DIGITAL ART

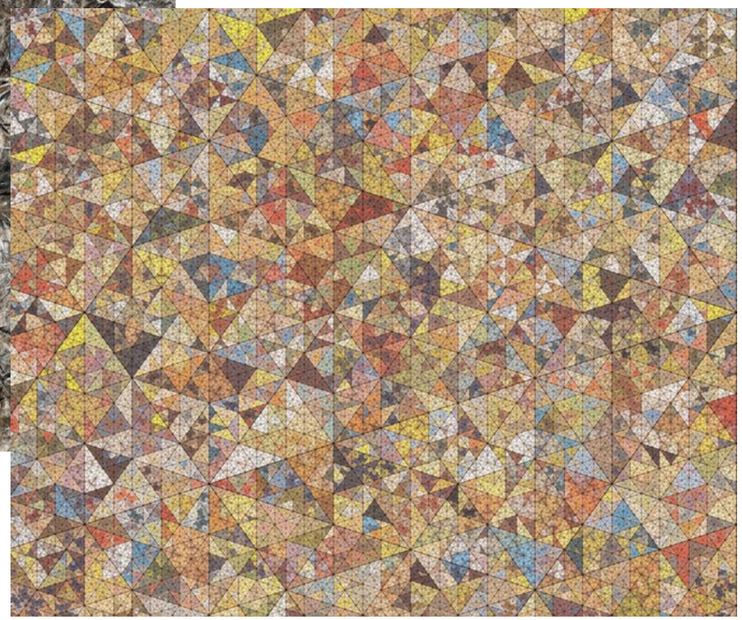
Daniel Havel
Miroslav Hájek
Vladyslav Holubenko
Anastasiia Solomiia Hrytsyna

GENERATIVE ART

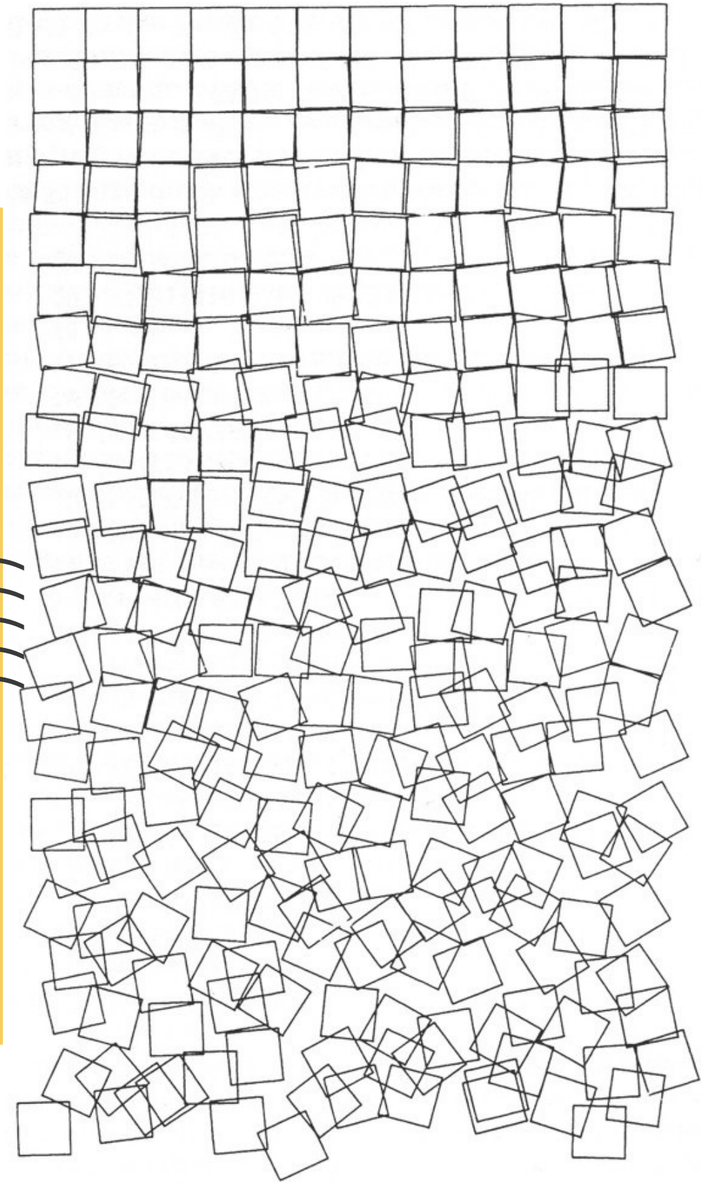
Miroslav Hájek

ARTWORK PARADIGM SHIFT

Intersection Aggregate
Jared Tarbell, 2004



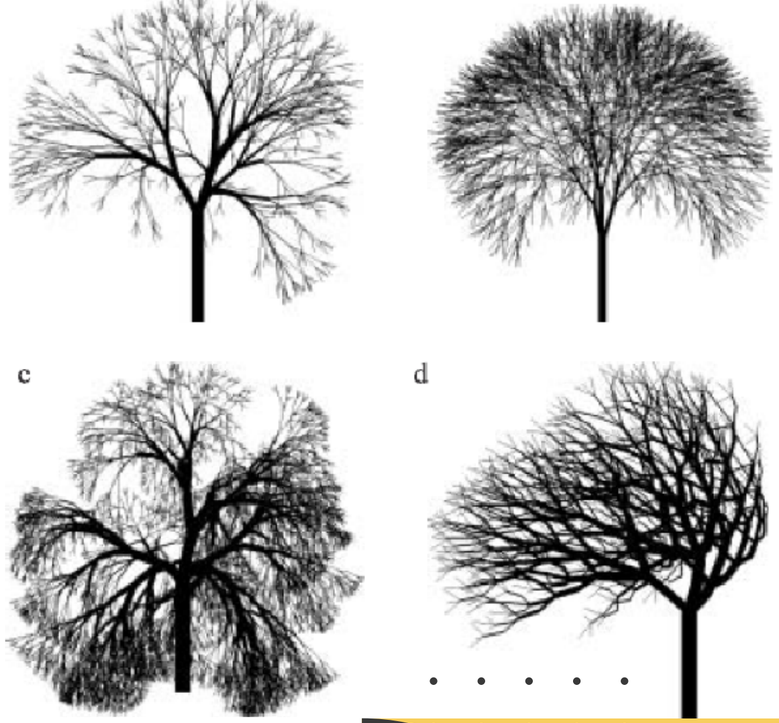
Penrose Substitution
Jared Tarbell, 2020



Schotter (Gravel) - Georg Nees ,1968

https://www.artnome.com/news/2018/8/8/why-love-generative-art

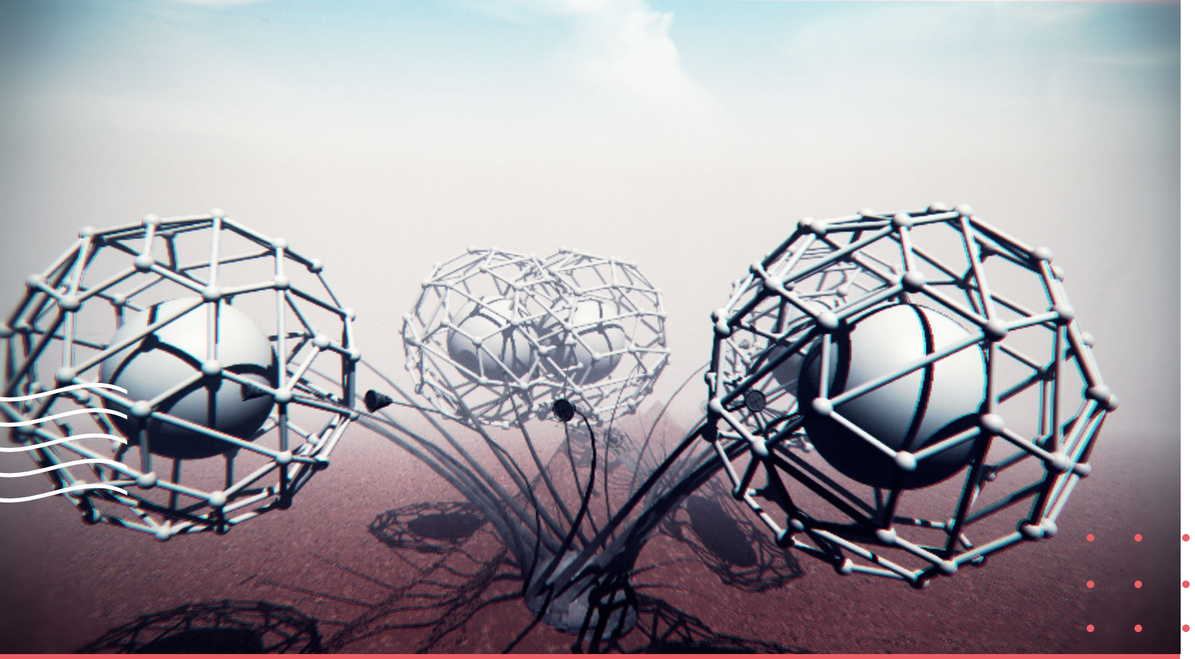
LINDENMAYER SYSTEMS



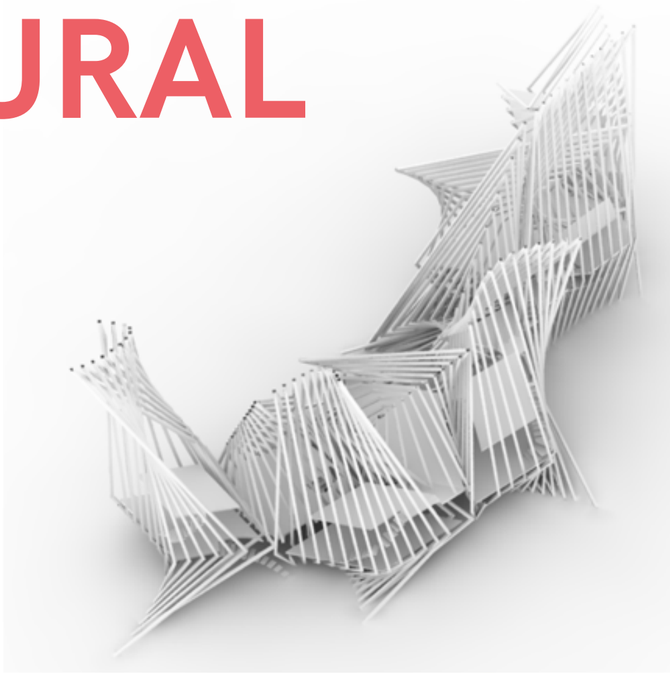
Processes

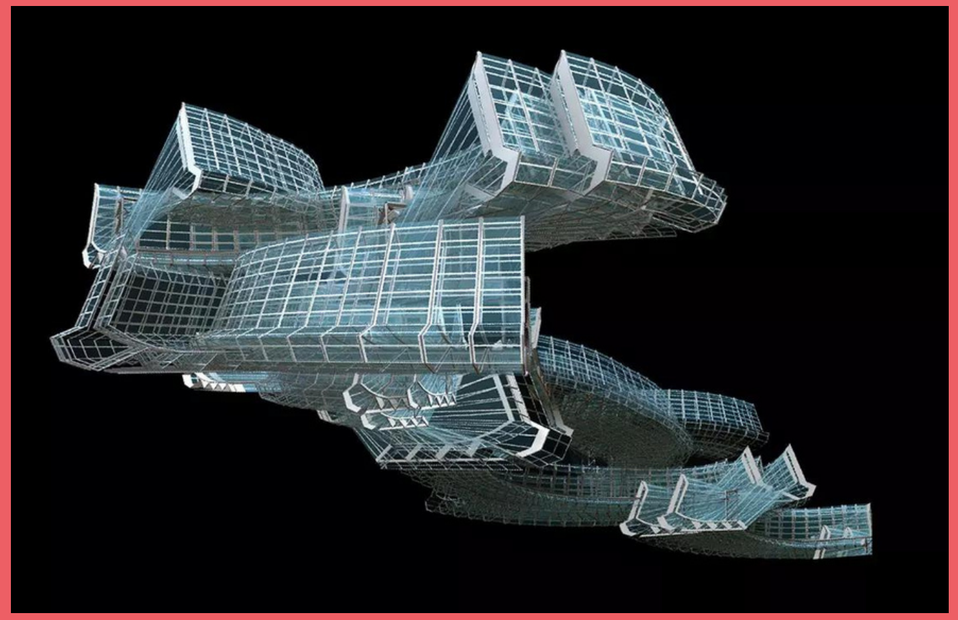
- Generative
- Interpretative

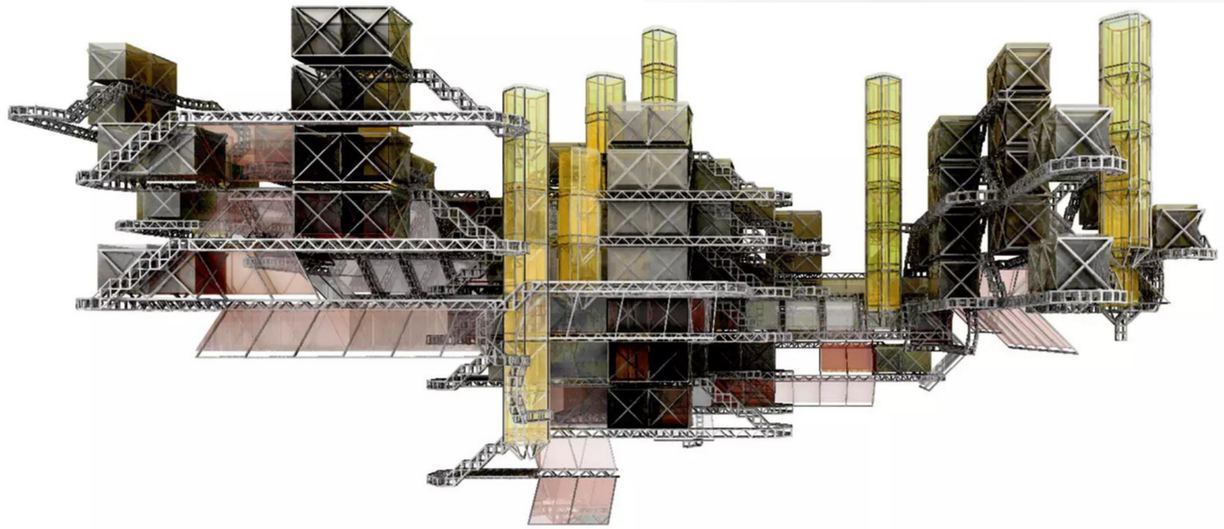
start: a
rules:
a → aba
b → ac
steps: 3



L-SYSTEMS IN STRUCTURAL DESIGN

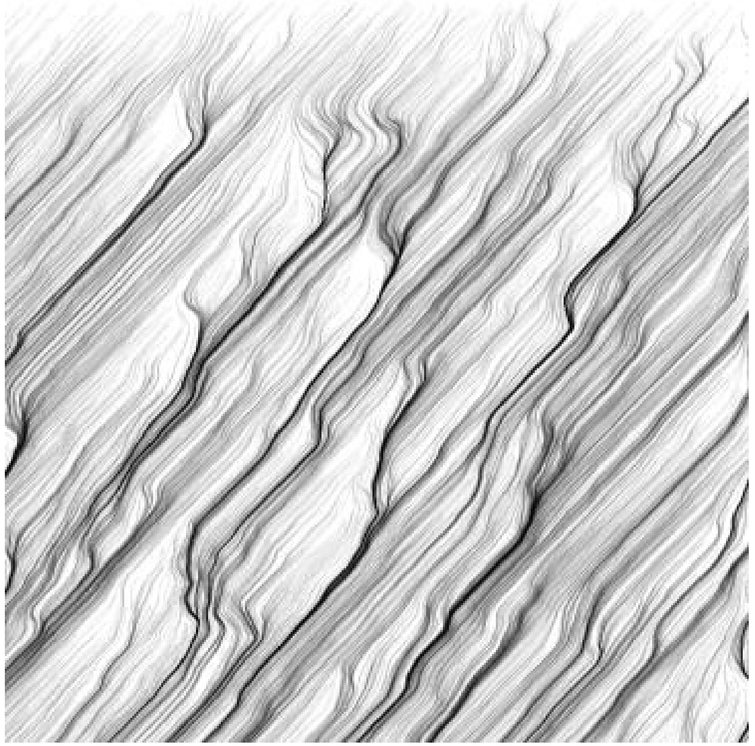


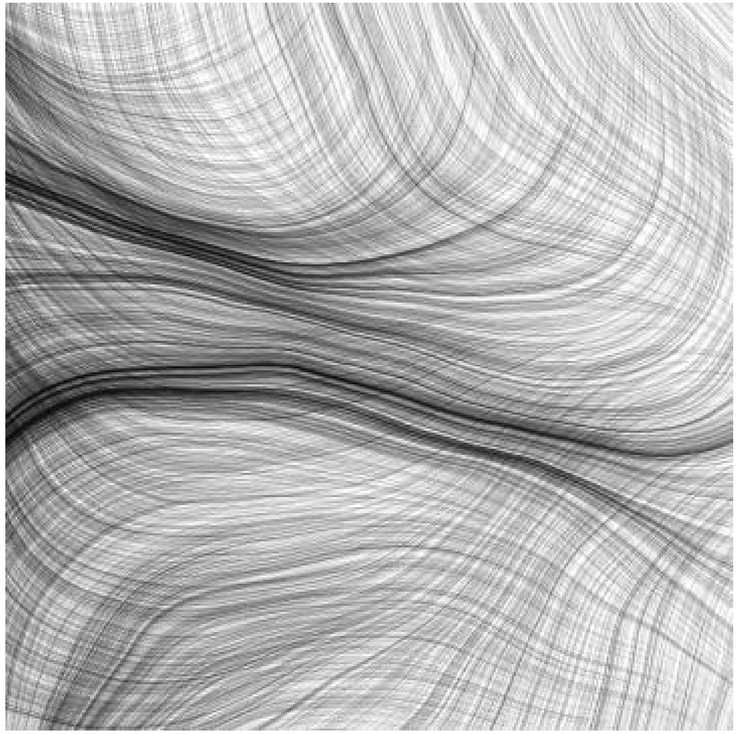




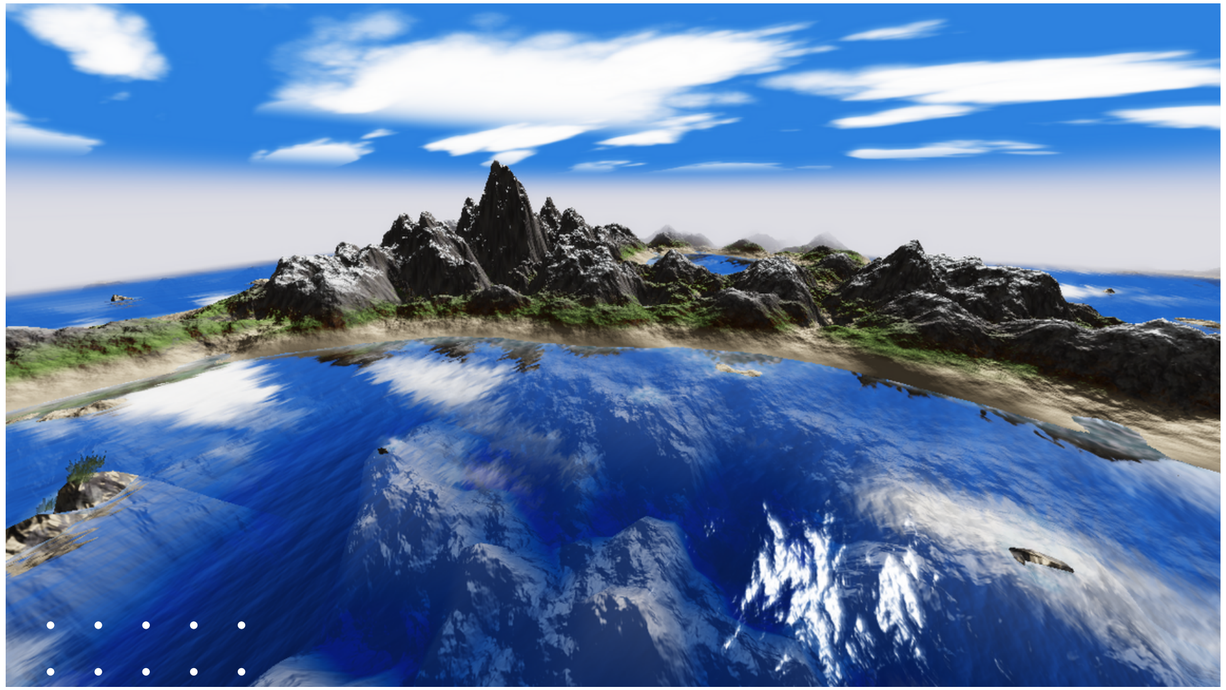
https://www.michael-hansmeyer.com/l-systems

PERLIN & SIMPLEX NOISE



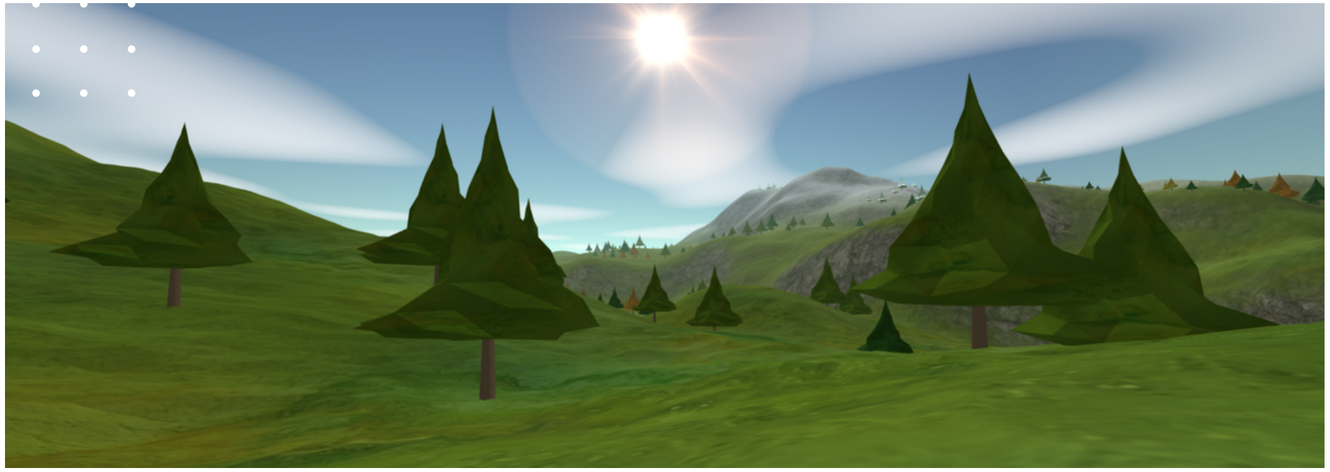


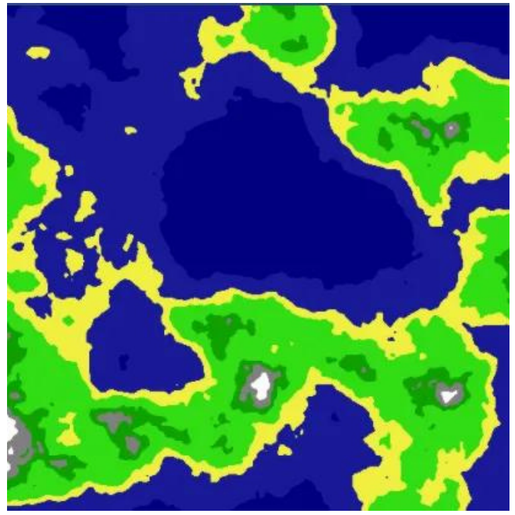
https://flashyprogramming.wordpress.com/2009/12/26/visualizing-perlin-noise/



NATURAL LANDSCAPES

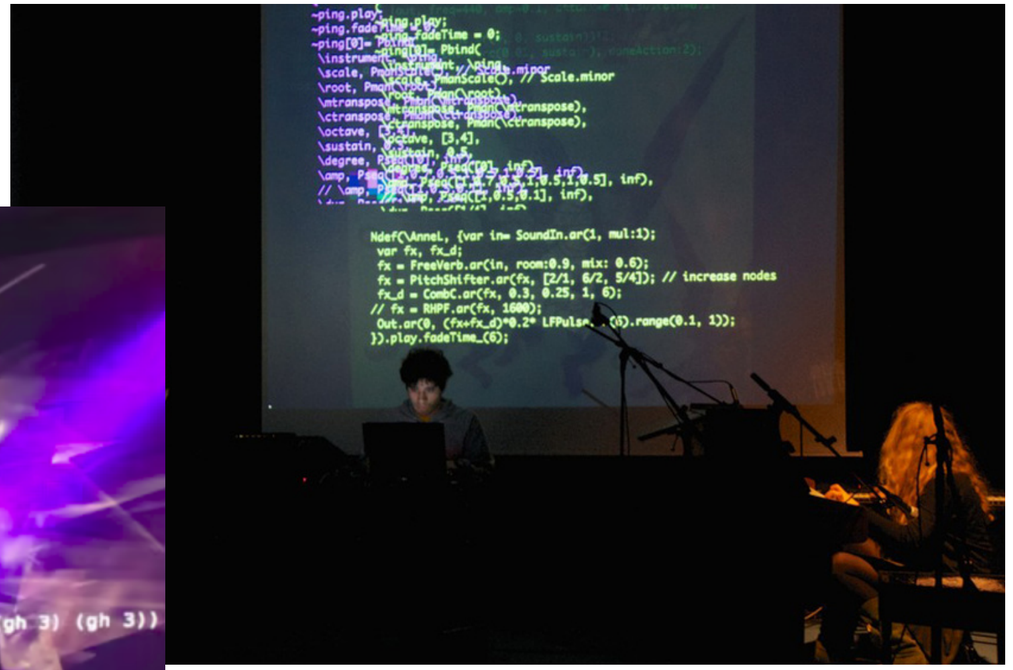
for virtual worlds





LIVE CODING

Performance art - visual effects and music in projected code

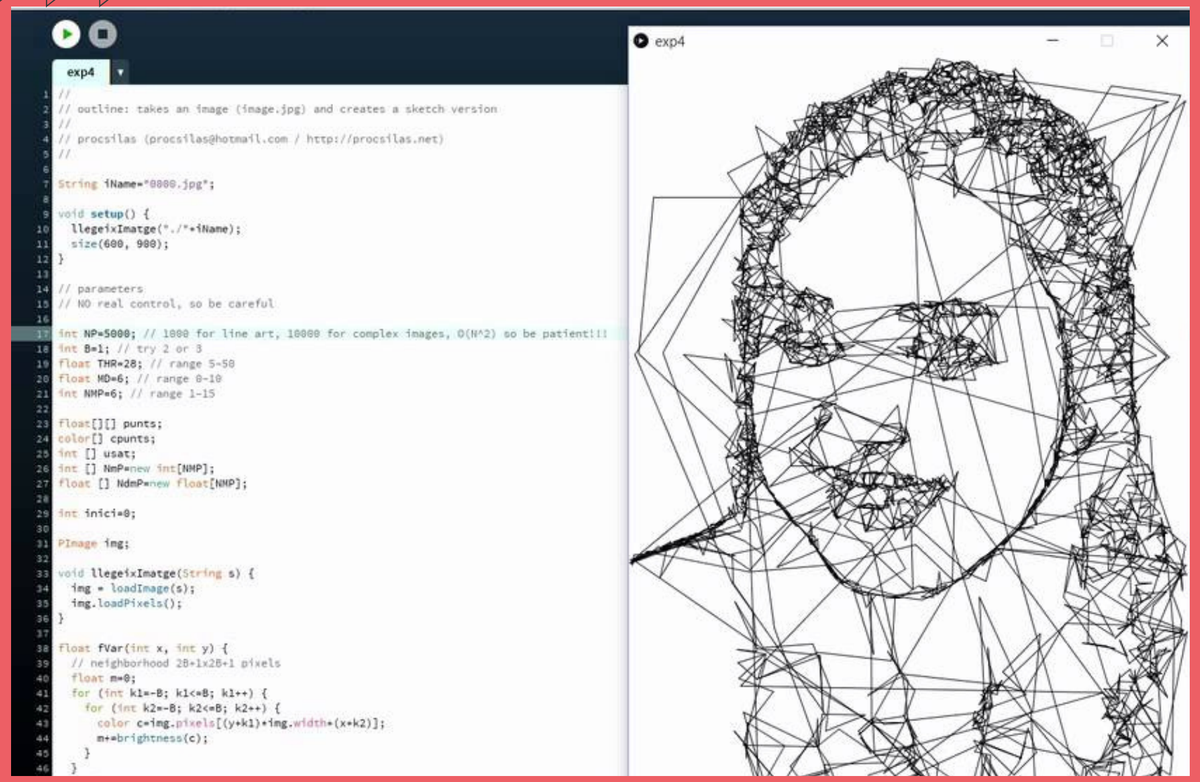


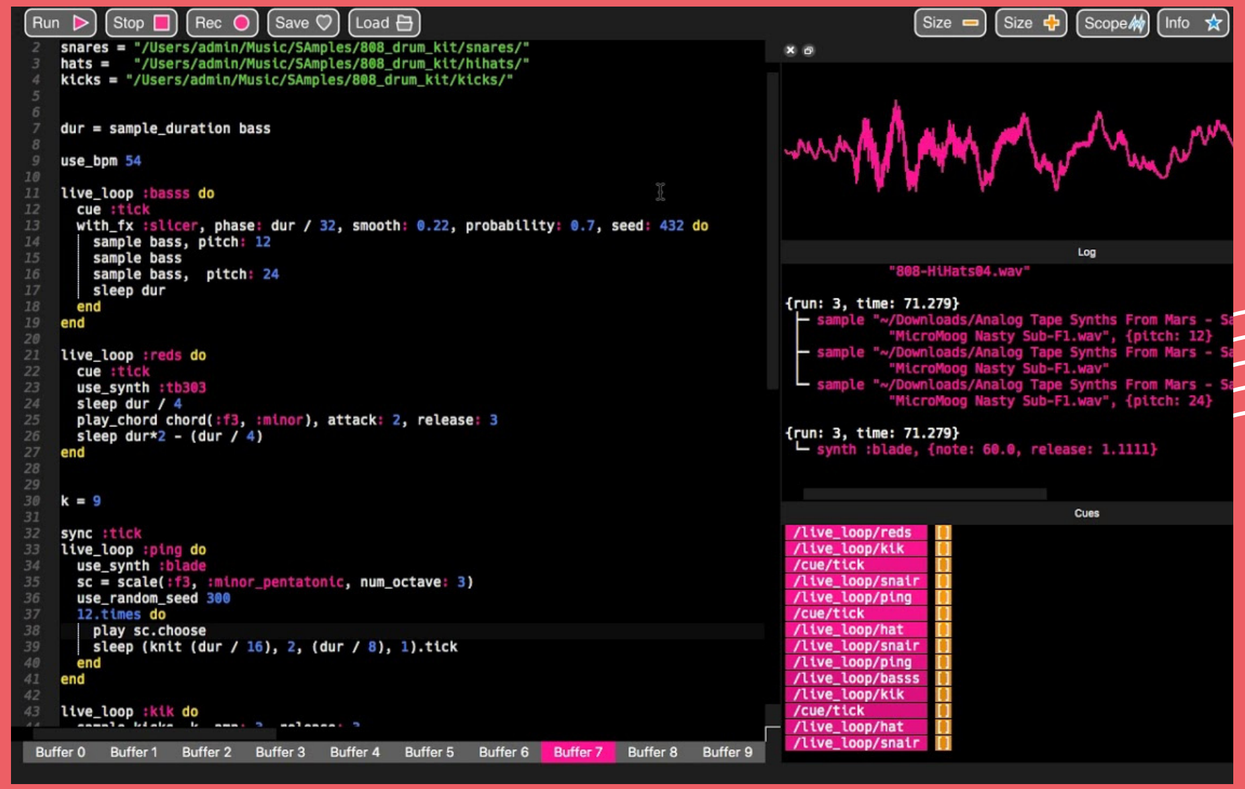
Sam Aaron concert: https://www.youtube.com/watch?v=G1m0aX9Lpts

TRY GENERATIVE ART YOURSELF

Processing

Sonic Pi





CGI

Vladyslav Holubenko

WHAT IS CGI?

Computer-generated imagery

static or animated visual content
created using computer software

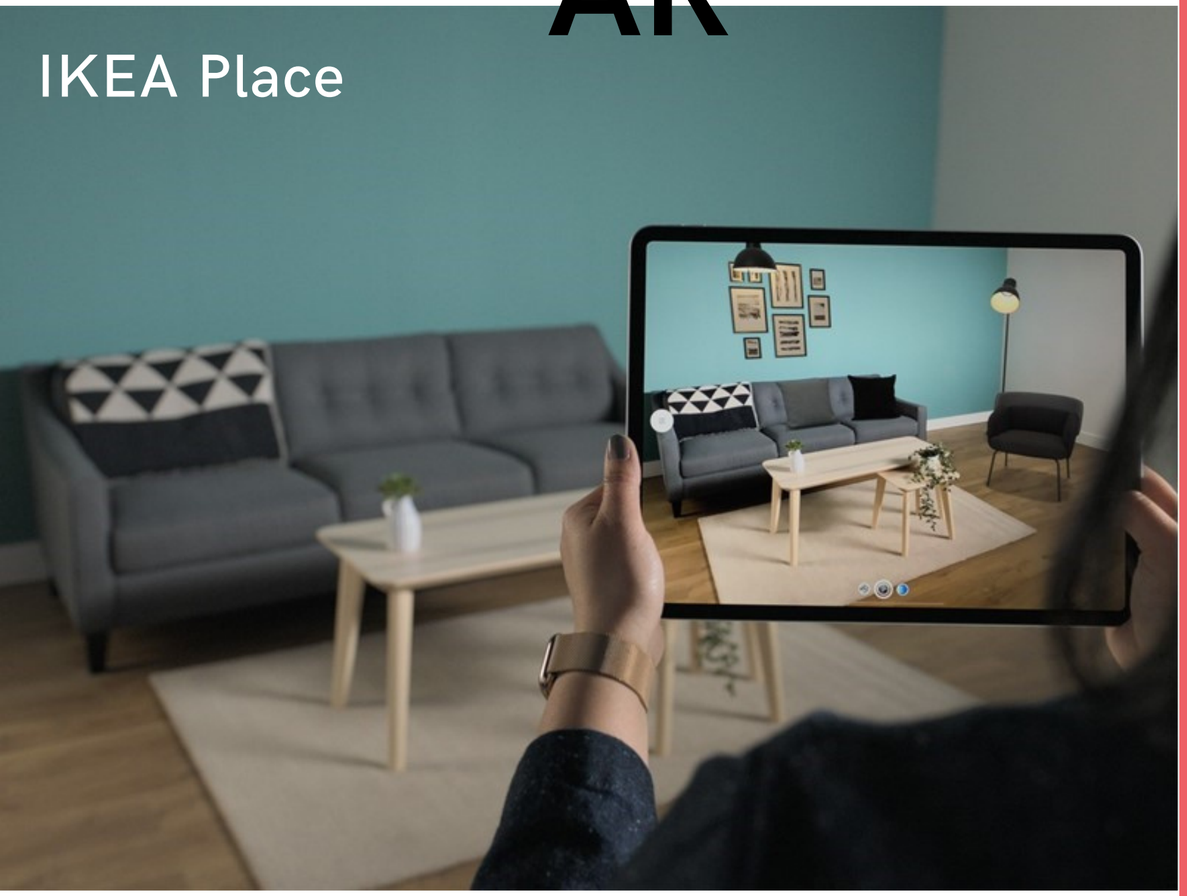
ARCHITECTURAL SCENES

Microsoft Flight Simulator (2020)

SIMULATIONS

AR

IKEA Place



VR

FILMS AND VIDEO GAMES

Turning Red (2022)

Cyberpunk 2077 (202

The Lion King (2019)

Life Hutch. Love, Death & Robots (2021)

MOTION CAPTURE

The Lord of the Rings:
The Two Towers (2002)

Dawn of the Planet of the Apes (2014)

FACIAL MOTION CAPTURE

The Irishman (2019)

Blade runner 2049 (2017)

DIGITAL FASHION

The latest in fashion is not made with threads and textiles, but with pixels and programs.

Anastasiia Solomiia Hrytsyna

https://www.forbes.com/sites/unicefusa/2022/04/11/lessons-from-covid-19-strengthening-health-systems-to-prevent-the-next-global-health-crisis/?sh=49f575d71b11

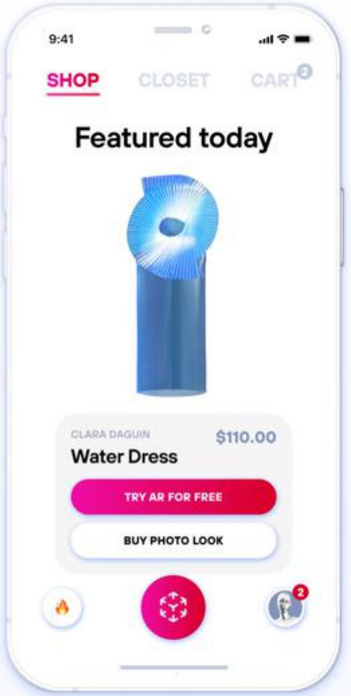
HISTORY

https://vs-lb.com/digitalization-fashion-industry-virtual-fashion/

THE FABRICANT

https://www.thefabricant.studio/

DRESSX



https://dressx.com/

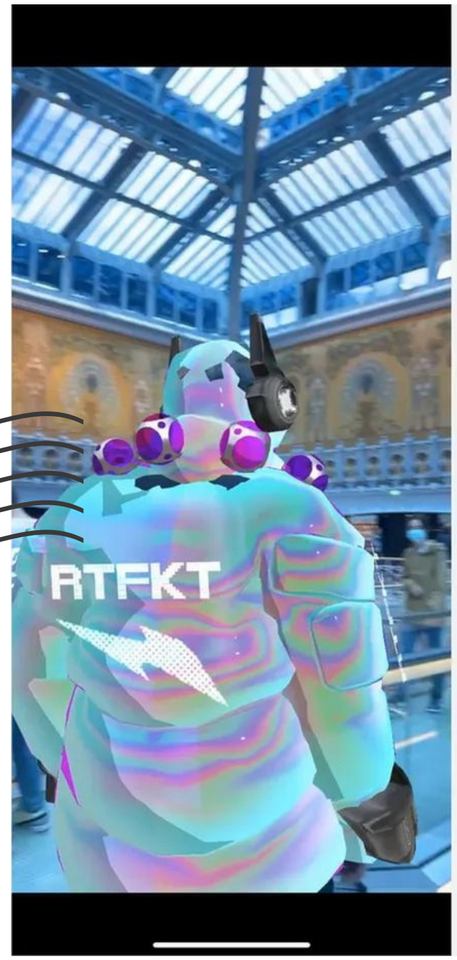
REPLICANT

https://en.replicant.fashion/

A FEW ADVANTAGES OF DIGITAL FASHION

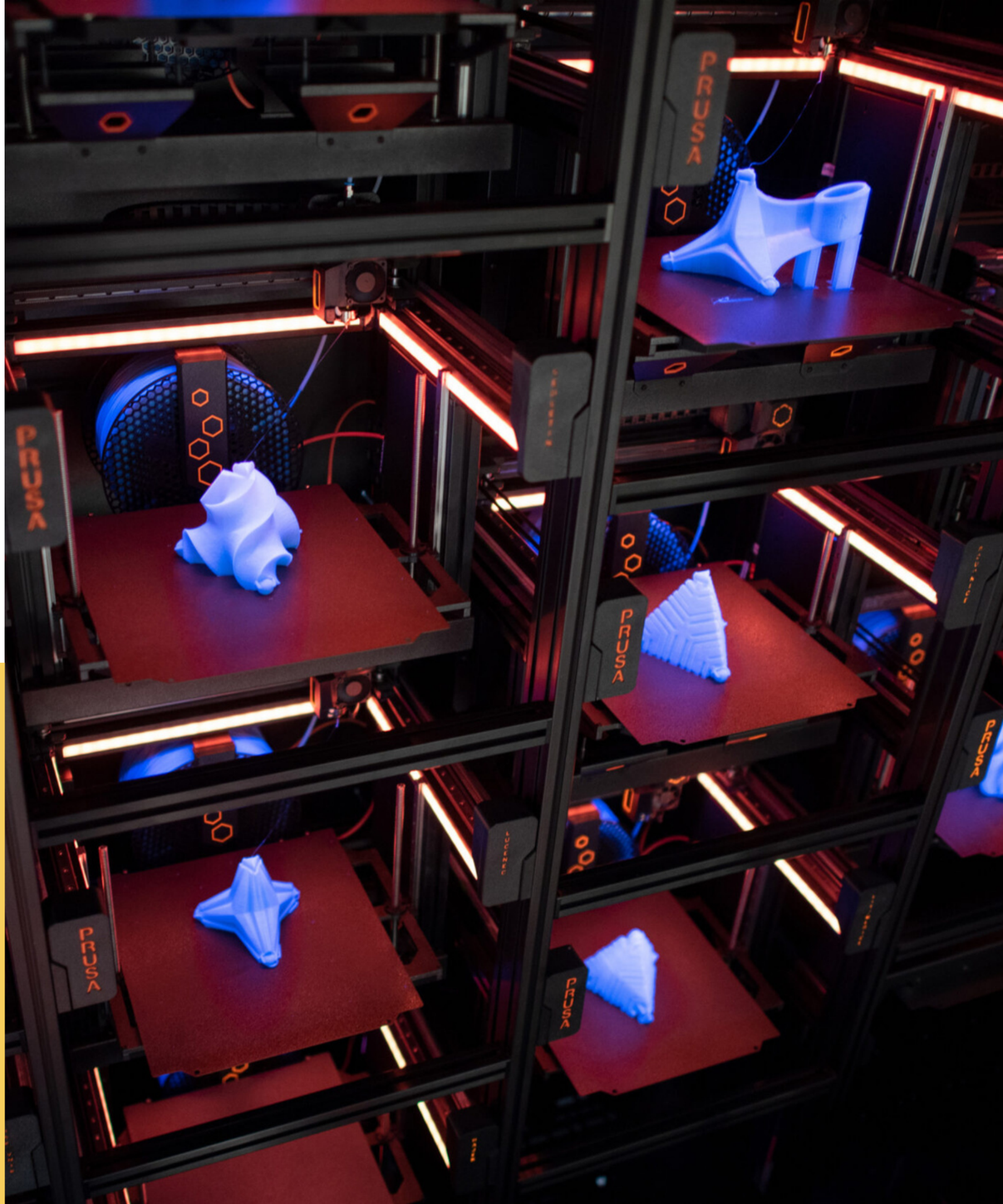
The substitute of fast-fashion
Reduce clothing waste
Less harm to the environment
No industrial water pollution
Luxury items are more affordable
All sizes inclusive

FUTURE

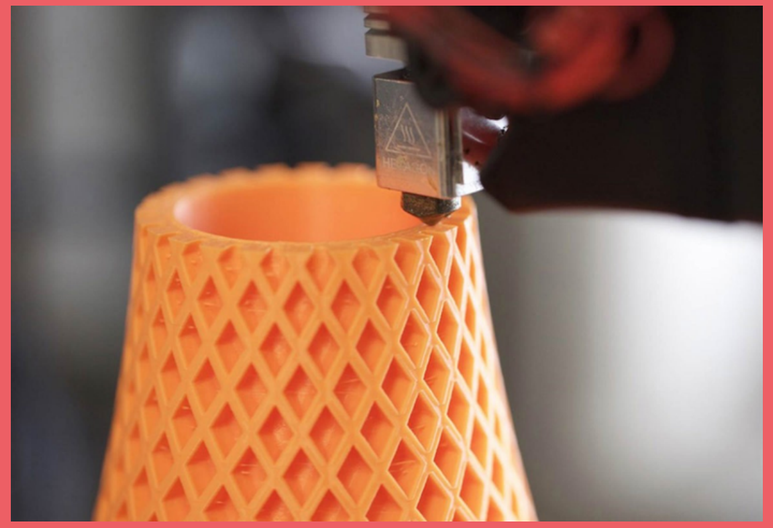


https://blog.loomly.com/digital-clothing/#:~:text=Digital%20clothing%20isn't%20made,and%20order%20something%20you%20like.

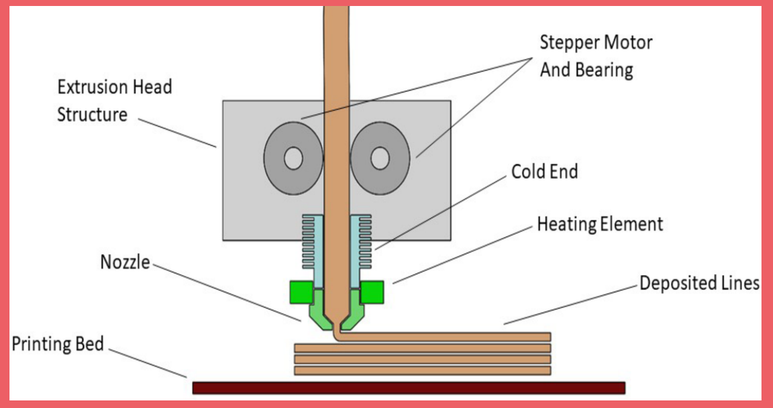
3D PRINTING

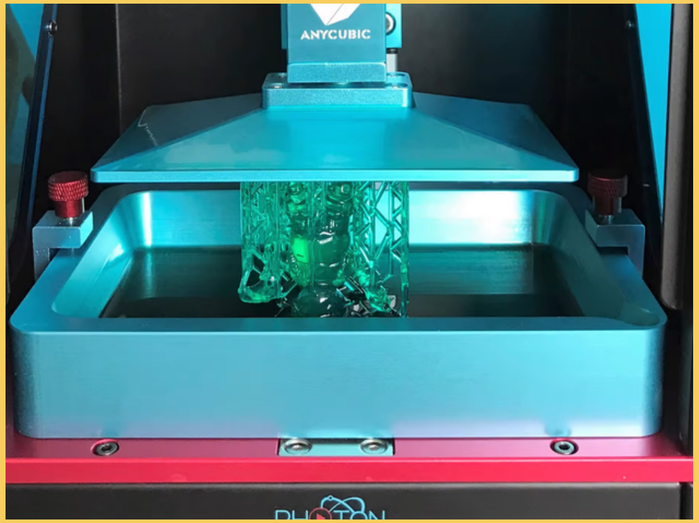


Daniel Havel

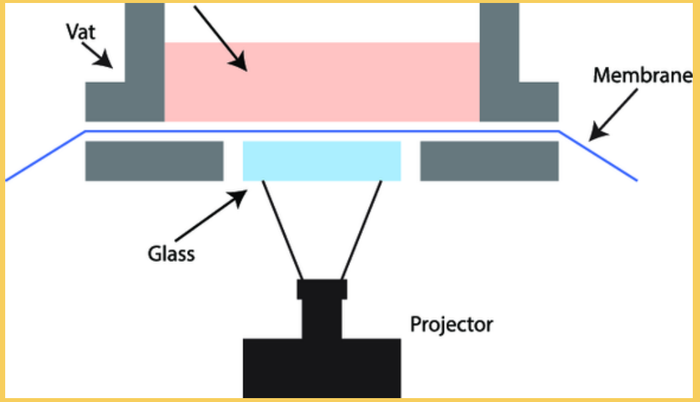


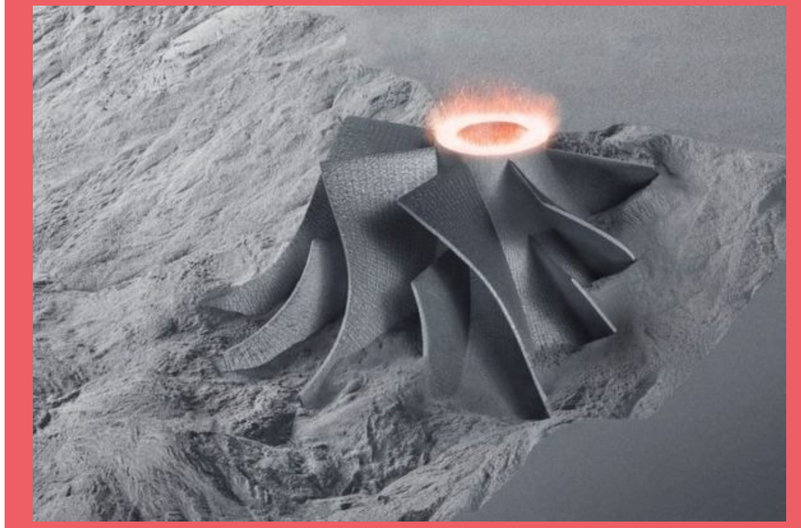
FDM


Extrusion Head
Structure
Stepper Motor
And Bearing
Cold End
Heating Element
Nozzle
Deposited Lines
Printing Bed

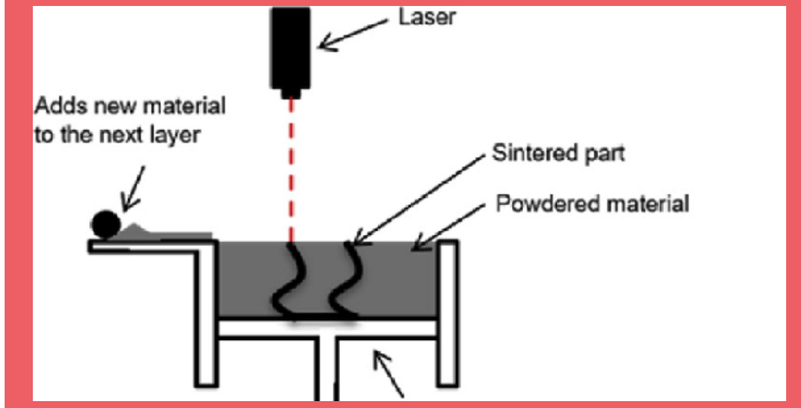

ANYCUBIC

SLA


Vat
Membrane
Glass
Projector

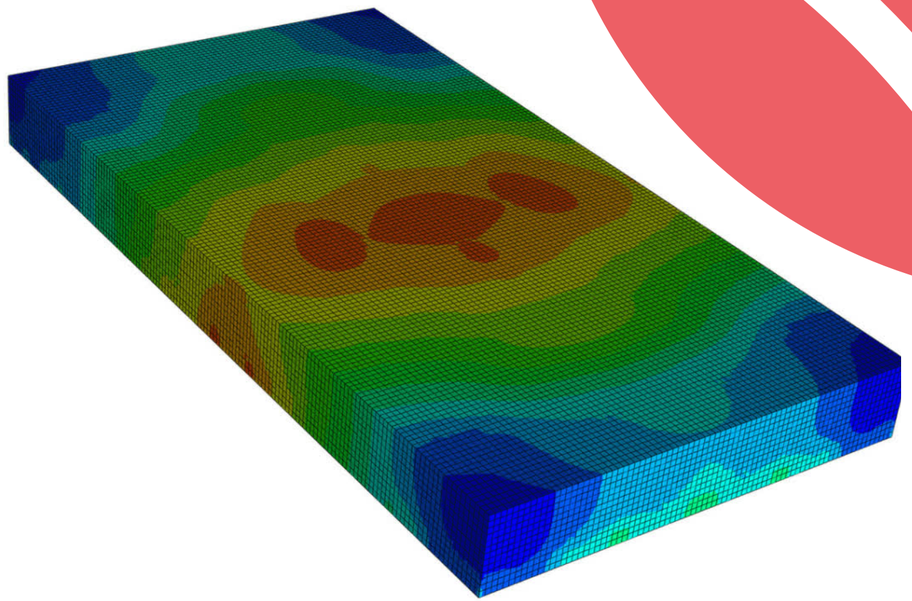


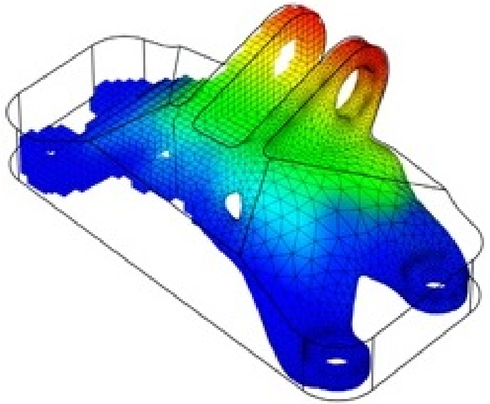
SLS


Laser
Adds new material
to the next layer
Sintered part
Powdered material

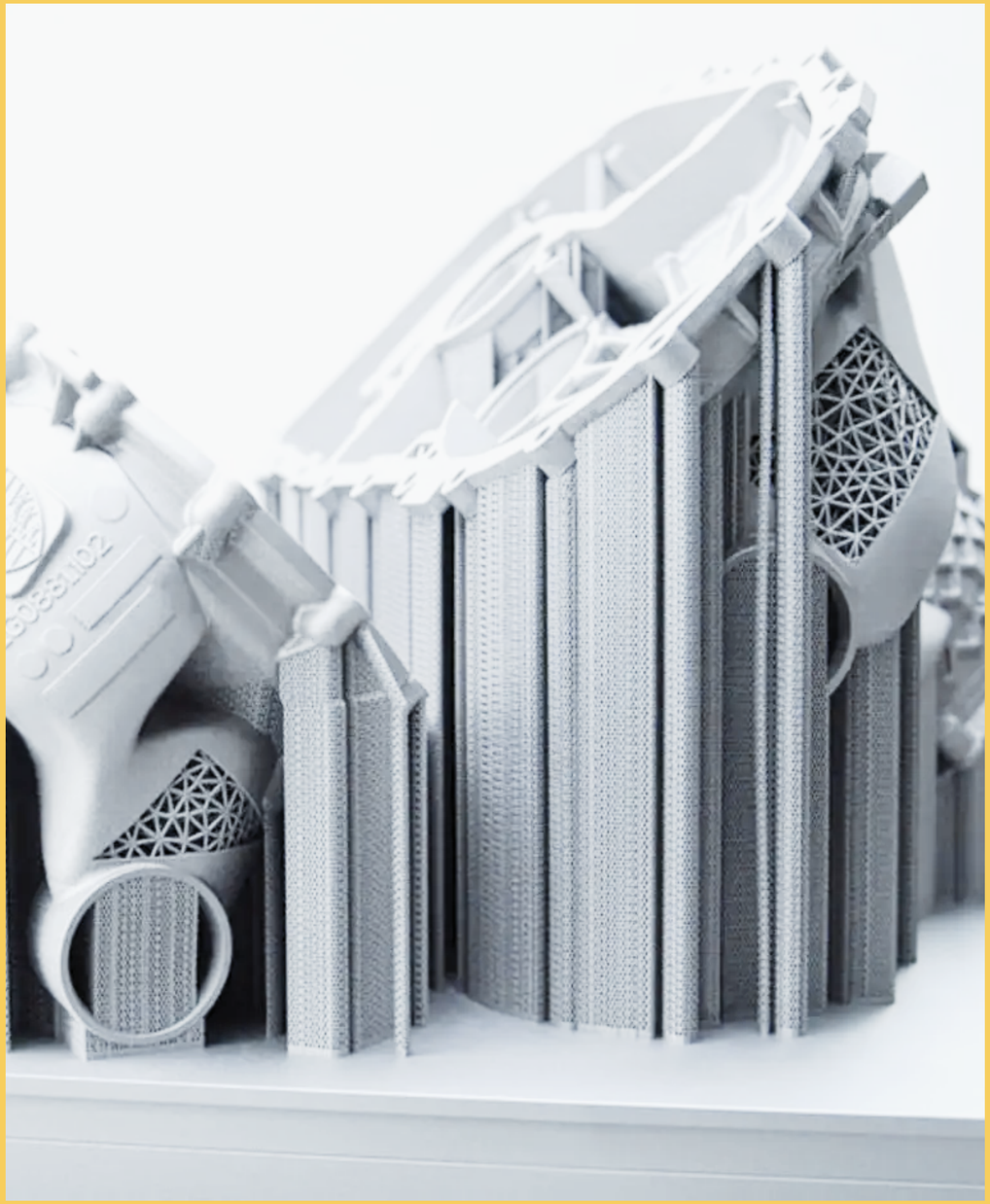
JEWELRY

TOPOLOGY OPTIMIZATION





CAR INDUSTRY



ARCHITECTURE

DISCUSSION