

Generative AI & Fabrication

MAS.863

Eitan Wolf

Oct 1st, 2026

Schedule

- 01 Checking in
- 02 Generative AI
- 03 2D-to-3D
- 04 Fusion MCP
- 05 Questions



How has it been so far?

**Is “Generative AI”
good for art?**

**~~Is "Generative AI"~~
~~good for art?~~**



**What can we learn
from experimenting
with these tools?**

AI Recitation Lecture 9/25-2025

How to Make (Almost) Anything (Almost) without Making Anything

Valdemar Danry, MIT Media Lab
Olivia Seow, Harvard Insight & Interaction Lab
Amira Abdel-Rahman, MIT Center for Bits and Atoms



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2025 Recitation





PhysiOpt

My view

01

**Sparking ideas
is better than
offloading them**

02

**Fabrication must still
follow physics and
physical expertise**

03

**Anyone making
anything is learning
something**



2D-To-3D



3D Printing

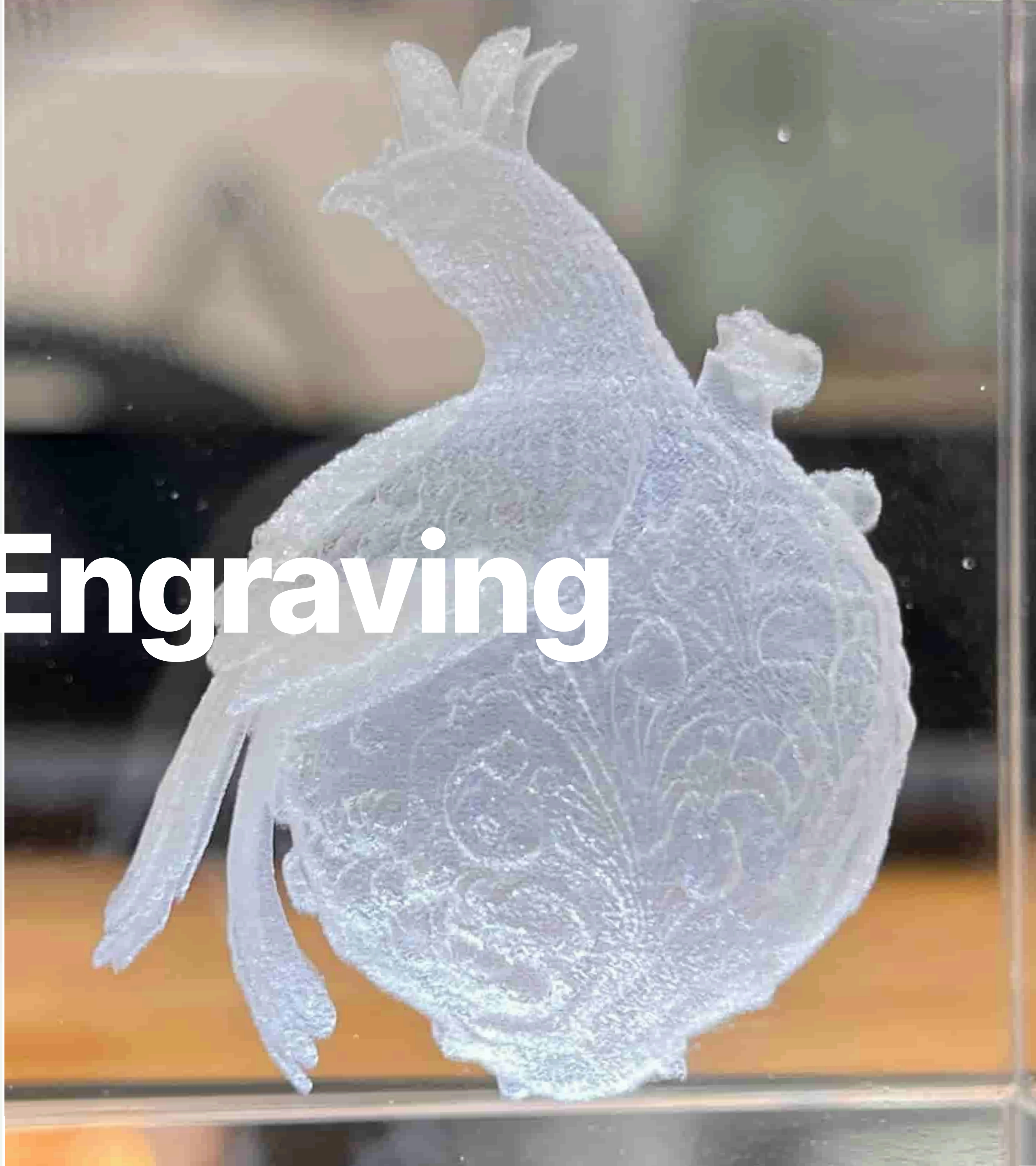




Molding & Casting



UV Laser Engraving



Generate your image



Consider complexity –
it's easier to adapt
simpler features

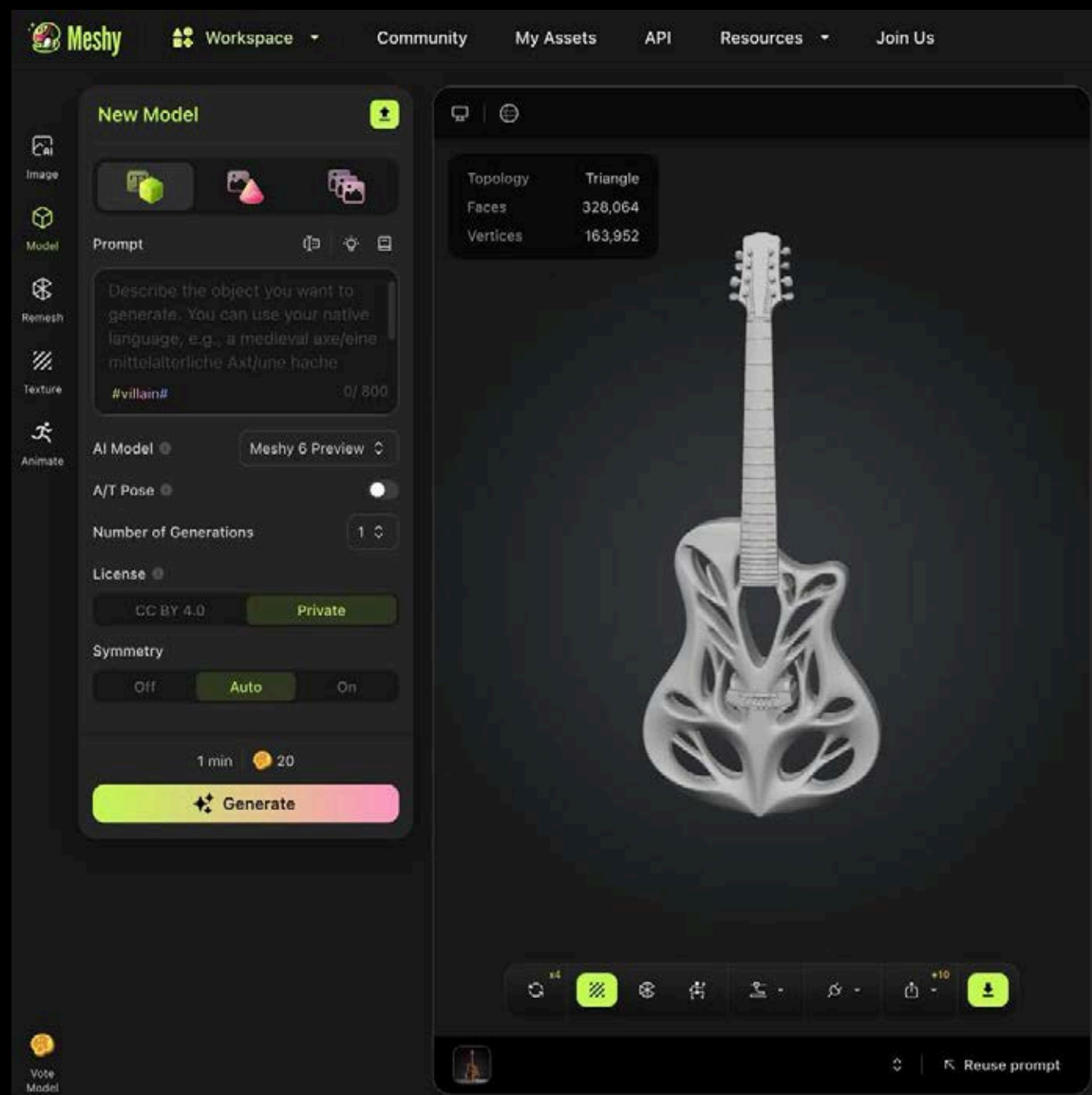


Think about structure –
will your model require
overhangs?

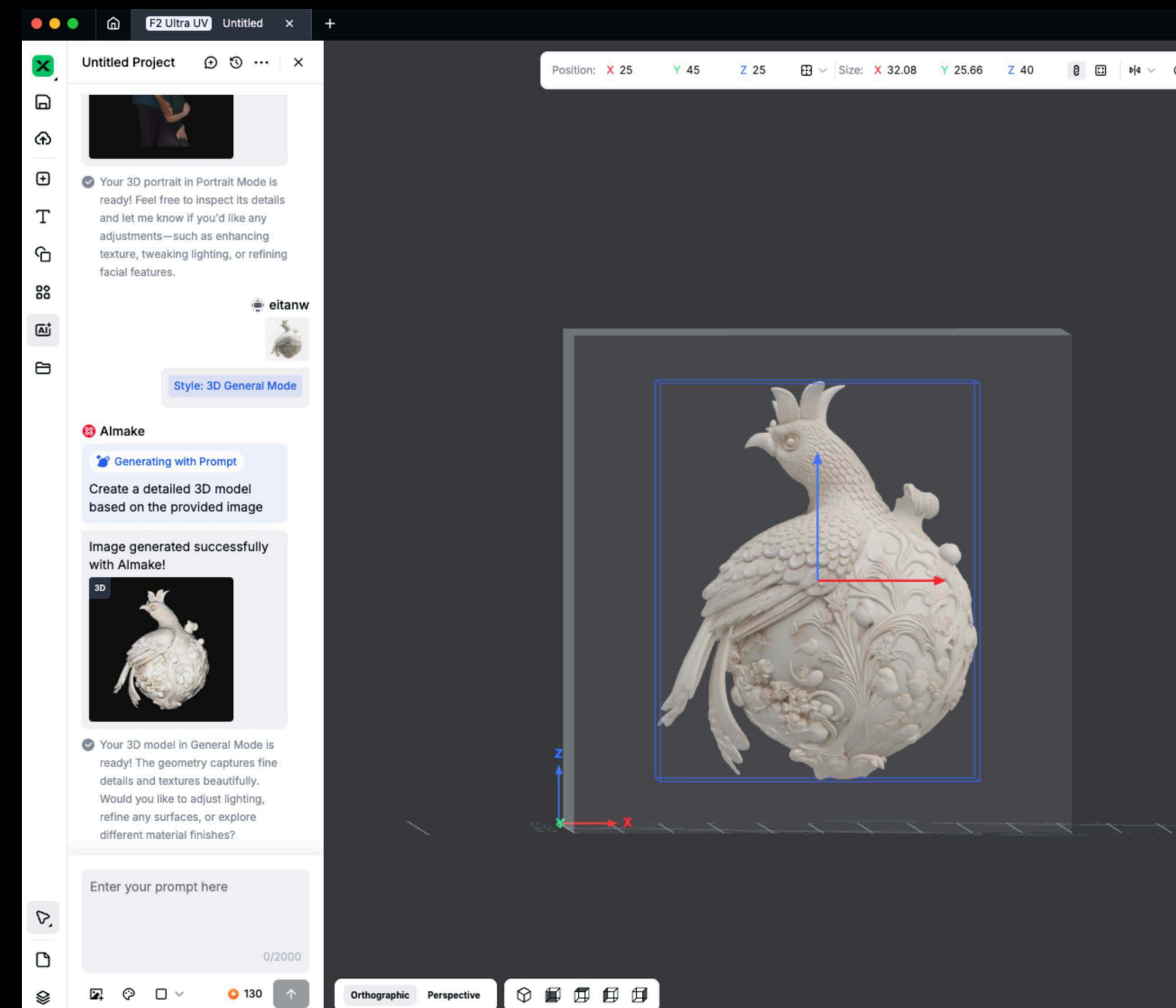


Adapt 3D
scanning principles –
generate 360° rotation

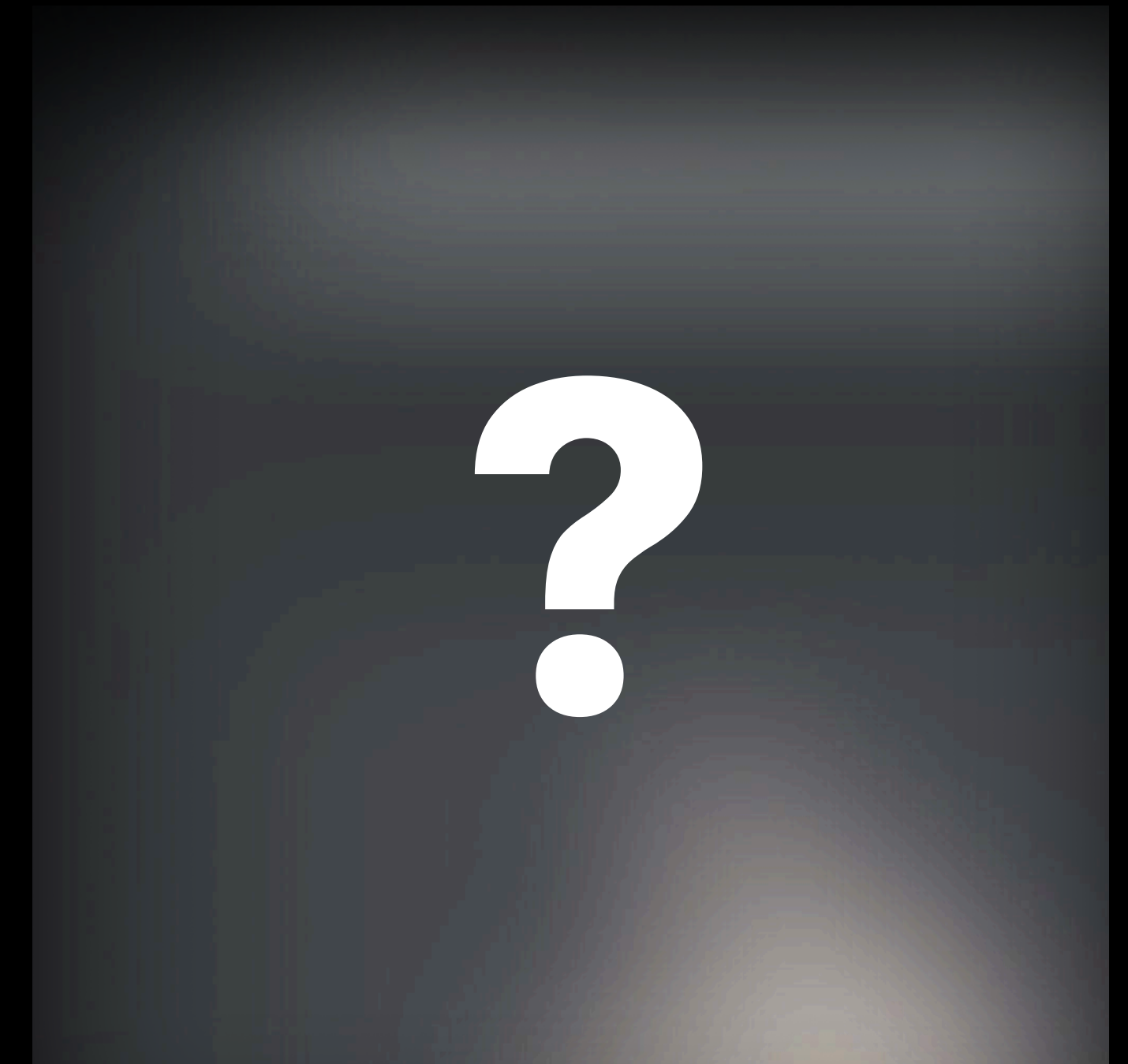
Put image into your AI tool of choice



Meshy.AI

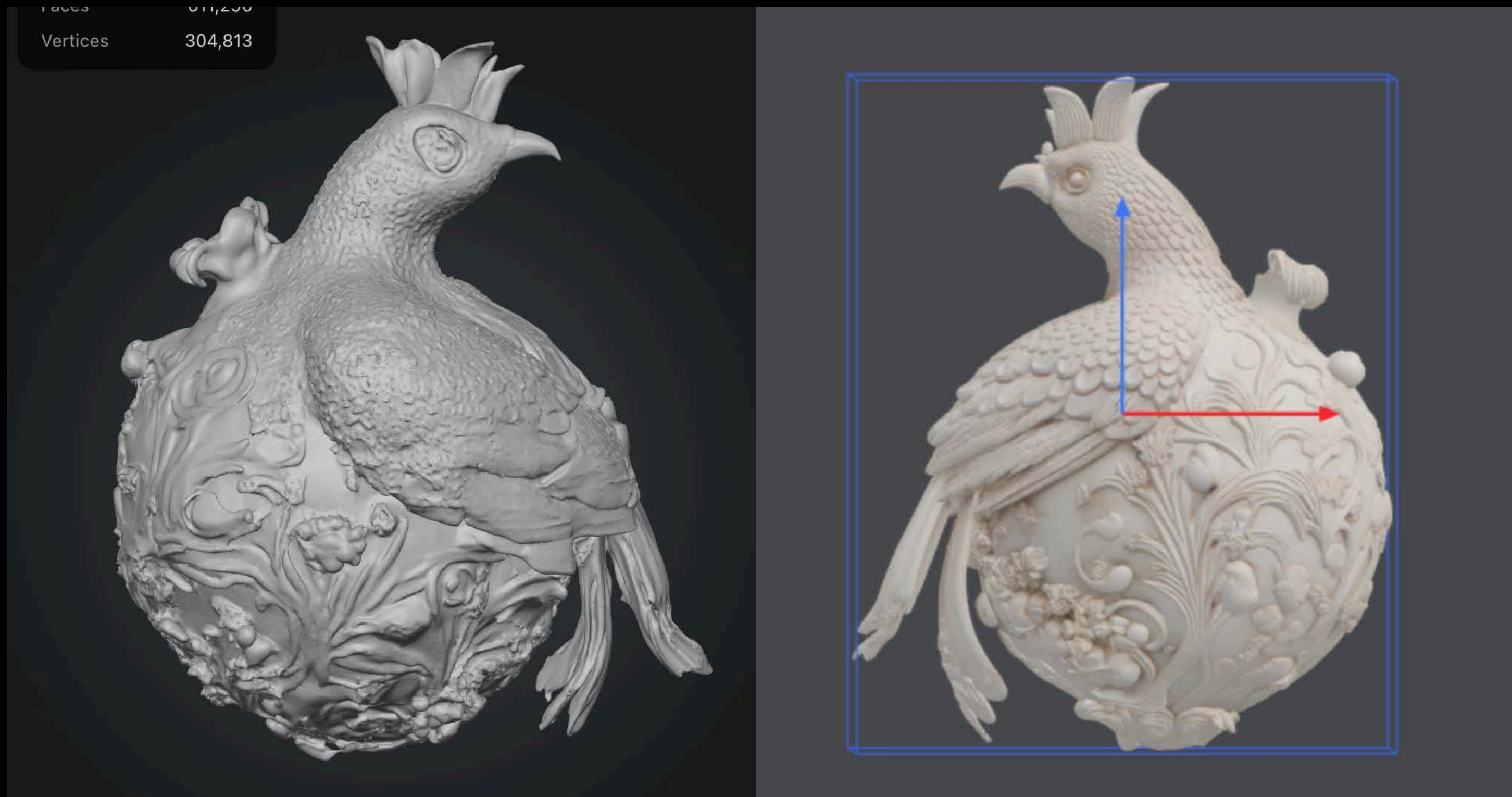


xTOOL



Something new!

Pick wisely!

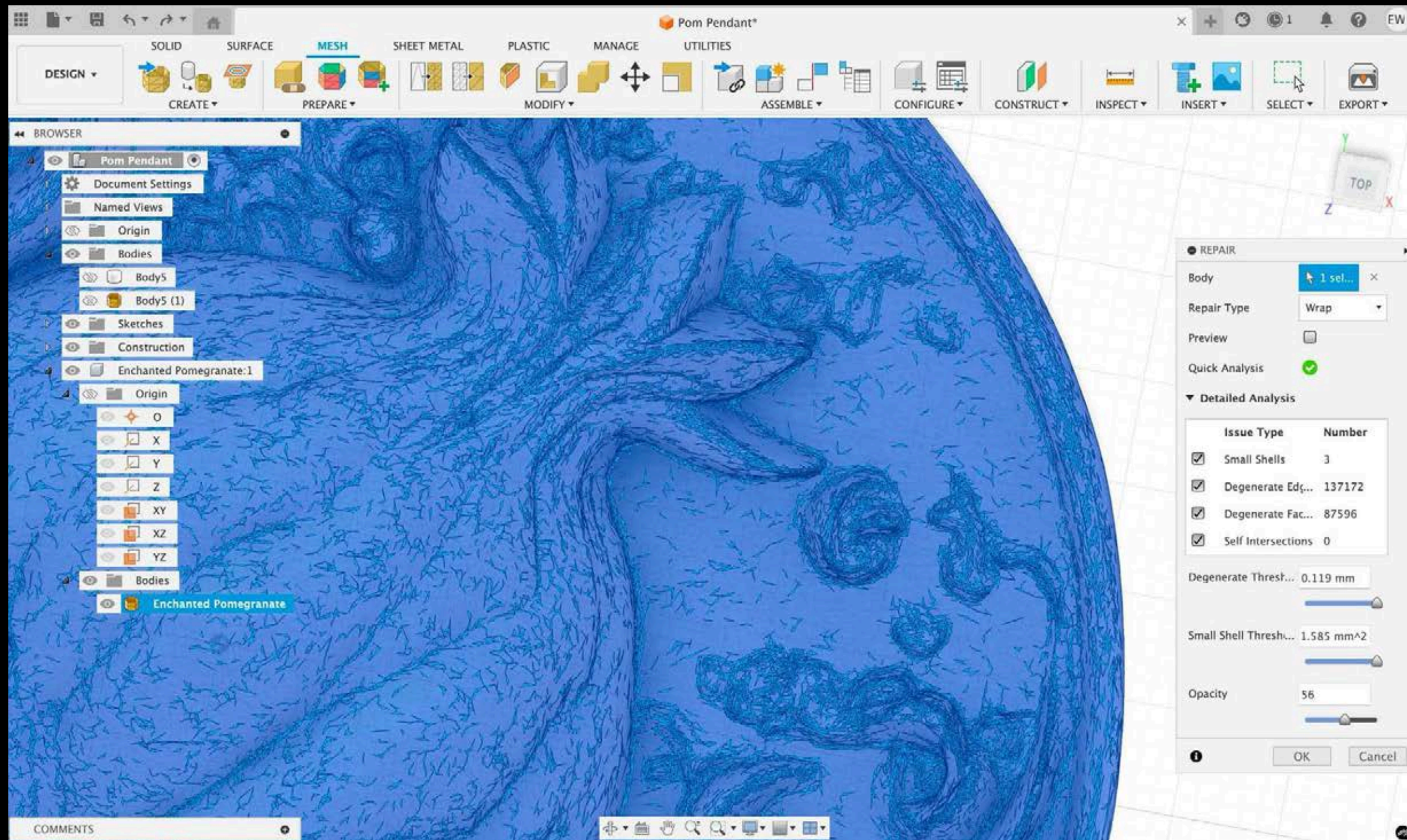


**xTool was miles ahead
of Meshy for this object....**

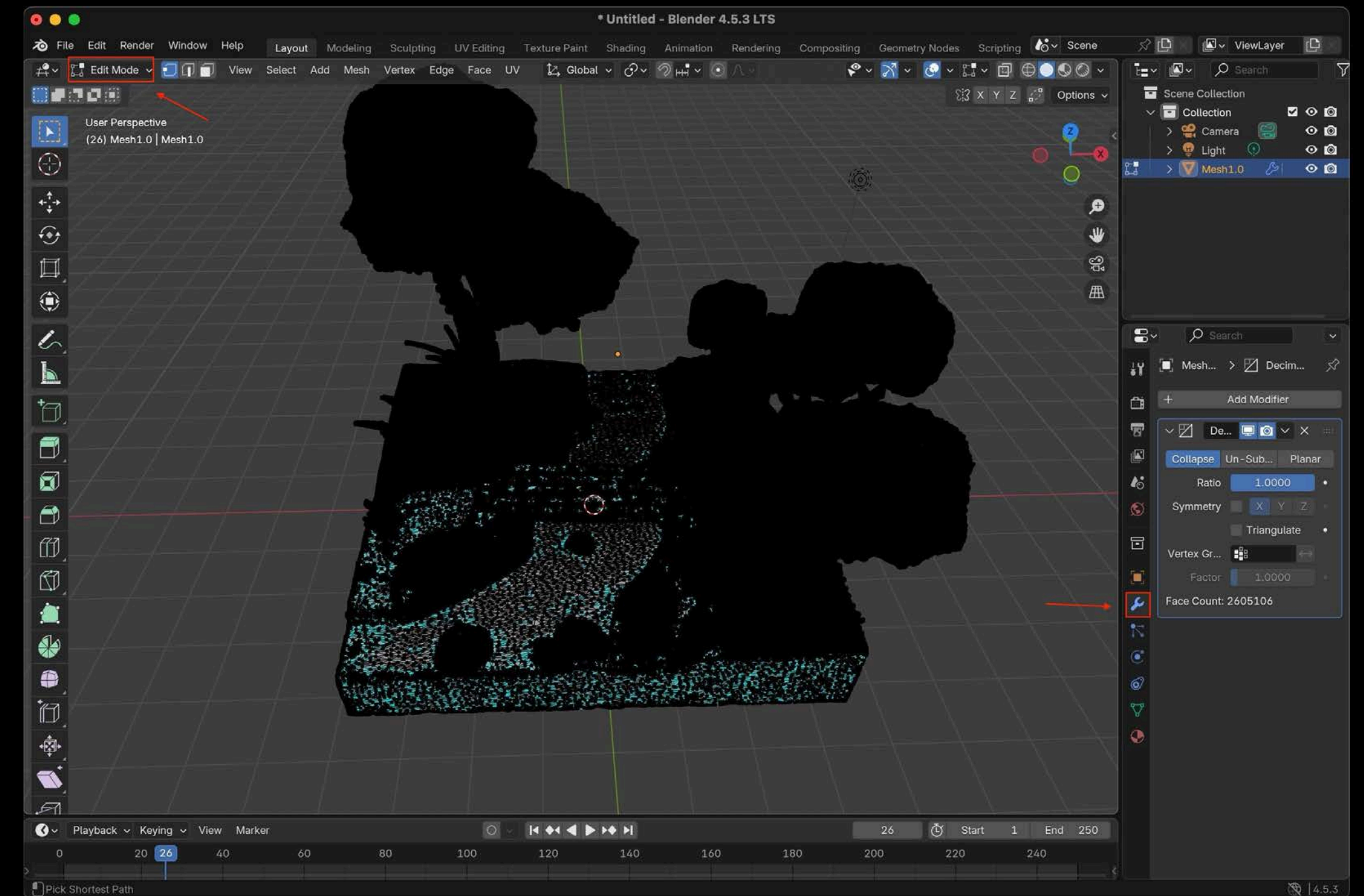


**...but xTool was
awful for people.**

Intermediary step: fix it!

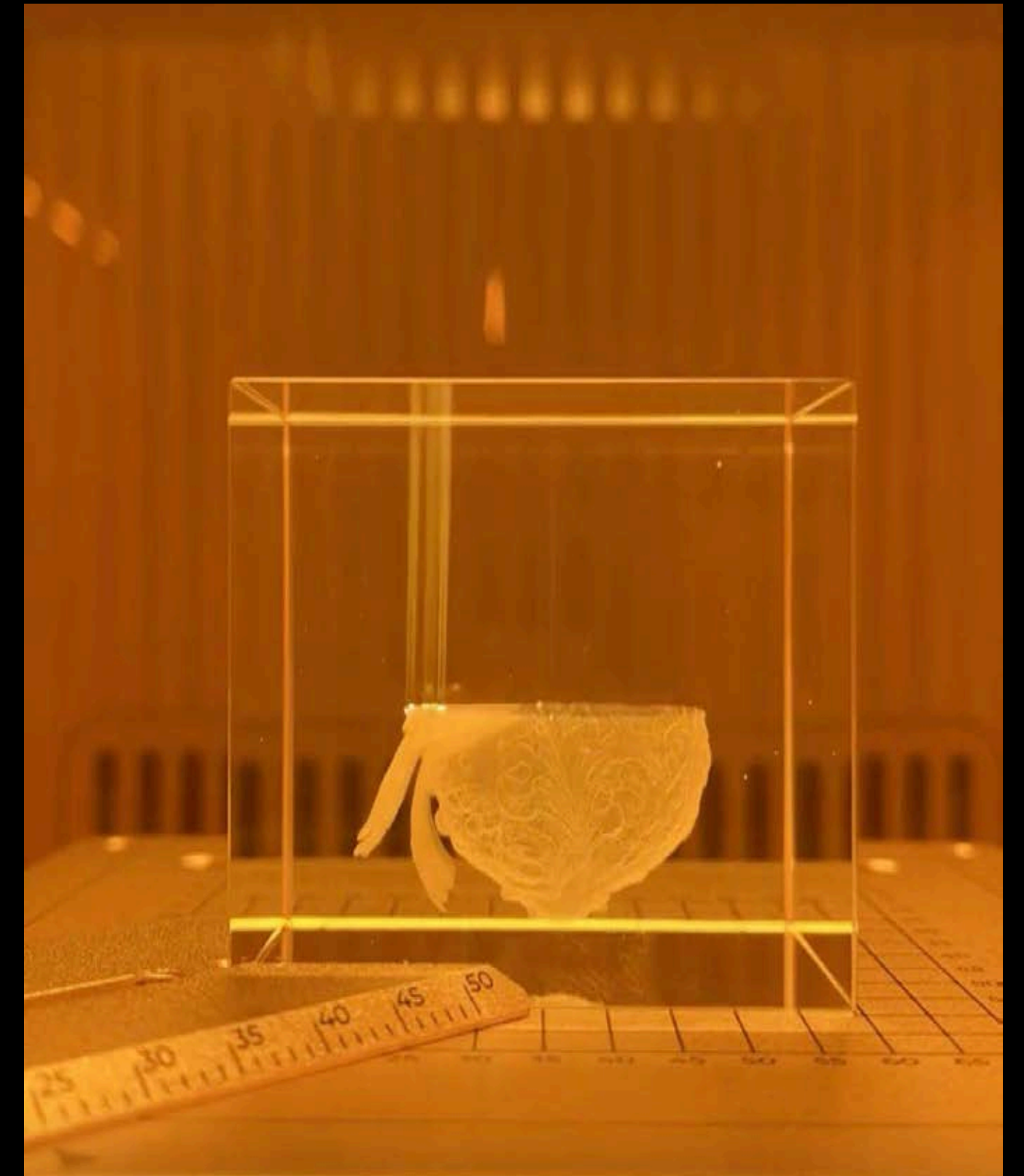


Repair / fix broken models



Decimate / reduce faces

Print / Cast / Engrave!

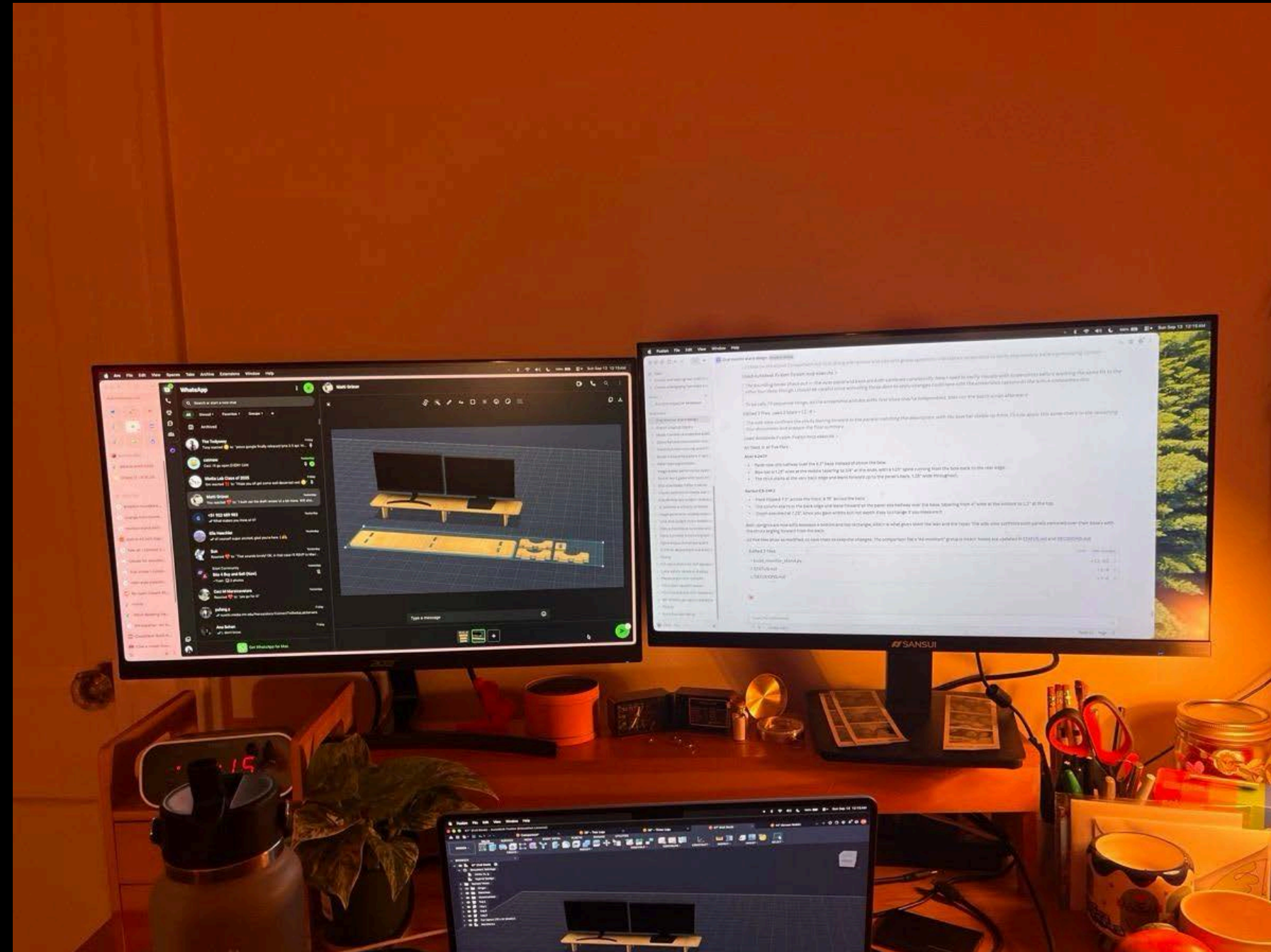


MCP to Fusion





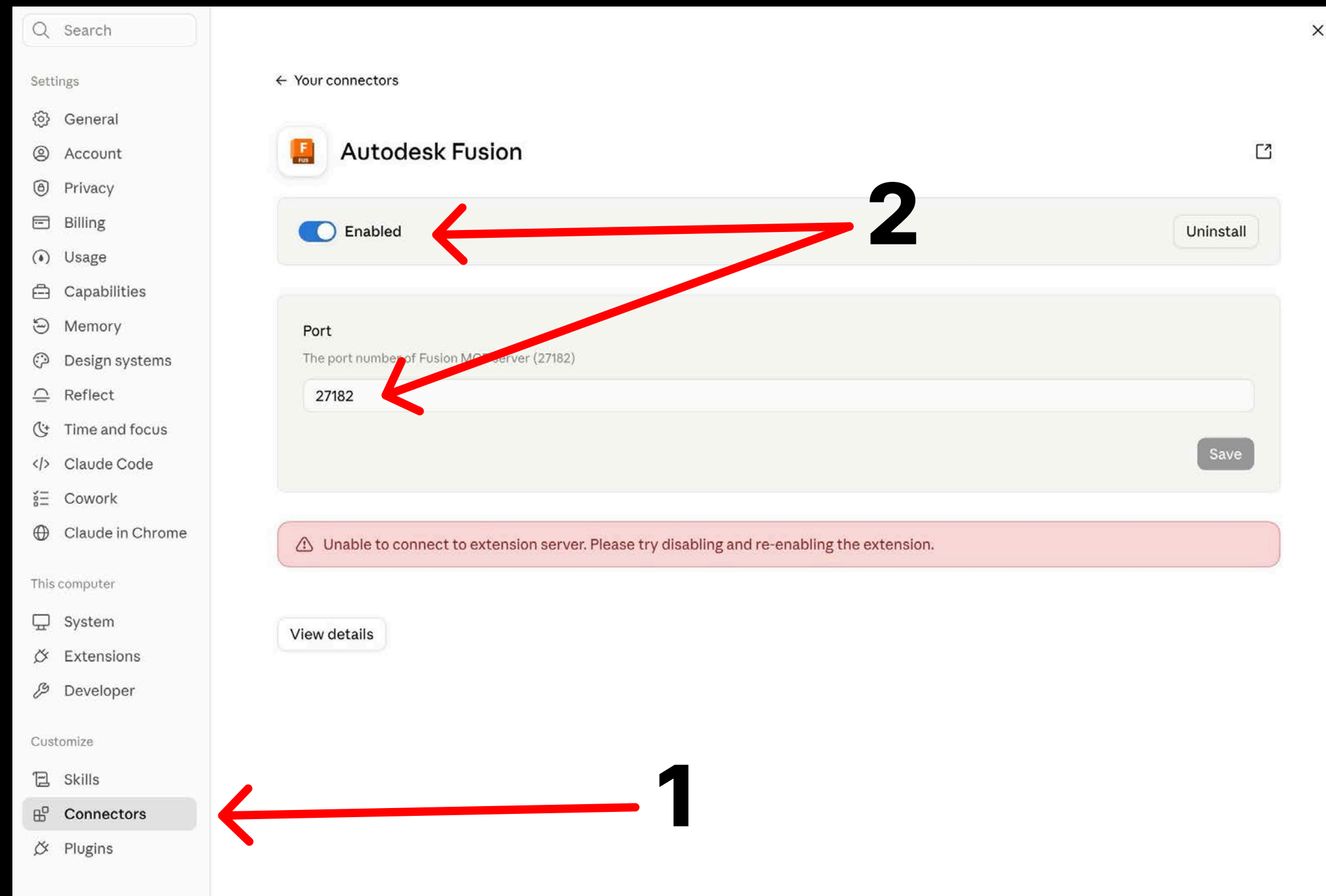
Find inspiration & craft your prompt



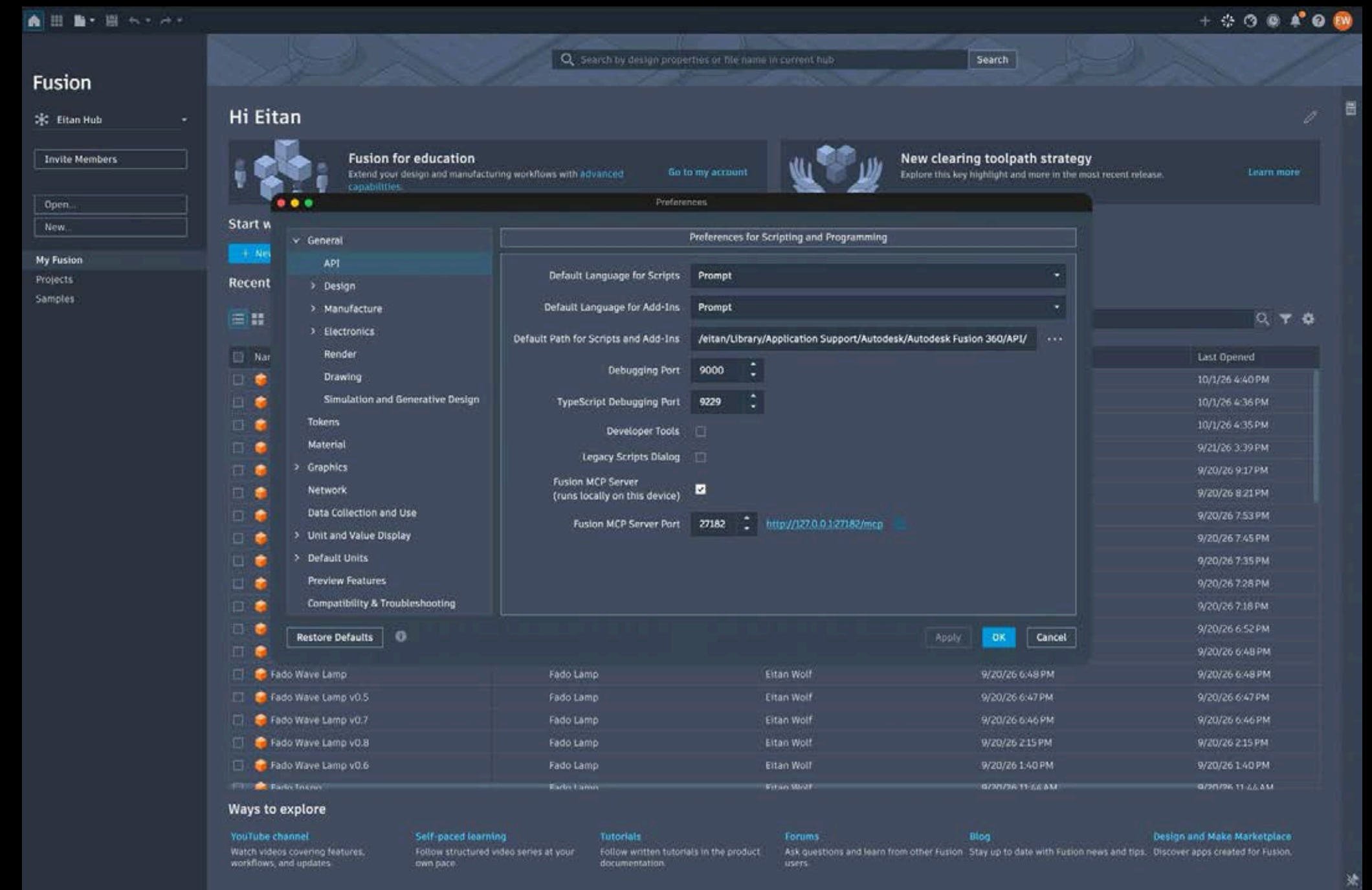
Make a folder of images, give specific dimensions, and include as much detail as possible

Think about your limitations, and build them into your idea

Intermediary step: connect AI to Fusion

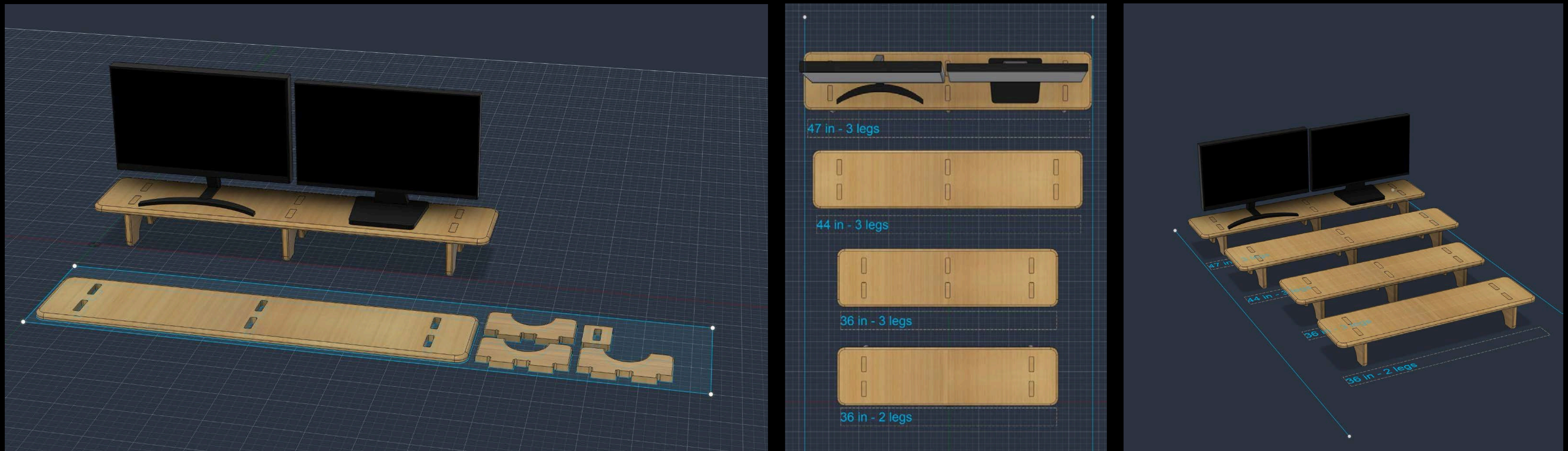


I use Claude, so I went to “connectors”, searched for Fusion, and enabled it – keep the Port # in mind



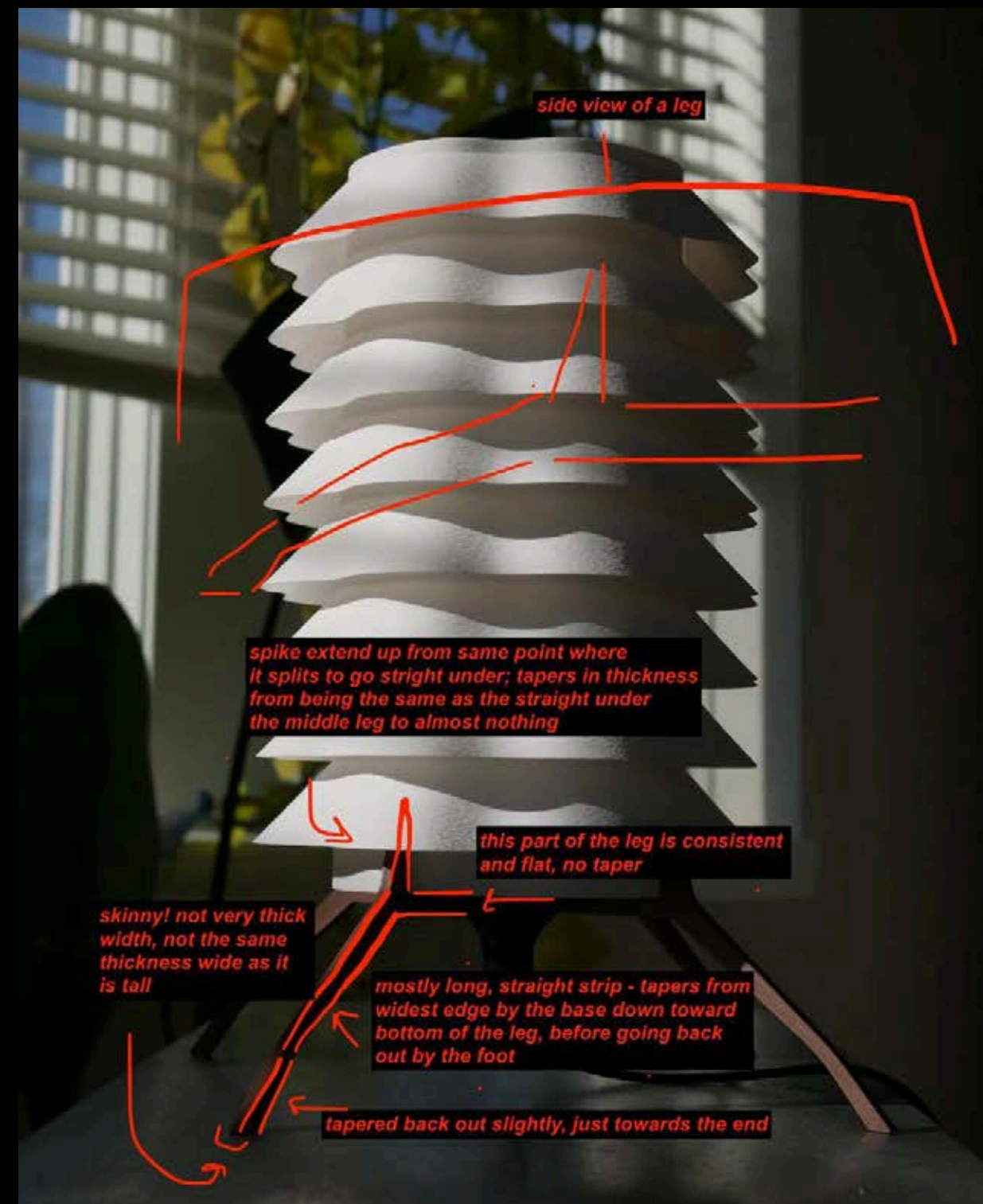
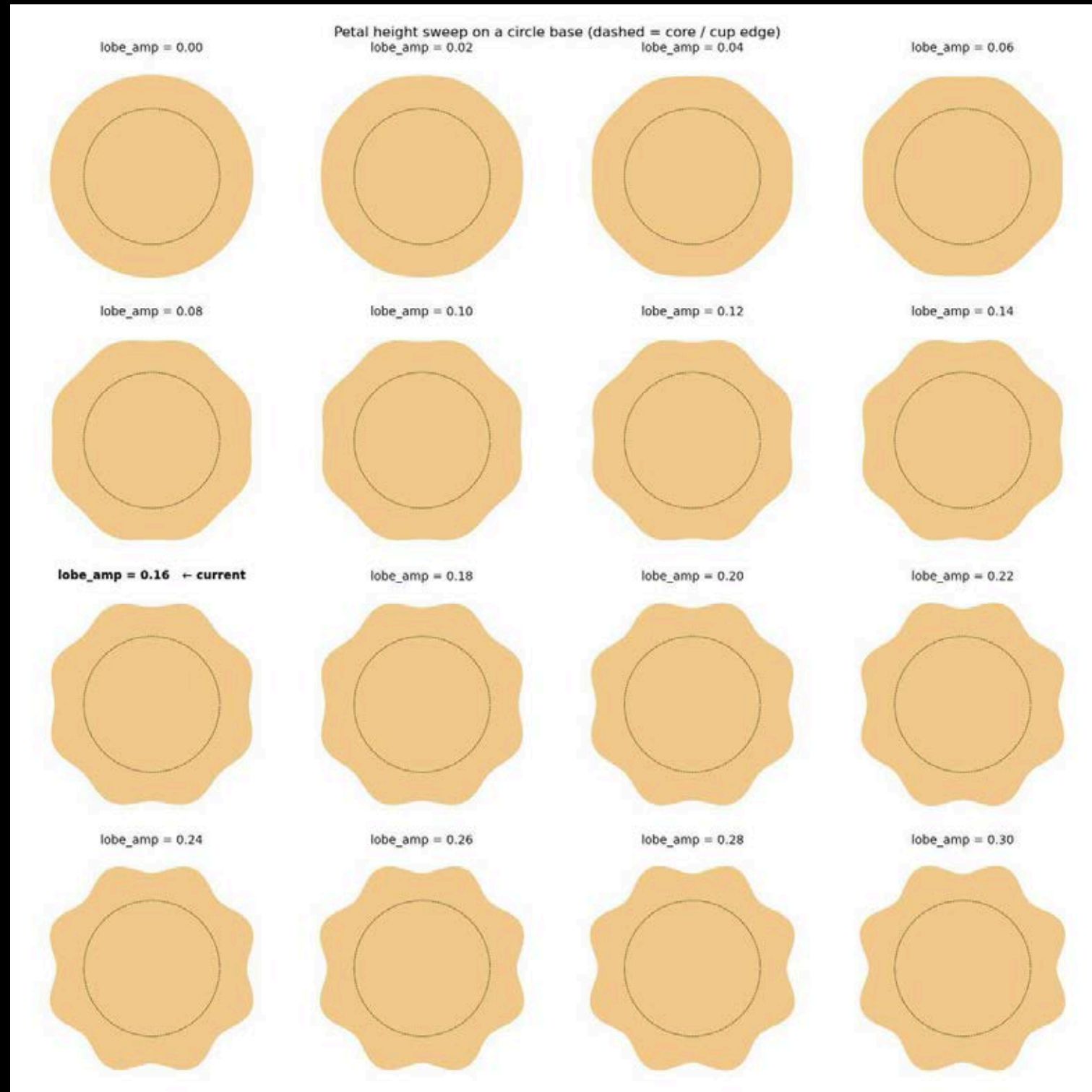
Then in Fusion, go to “Preferences”, “General”, “API” and enable “Fusion MCP Server”; make sure the # matches

Refine & develop



Once you're connected, work in spirals! Get something working first, use parameters, and then narrow in from there

Refine & develop

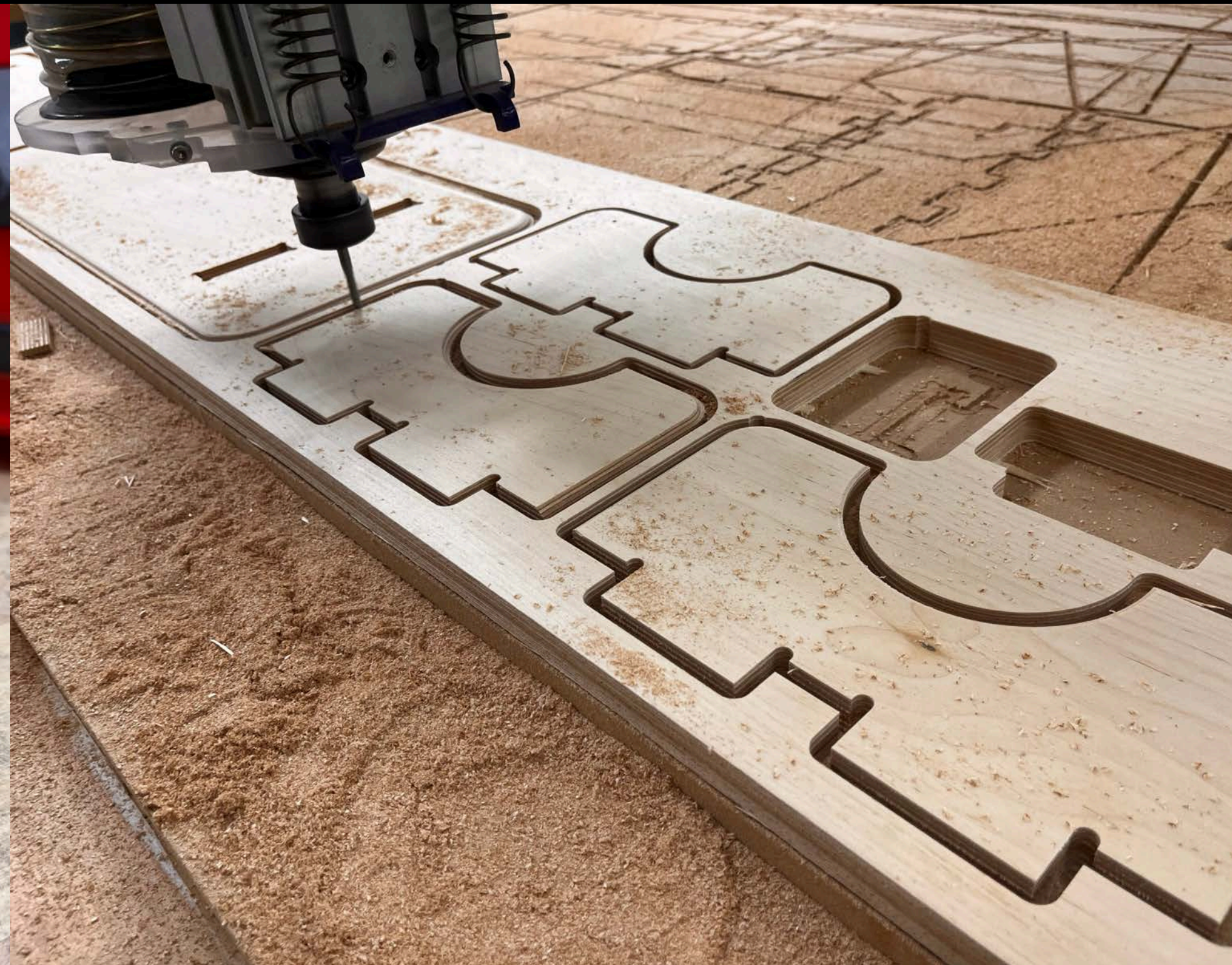


You can generate 2D shapes before taking time in 3D

Mark up pictures, and add notes!

Make comparisons in 3D to get a sense of "physical" space

Use it!



To review

01

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is better than
offloading them

02

Fabrication must still
follow physics and
physical expertise

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Thank you!

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