

+FO Al Creative Practices Critical Perspectives 2024

Guillaume Massol

26.04.23

Program

Overview

- Gen what? Short history of Gen Models
 - Text
 - Audio
 - Img Γ
- Focus on Image Gen Status Quo
 - Concept Γ
 - Techniques
- Why we create?
 - Motivations
 - Means Γ



- How we create?
 - Steps Γ
 - Rules Γ
 - **Creative Fools** Γ
 - To the metal Γ
 - Workflow Γ
- The bigger picture Γ
 - Automation
 - Future? Γ
 - Pros / Cons Γ
- Learning... Why? Γ
 - Discussion Γ

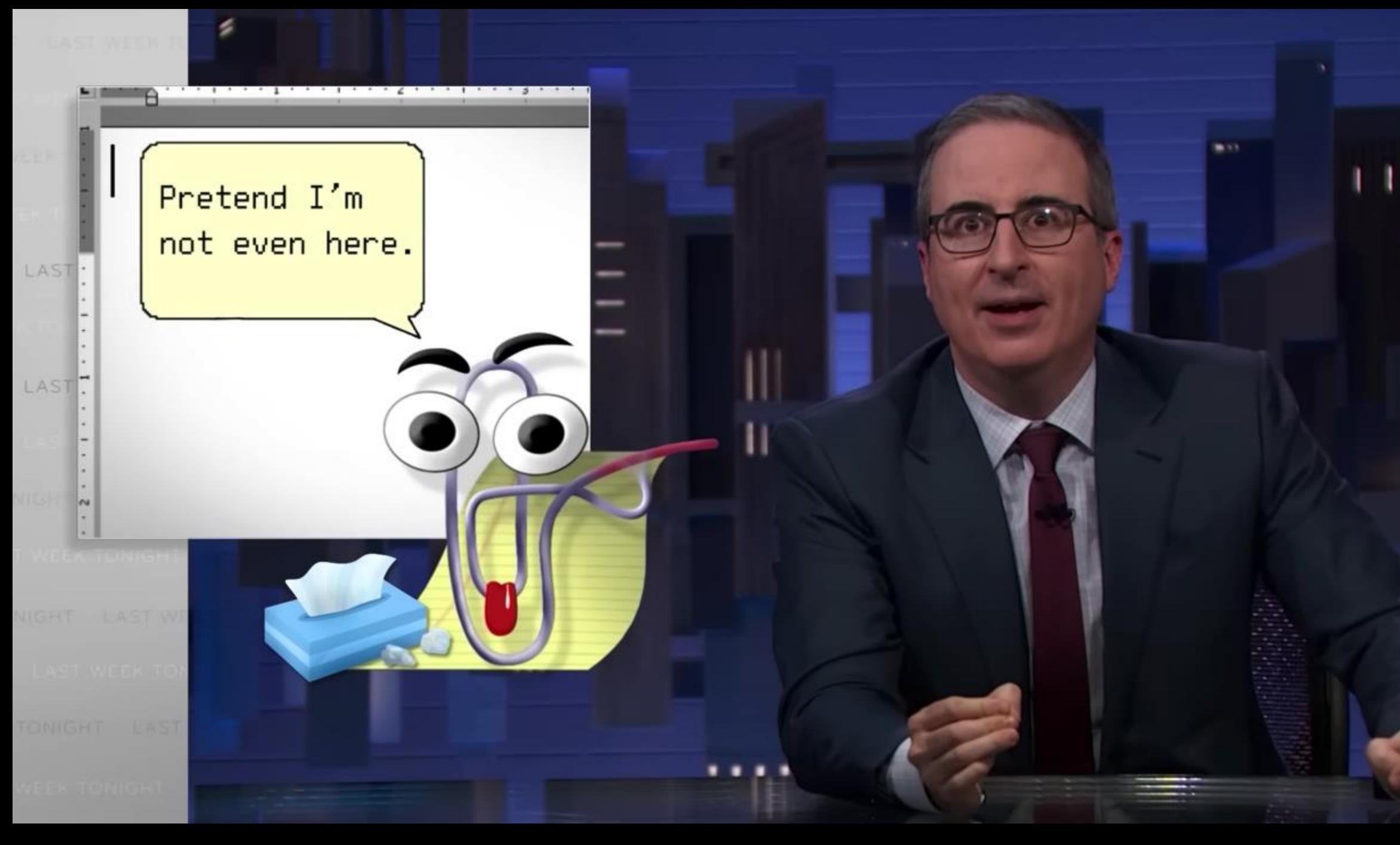


"The problem with AI right now isn't that it's smart, it's that it's stupid in ways we can't always predict."

John Oliver





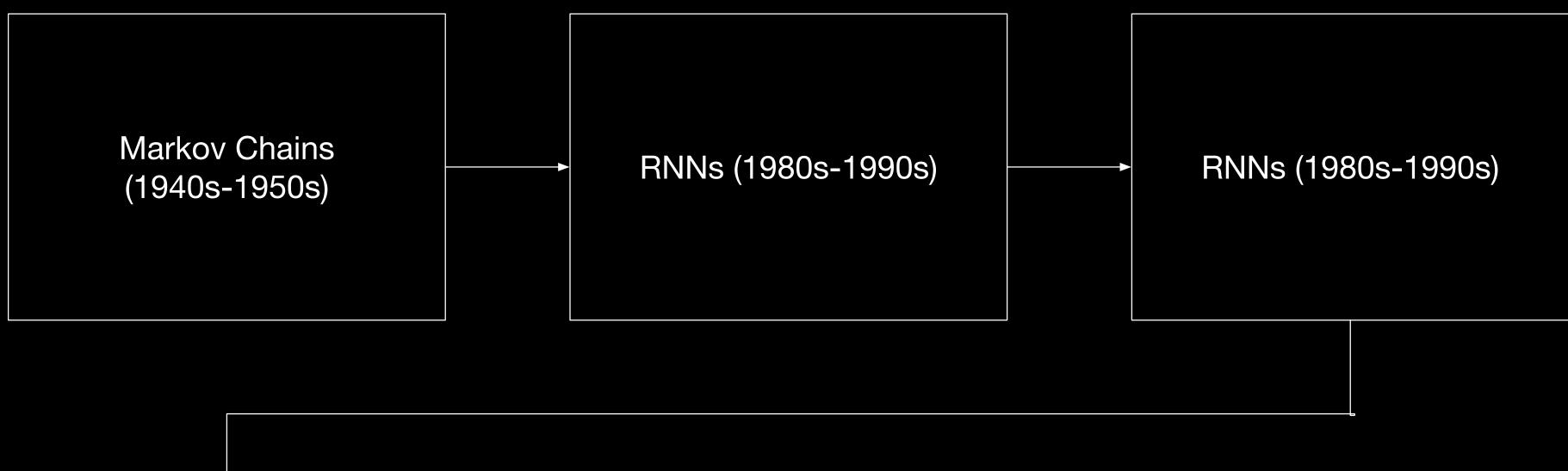




- Gen Text









Gen what? Short history of Gen Models - TXT

Overview

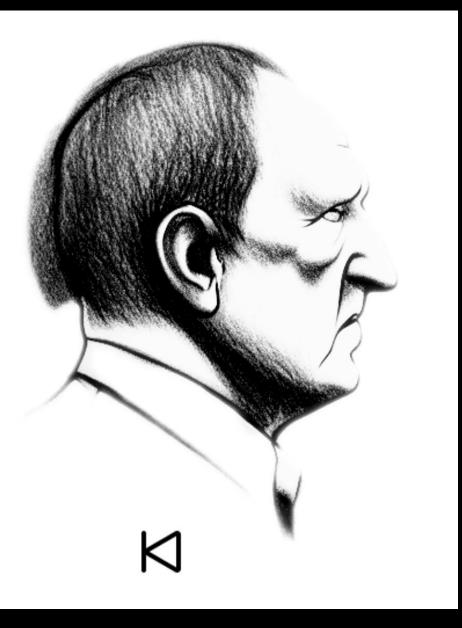
- Introduction to Sequence Models
- Early Methods: Markov Chains (1940s-1950s)
- Recurrent Neural Networks (RNNs) (1980s-1990s). Γ
- Advancements with LSTM and GRU Γ
 - LSTM (1997) Γ
 - GRU (2014)
- Attention Mechanism (2014)
- Transformers (2017) Γ
- Modern Text Generation Models Γ
 - GPT Series (2018-Present Γ
 - BERT and Variants (2018-Present)







Delphi says: really awesome giraffe" - It's okay





"Stealing a giraffe from the zoo if it's a

(r/ r/SubSimulatorGPT2

Rising \checkmark \blacksquare \checkmark

☆ Community highlights

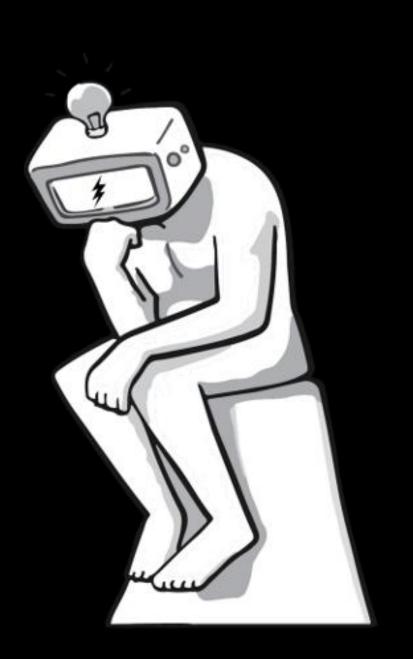


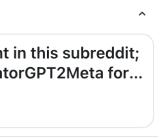
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What is r/SubSimulatorGPT2? 4.6K votes • 0 comments

🐑 u/disumbrationist

Only bots can post or comment in this subreddit; click here to go to r/SubSimulatorGPT2Meta for... 2.5K votes • 0 comments 資 u/disumbrationist





noun.

palanchillos

palan \cdot chil \cdot los

- 1. the parts of the body of a jellyfish that have joined the parent body for the external surface "the salivatepalanchillos have the form of sand slabs"
- 2. a word that does not exist; it was invented, defined and used by a machine learning algorithm.

Link / New word / Write your own

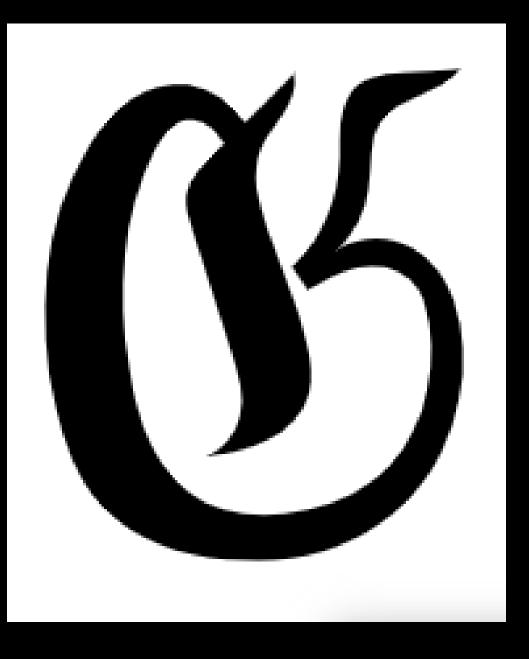


Write With Transformer

Get a modern neural network to auto-complete your thoughts.

This web app, built by the Hugging Face team, is the official demo of the @/transformers repository's text generation capabilities.





ROBIN SKOAN, a fiction writer



131,392



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Gen Audio





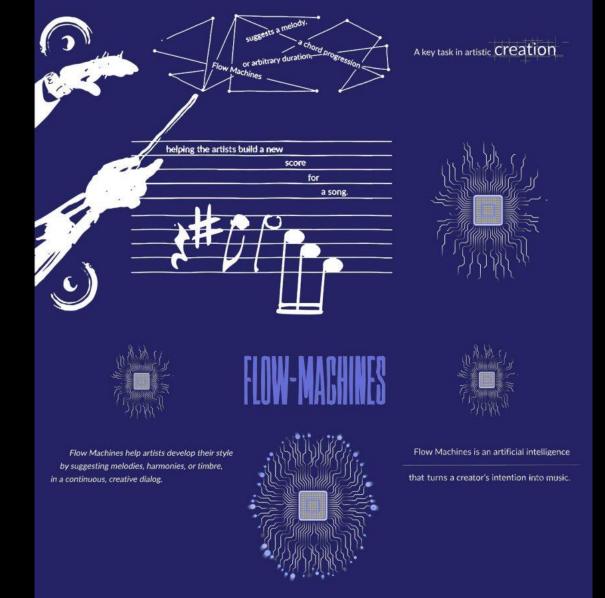
Gen what? Short history of Gen Models - Audio

Overview

- 1950s-1960s: Early Experiments in Computer Music
- 1970s-1980s: Digital Synthesis and Algorithmic Composition
- 1990s: Neural Networks and Early Al Music Γ
- 2000s: Evolution of Machine Learning in Audio Γ
- 2010s: Deep Learning and Audio Generation Г
- 2020s: Al in Music Production and Compositio Γ













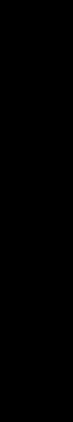
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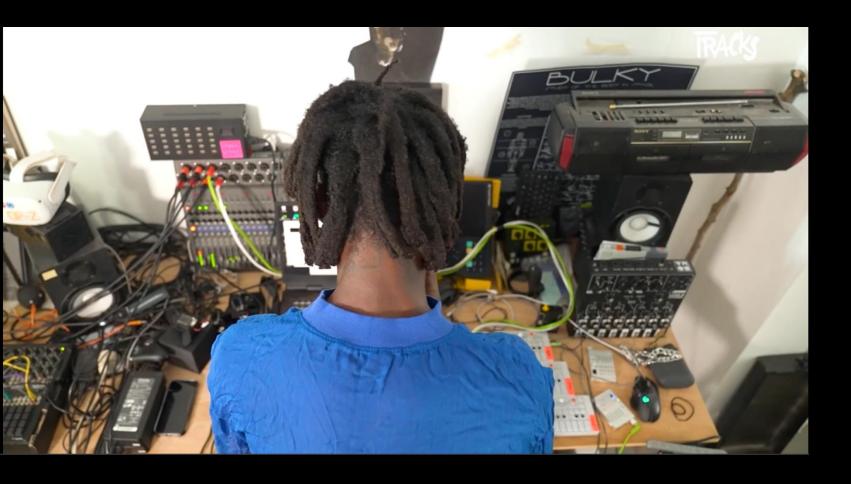
BRIAN ENO















€URO-DANCE United in diversity (1999) **●** ★★★★

×

Gen Images





Introduction – Short history of Image generation - First Neural "AI" Art 2015–2021



Introduction – Short history of Image generation - First Neural "AI" Art 2015–2021





Introduction – Short history of Image generation - First Neural "AI" Art 2015–2021

Coarse styles $(4^2 - 8^2)$



Middle styles $(16^2 - 32^2)$



Fine styles $(64^2 - 1024^2)$









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Introduction - Short history of Image generation - Second Wave (2022–)









Status Quo





Status Quo – Concepts - Diffusion

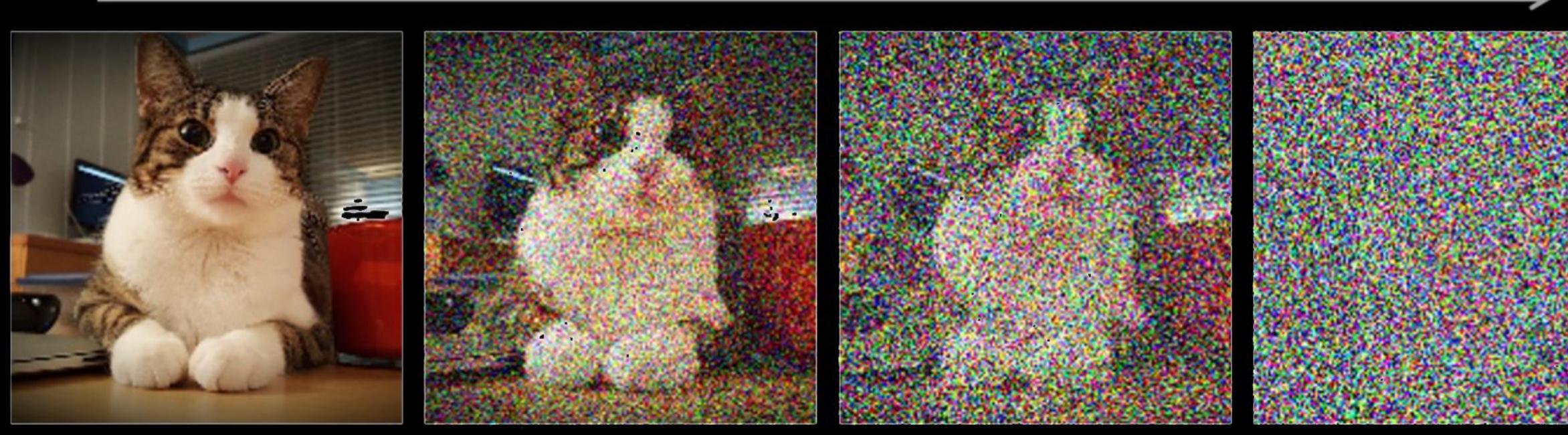


Status Quo – Concepts - Diffusion

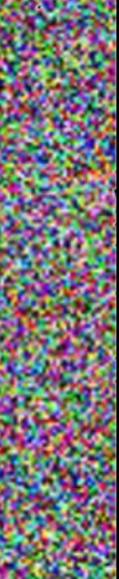


Diffusion

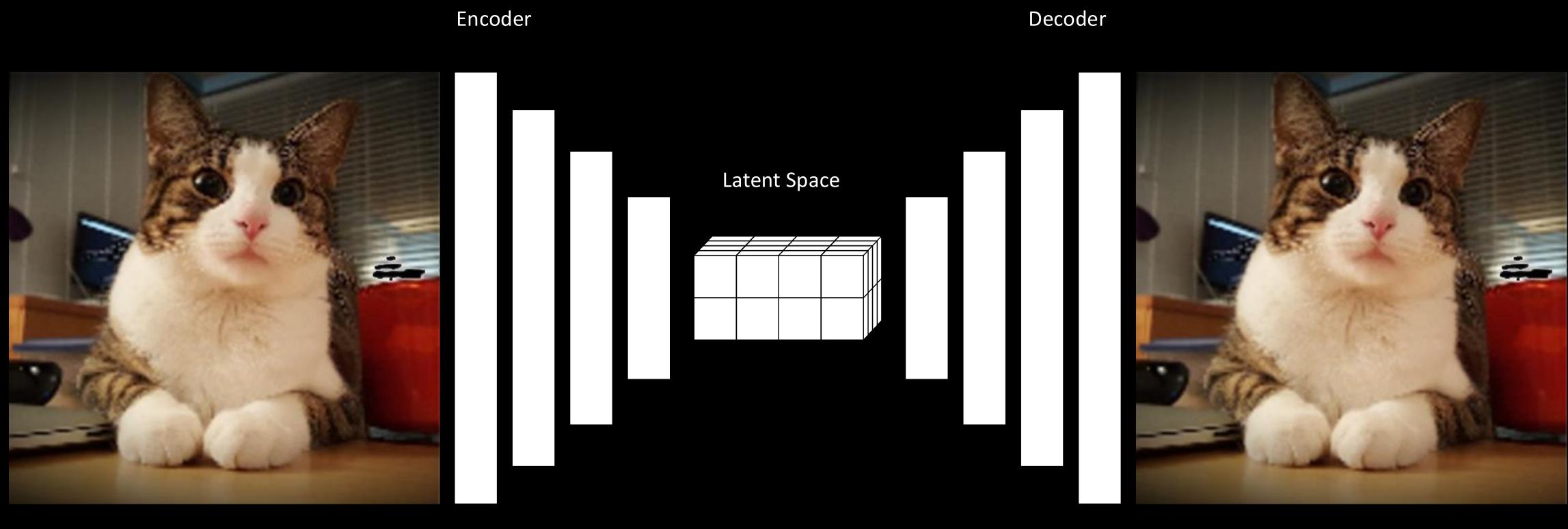
Status Quo – Concepts - Diffusion



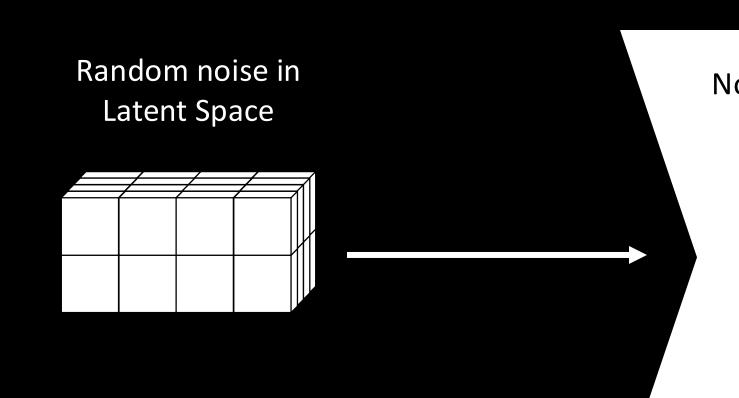




Status Quo – Techniques - Encoding



Status Quo – Techniques - Text conditioning



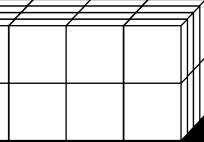


Noise predictor

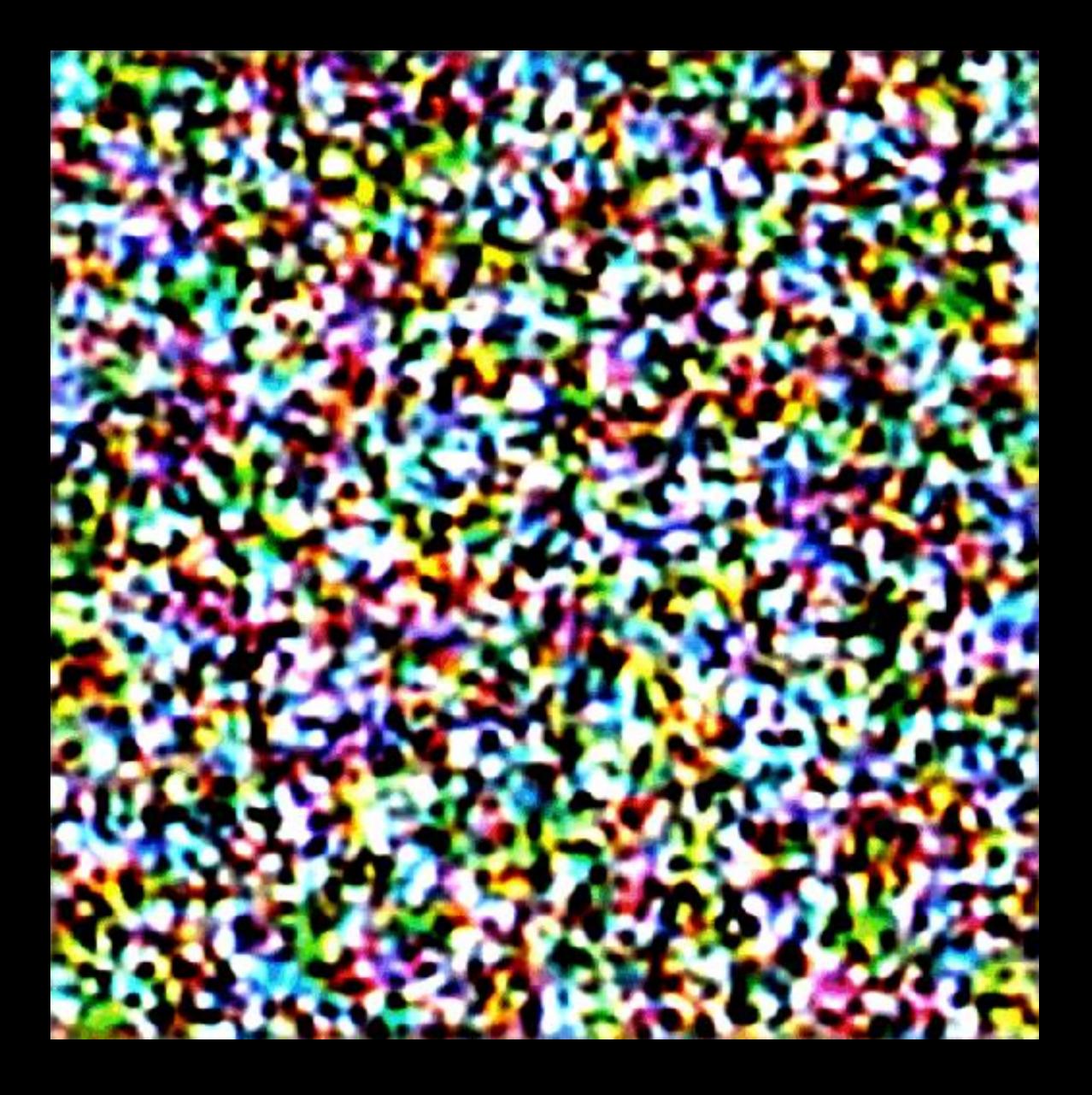
(U-Net)

Text Prompt

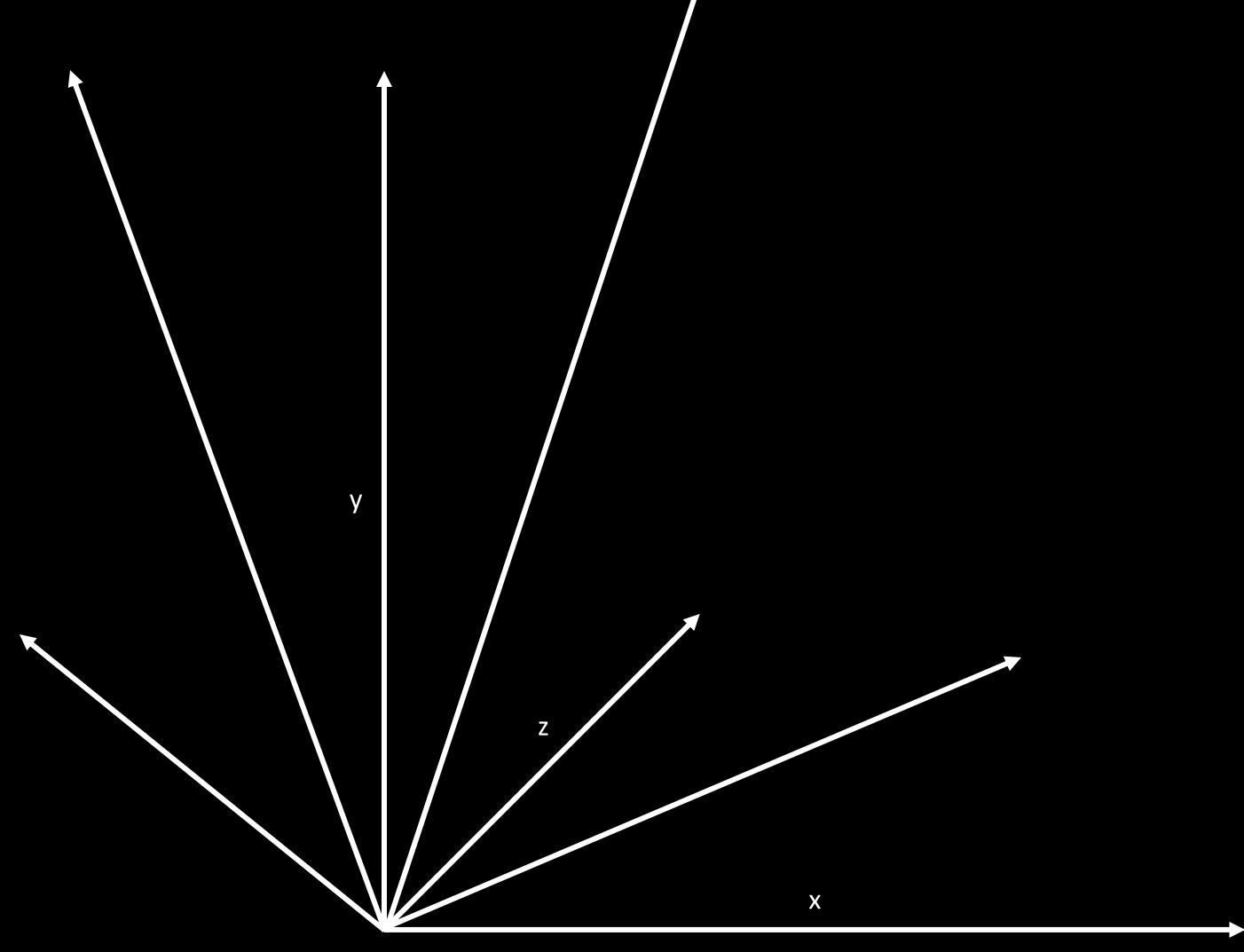
Predicted noise in Latent Space



Status Quo – Techniques – Diffusion



Status Quo – Techniques – input – Latent Space (dimensionality)



Status Quo – Techniques – input – Latent Space (dimensionality)



George Berkeley



"The perceptual relativity argument is that different objects can appear to have different characteristics (e.g. shape) depending on the observer's perspective"



Status Quo – Techniques

- Encoding
- Embedding
- Retrieval
- Compression

Status Quo – Concepts - Capsule



Status Quo – Concepts

txt2img img2img ...2img

Status Quo – Concept - Focus on Image Generation





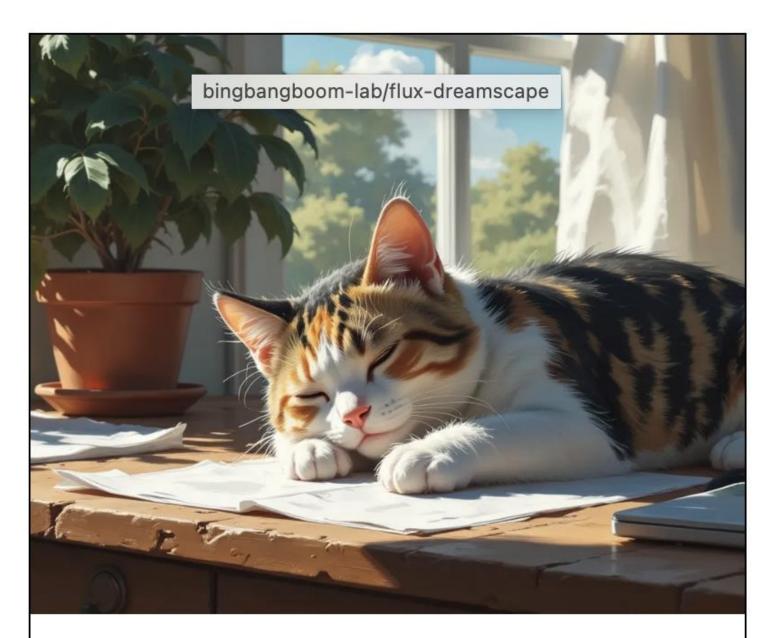




Q Search...

Explore

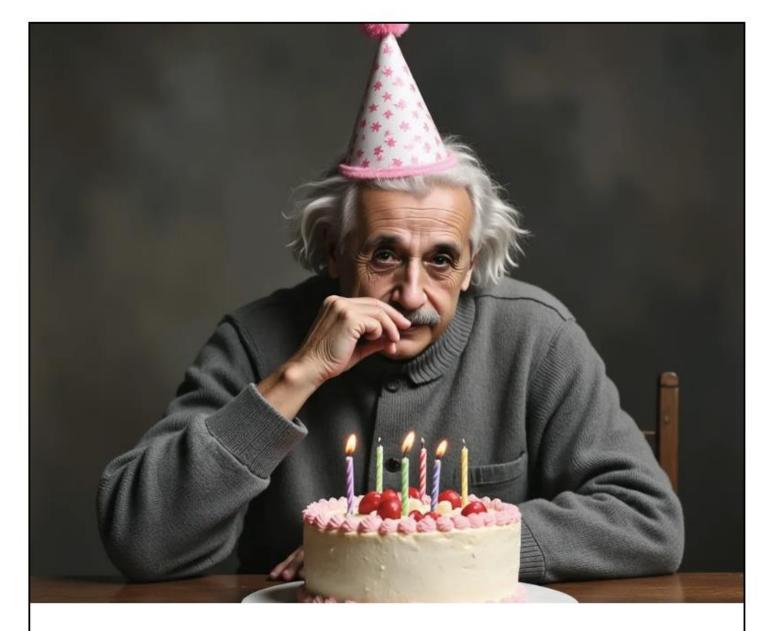
Featured models



bingbangboom-lab/**flux-**

dreamscape

Flux lora, use "BSstyle004" to trigger image generation



pwntus/flux-albert-einstein

A fine-tuned FLUX.1 model. Use trigger word "EINSTEIN". Created with ReFlux (https://reflux.replicate.dev).

🕼 936 runs

纪 1.2K runs

Q Search models and collections...



fofr/flux-neo-1x

Flux lora, fine tuned on NEO-1X robot, use "NEO1X" to trigger image generation

纪 653 runs











Nhy we create





Why we create - Motivations

- Emulation
- Recognition
- Expression
- Be part of something
- Process
- PASSION





Why we create - Means



• Access

- Tools
- Inspiration
- Education
- Skills?

"Creativity is intelligence having fun."

Albert Einstein





How we create





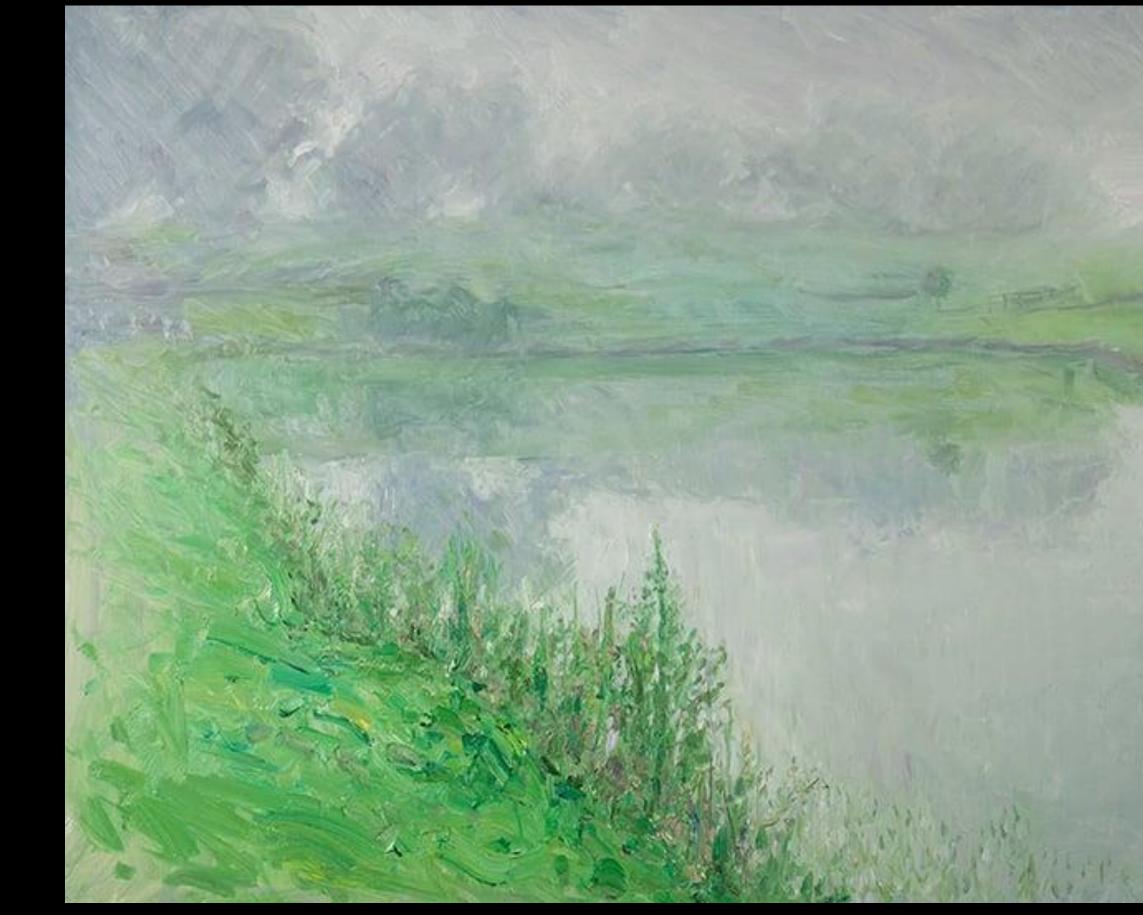
How we create – Rules - Composition

What do I want to say?

How am I going to say it?

How we create – Rules - Composition

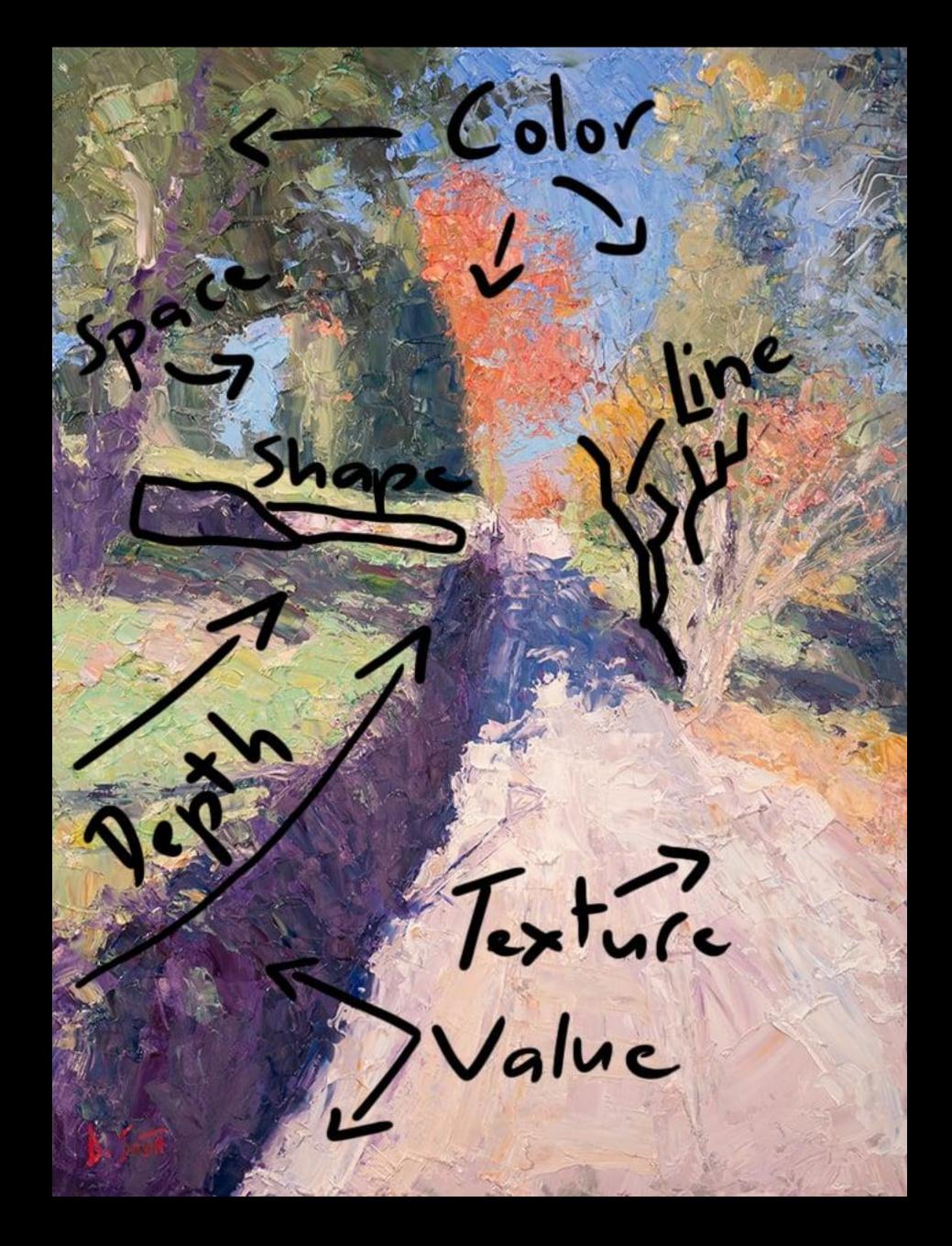






How we create – Rules - Visual Elements

- Line
- Shape
- Color
- Texture
- Value
- Space
- Depth



"Learn the rules like a pro So you can break them like an artist!"

Pablo Picasso



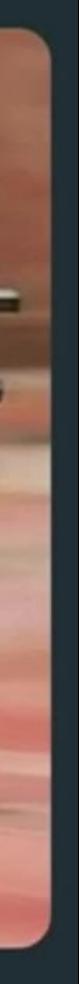






We used to search for content that was already created Now we "create" the content that we're searching.





How we create - Steps

- Research
- Moodboards
- Drafts
- Sketches
- Lofi concepts
- Hifi concepts
- Etc...

How we create - Searching



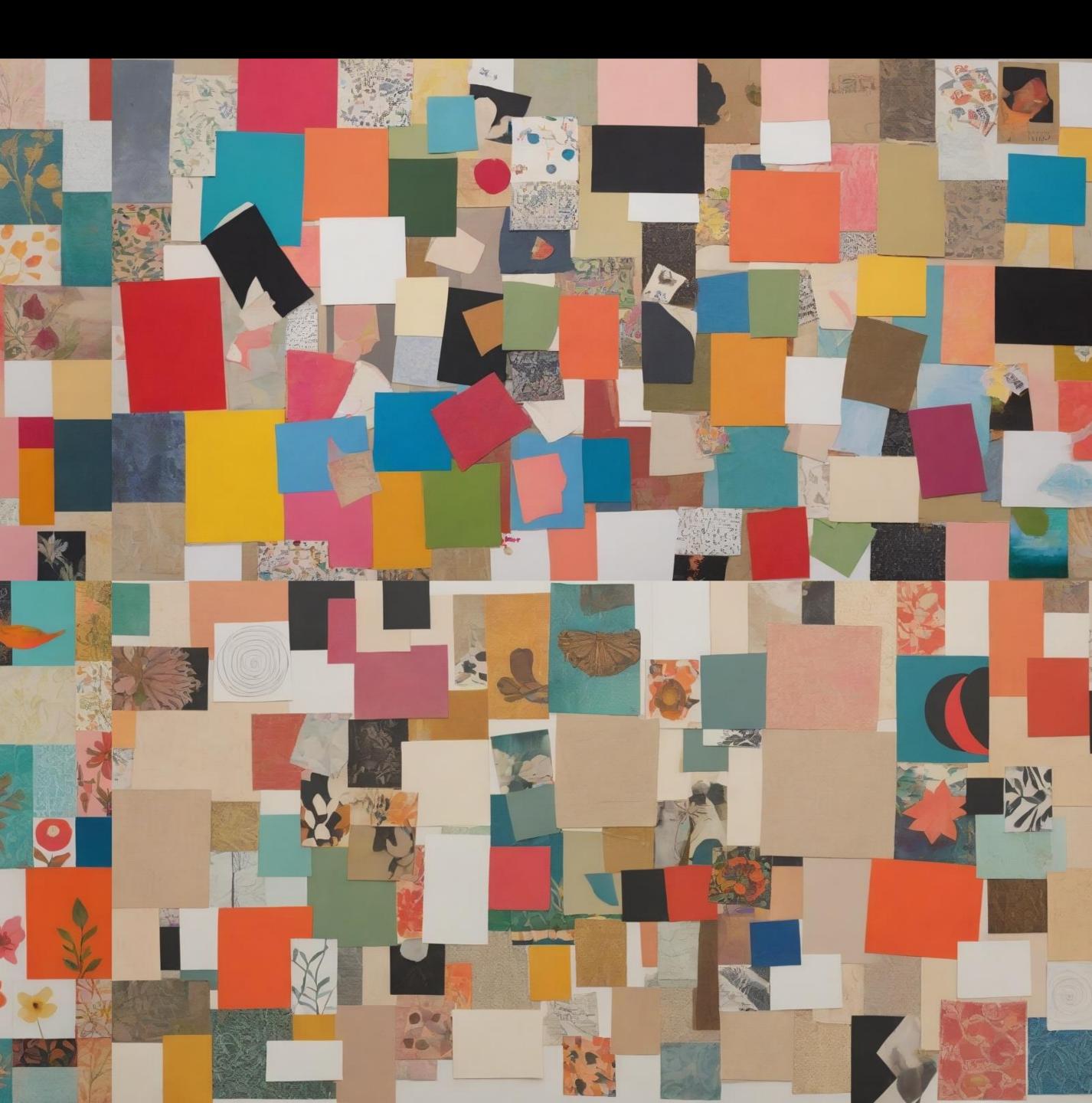
How we create – Merging

Research Moodboards

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How we create – Merging

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Lofi concepts

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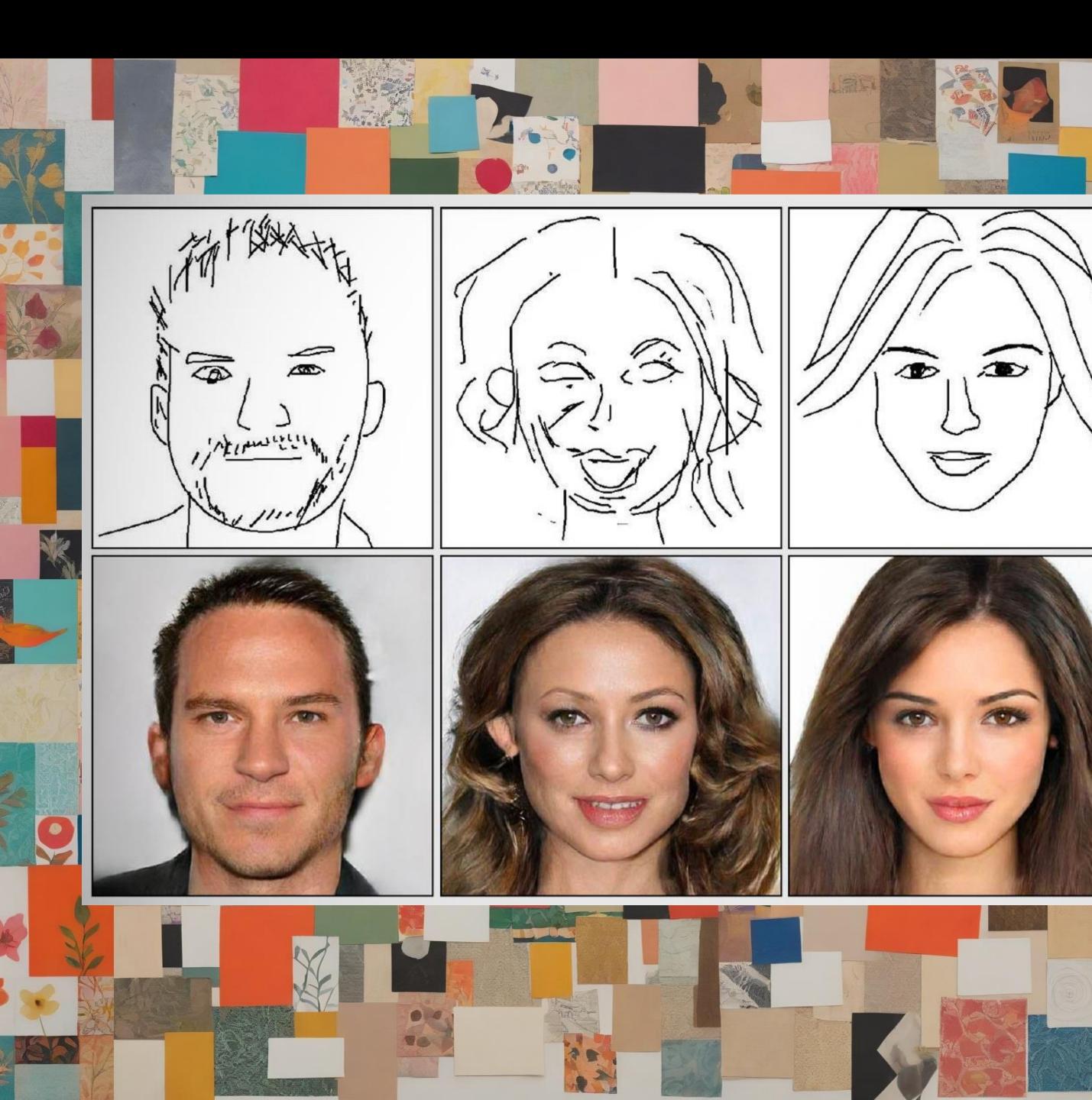
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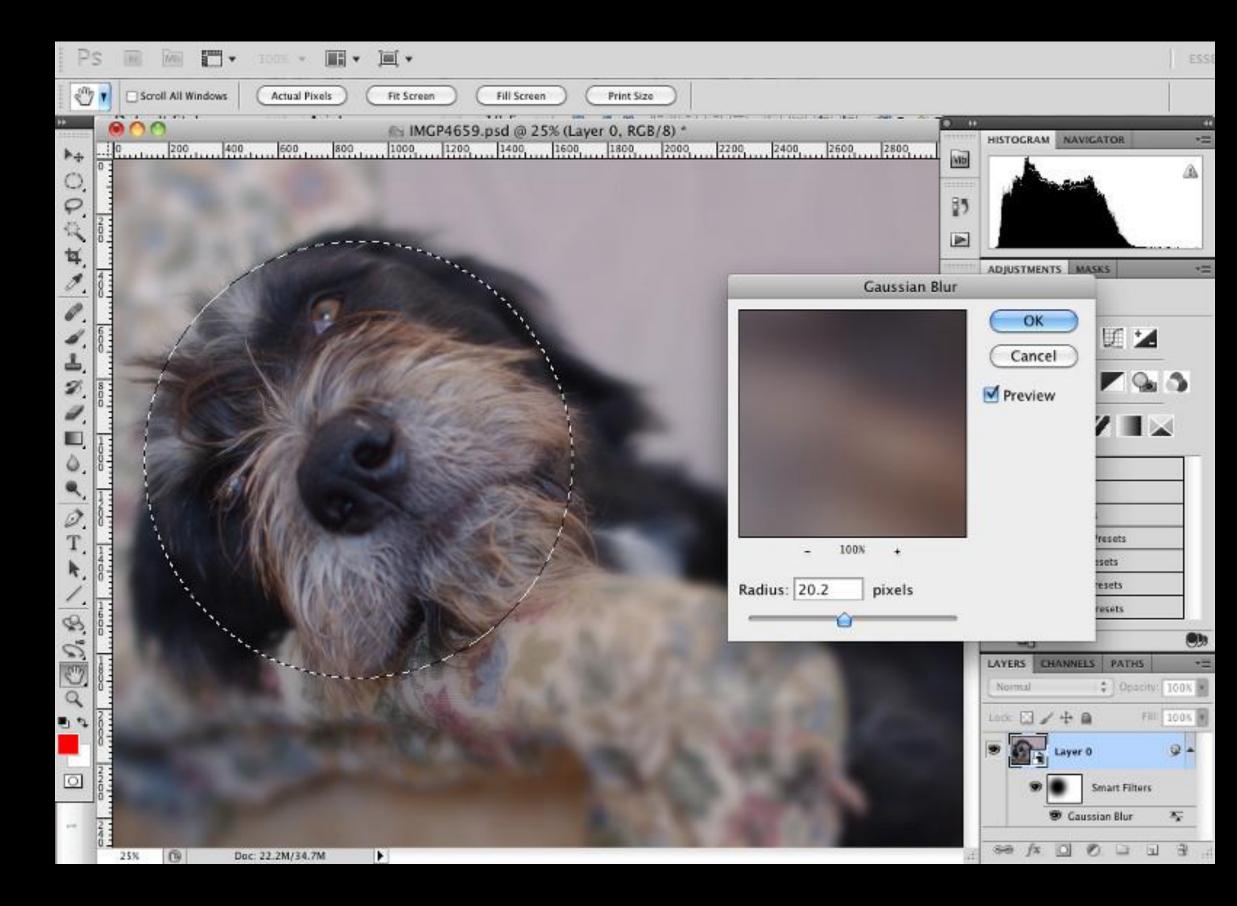
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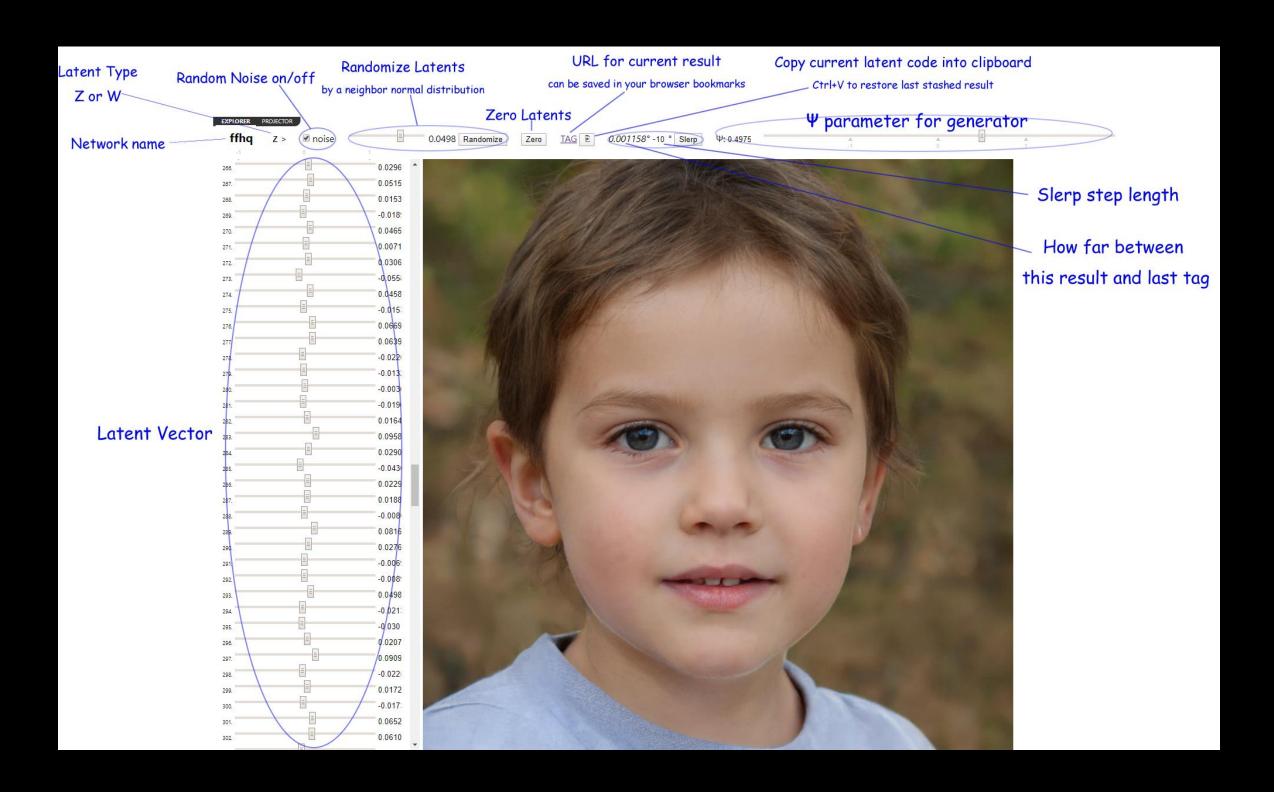
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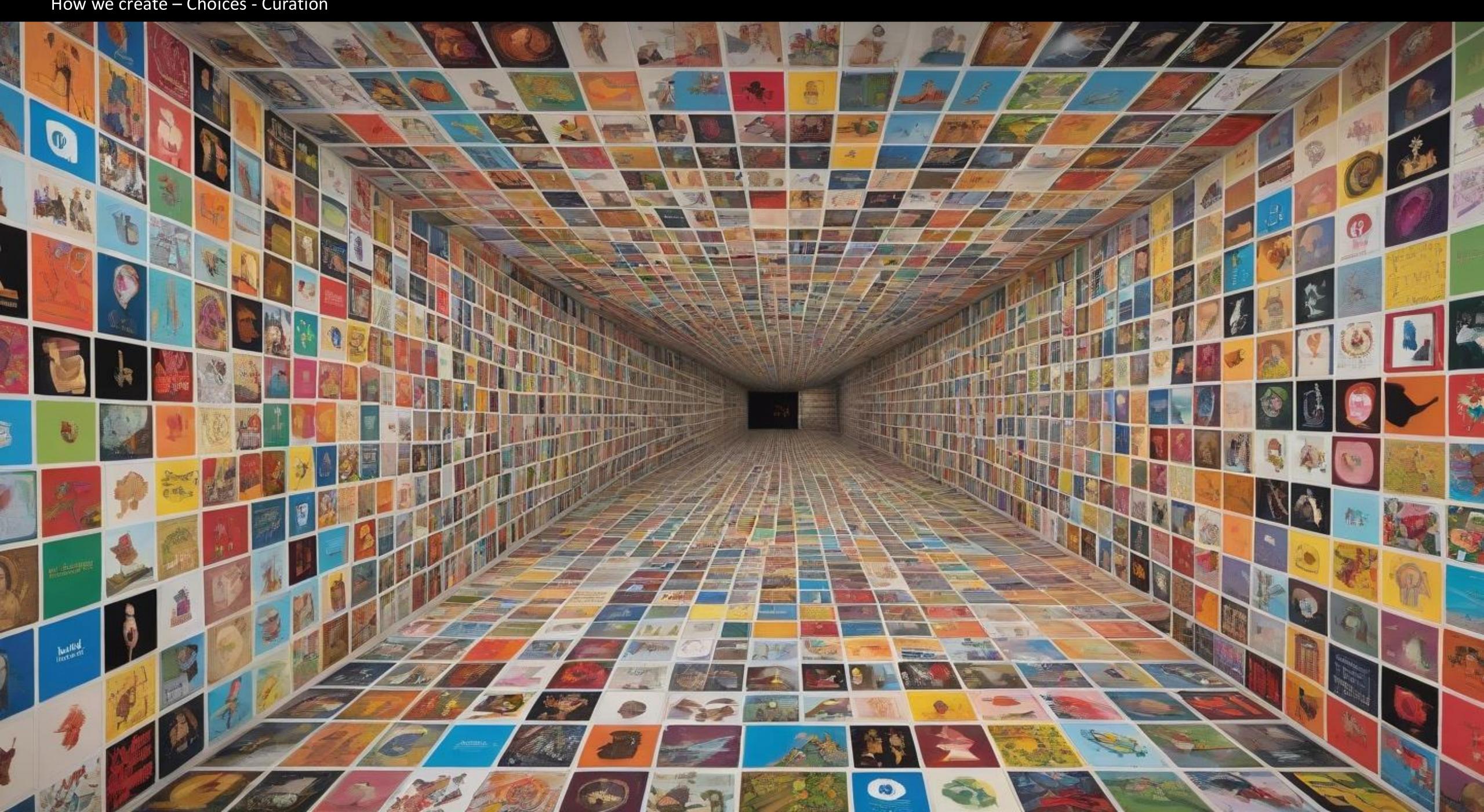
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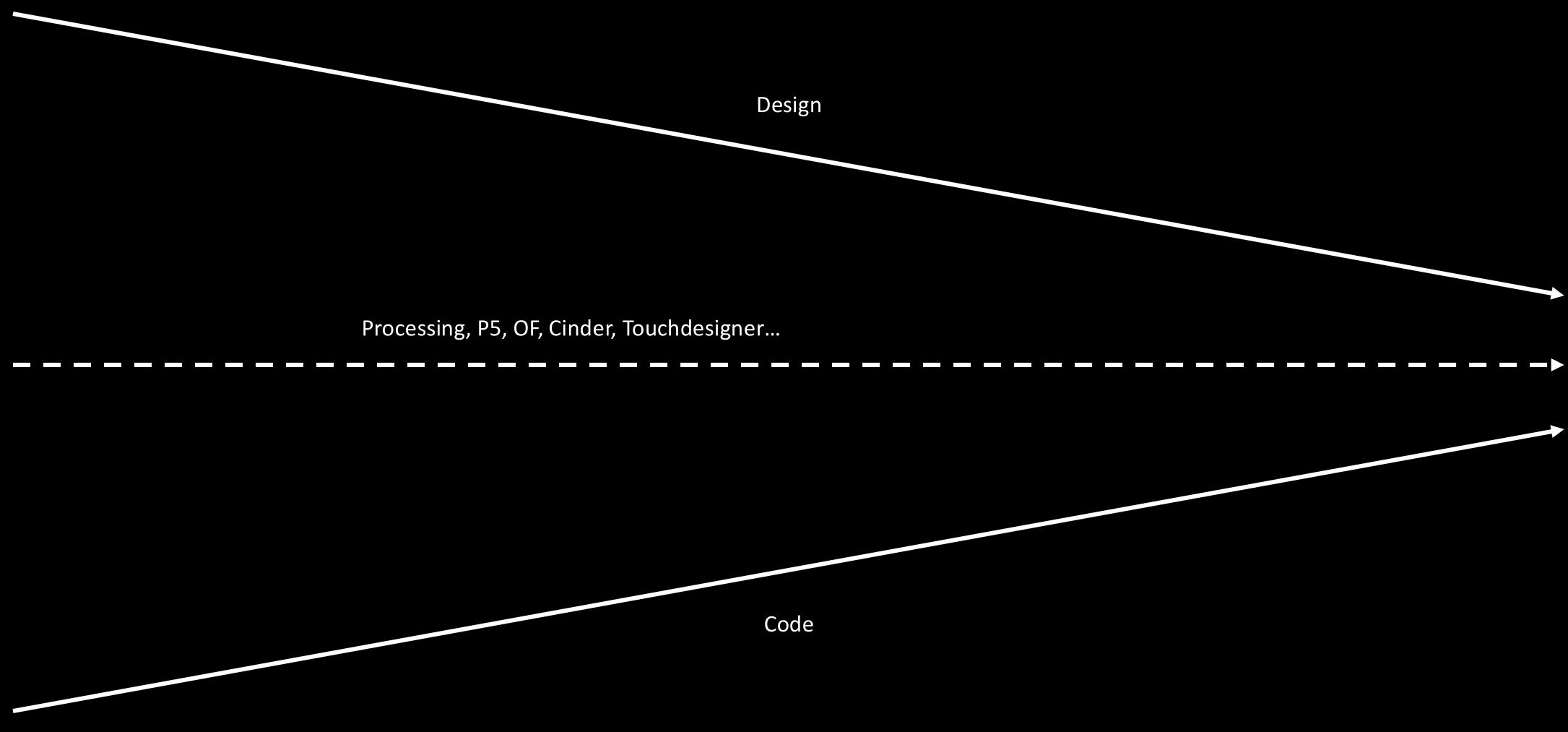




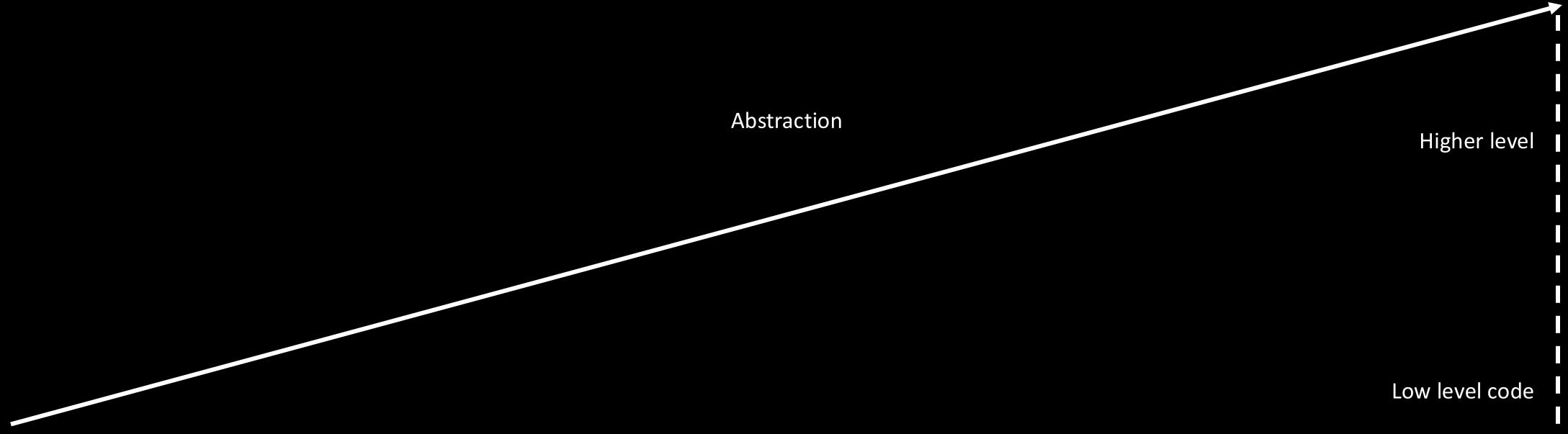
How we create – Choices - Curation



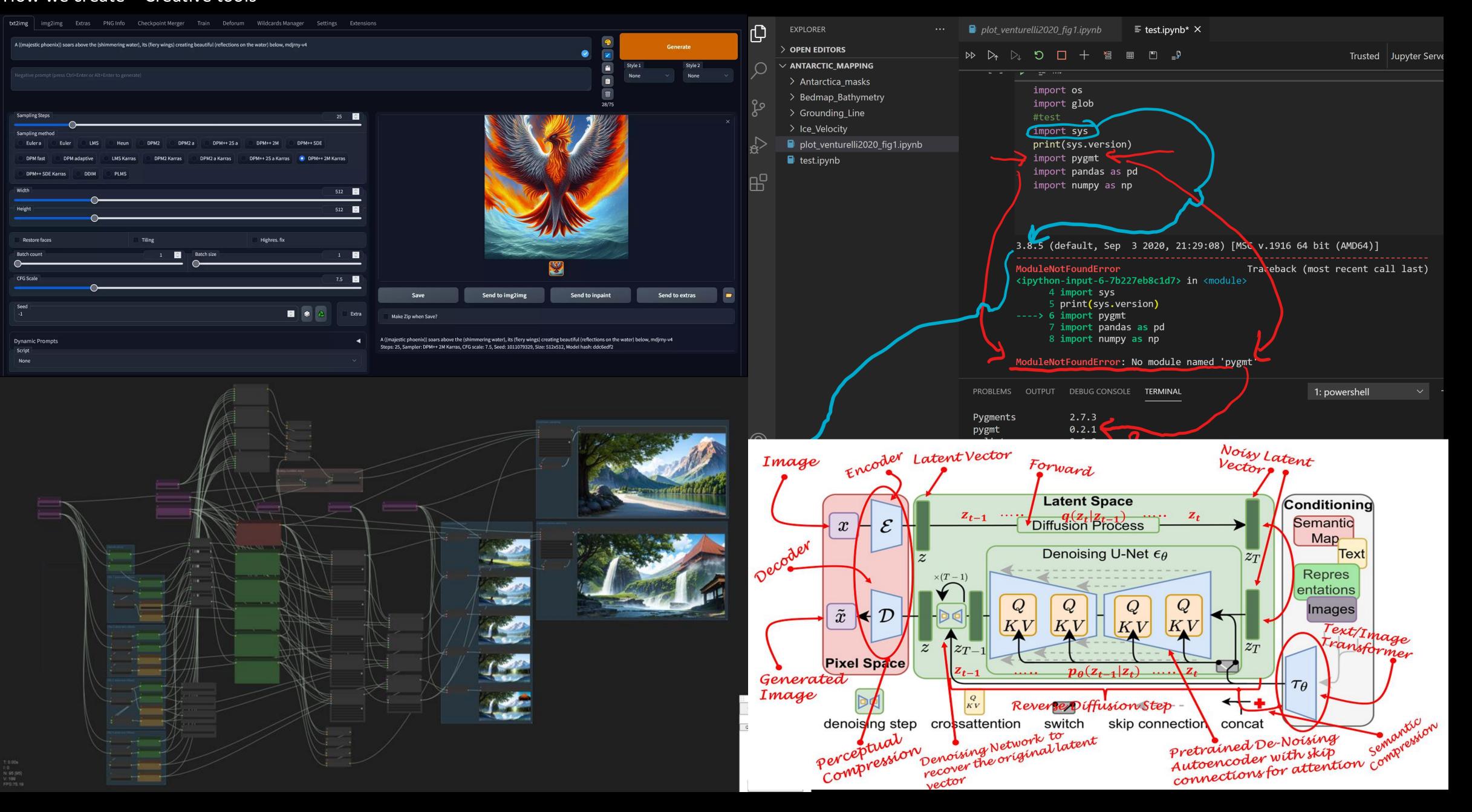
How we create – Creative tools - Evolution



How we create – Creative tools - Abstraction



How we create – Creative tools

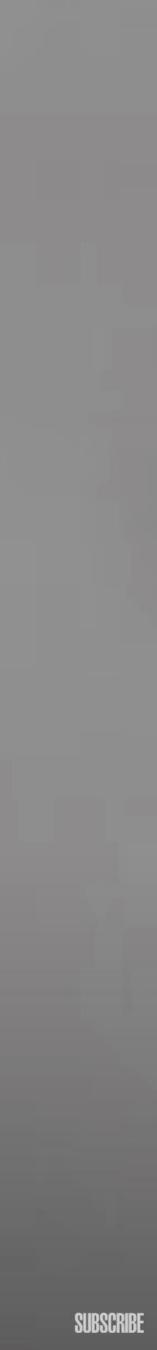


NOBODY STARTS OUT ORIGINAL



"Start copying what you love. Copy copy copy copy. At the end of the copy you will find yourself." Yohji Yamamoto











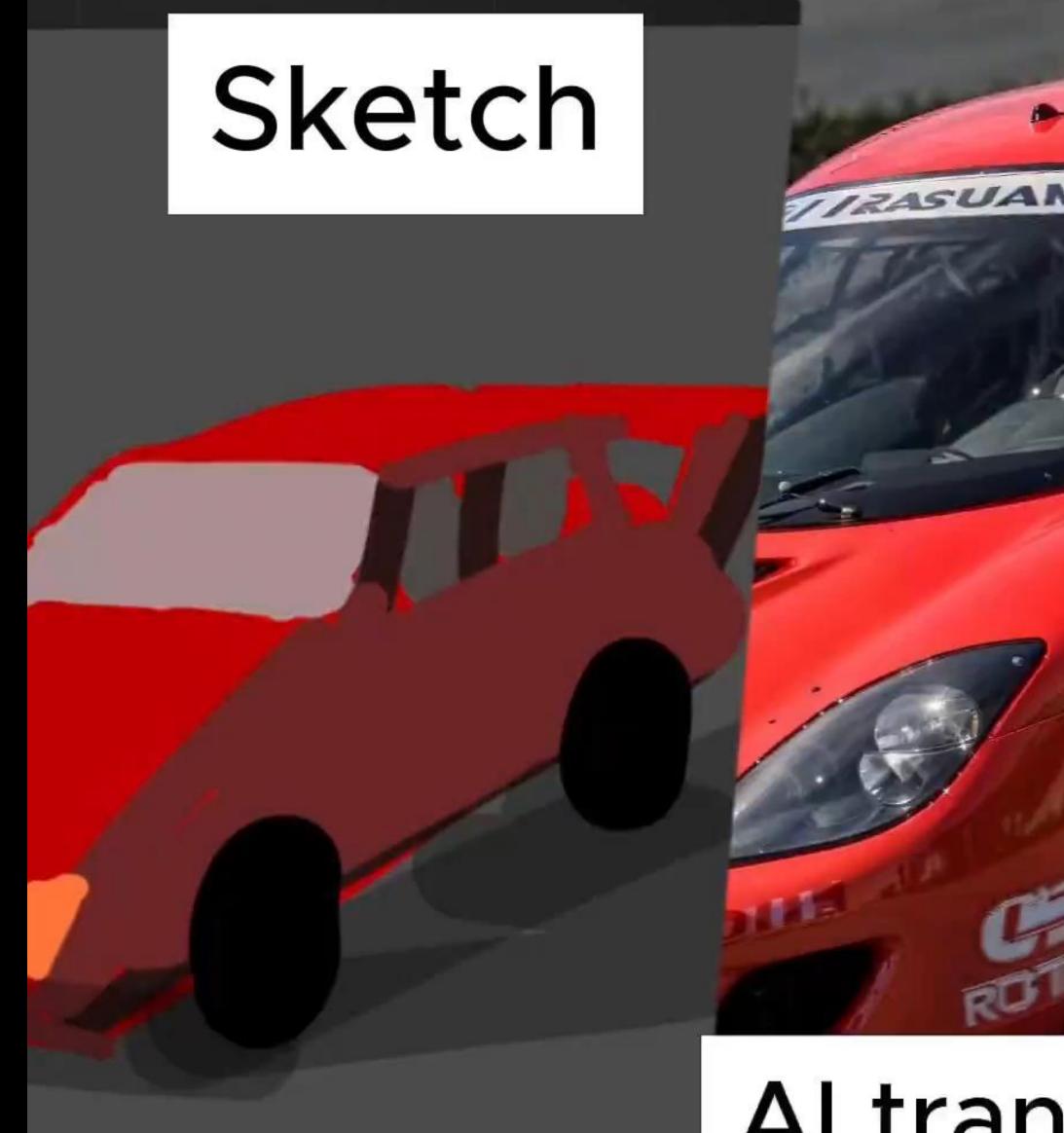
We are not Only A brain...



How we create – Workflow



How we create – Workflow



Gaussian Splats in UE5

Al transform



The bigger picture





Democratised Techtopia



The bigger picture

Bange

Automation

AL 16.

