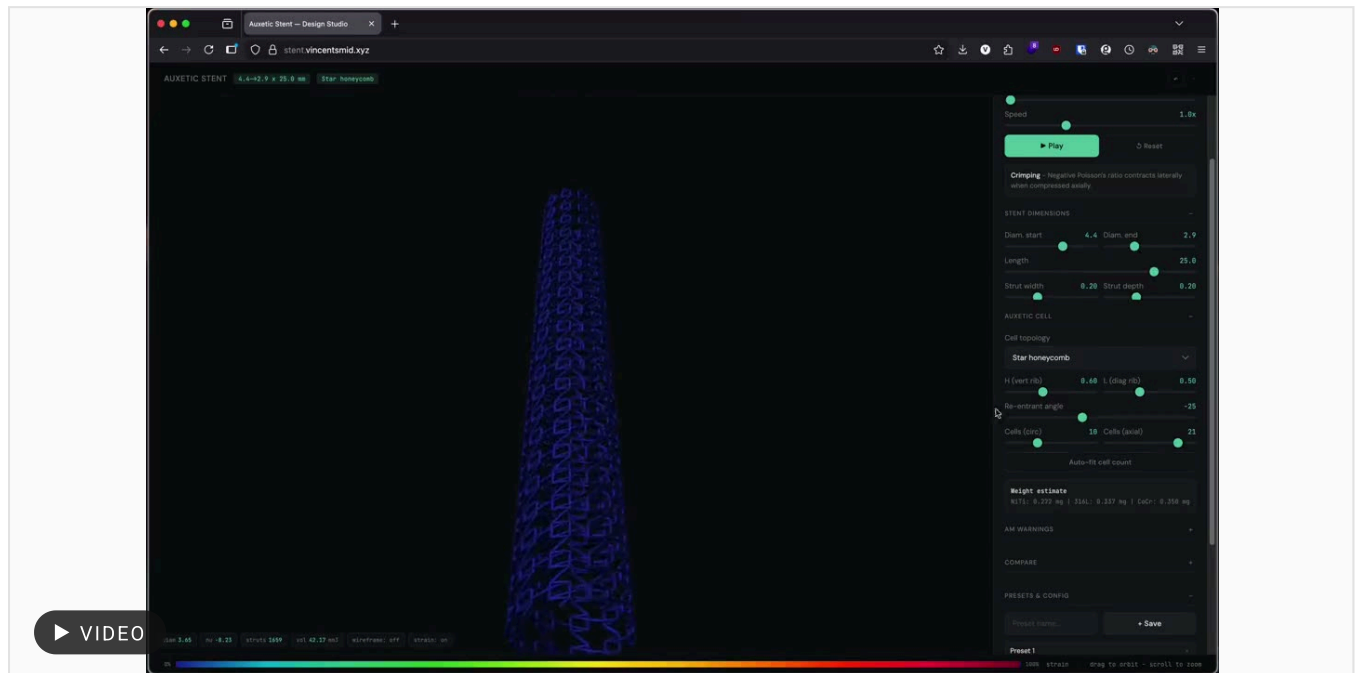
Product · 3D print



ON BIKE Printed and mounted

# Coronary Stent Design Studio

MEDICAL DEVICE · PARAMETRIC DESIGN TOOL



DESIGN TOOL — The parametric design studio (Three.js)

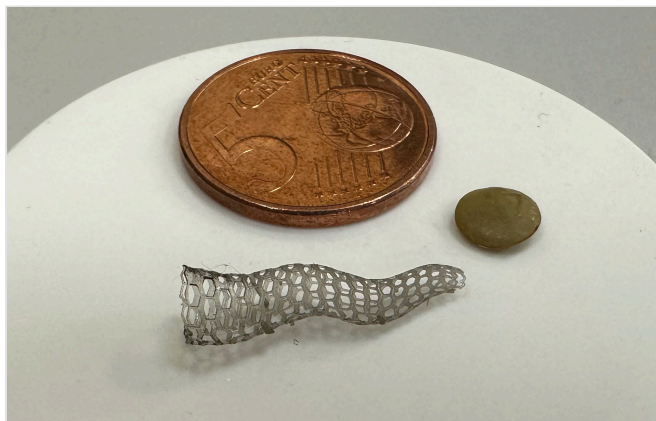
A browser-based parametric design studio for auxetic (negative-Poisson's-ratio) coronary stents, built at a medical-device hackathon. It generates the full 3D lattice in real time, simulates crimping, expansion and fatigue, checks 3D-printability and exports a watertight STL — which I then 3D-printed to validate the geometry.

## SKILLS

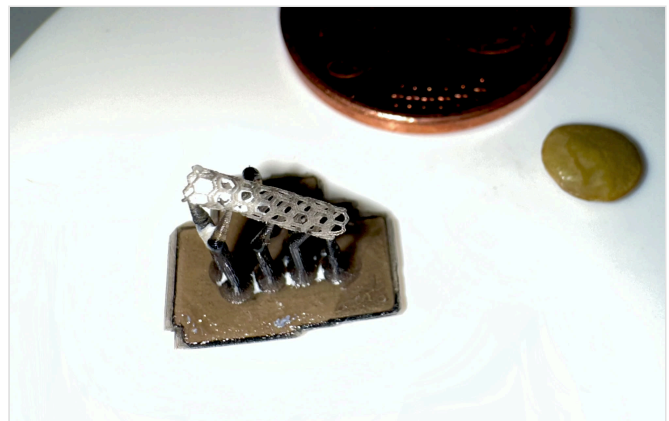
Parametric CAD · 3D print · Web

## WHAT I DID

- Parametric 3D geometry engine (four auxetic cell types)
- Real-time deformation & strain visualization
- Design-for-3D-printing checks + STL export
- 3D-printed and validated the generated geometry



3D PRINT 3D-printed auxetic stent — 5-cent coin for scale



3D PRINT A smaller printed lattice

# Let's make something real.

Vincent Šmíd — Industrial Designer

Also a programmer & electronics designer

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3D CAD Modeling · Prototyping — 3D Printing · Visualization & Rendering · Electronics & PCB · Design  
for Manufacturing · Mechanism Design · Programming — games & enterprise apps

The interactive version of this portfolio includes video walkthroughs of the mechanisms and  
products in use. Available on request.