



FILMUNIVERSITÄT
BABELSBERG
KONRAD WOLF



CX Studio
Creative eXchange

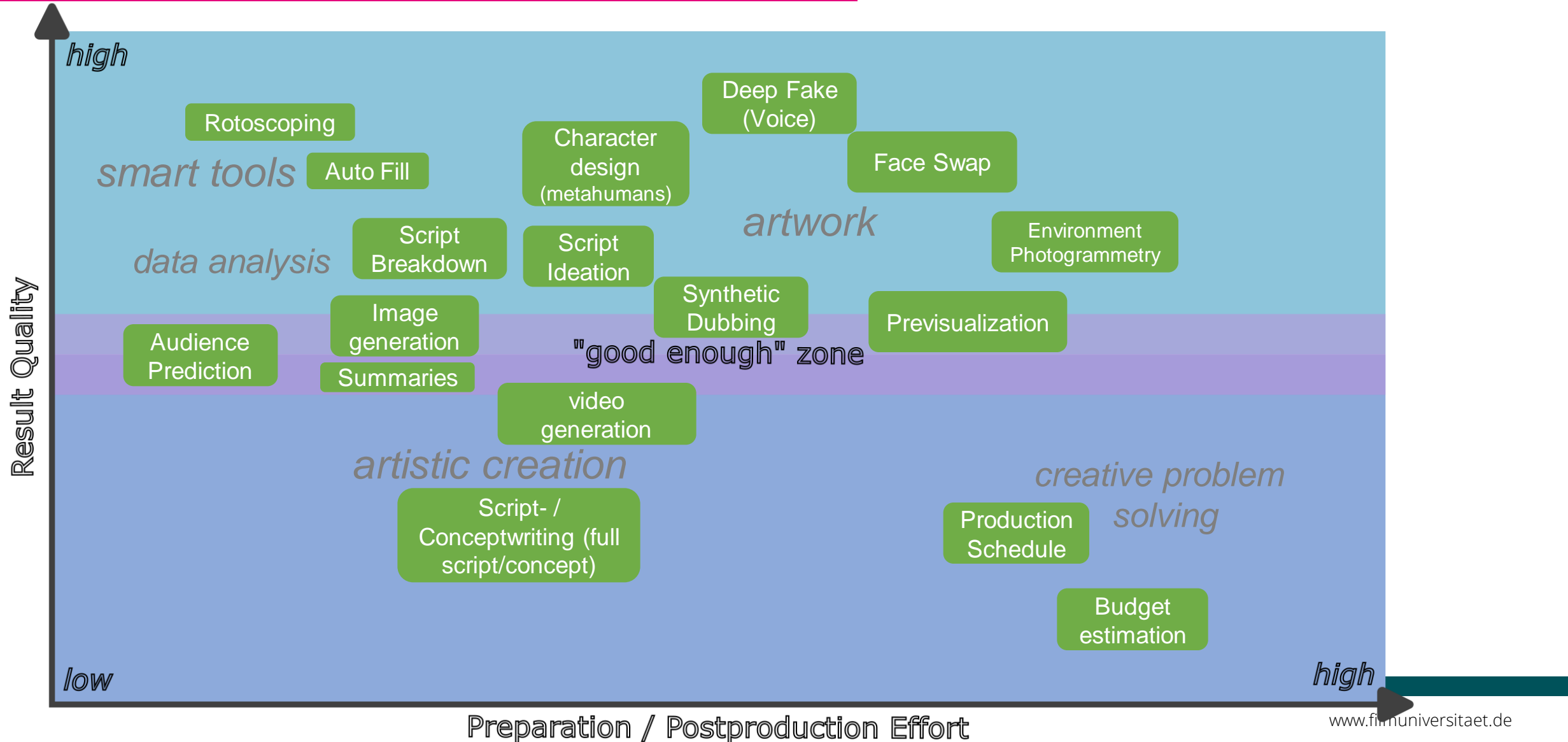
Generative AI and Film

ARTSCENICO Open Forum #5, 25.04.24

Prof. Dr. Björn Stockleben



Areas of application in media





AI in Film Production

Development

Ideation,
Contextualisation,
Dialogue
Writing, Exposé,
Loglines, *full
script generation*

Funding/ Greenlighting

Script & Package
Analysis, Box Office
prediction

Preproduction

Previsualization,
Script Breakdown,
*Budget estimates,
Scheduling*

Principal Photography

realtime AI effects,
real-time deep fake,
photogrammetry,
Mo-Cap characters,
*full audiovisual AI
synthesis*

Post- Production

generative fill,
automatic
rotoscoping,
environment
generation,
generative audio

Distribution

Forecasting, audience
analysis

example AI models and services

ChatGPT
DeepStory

largo.AI
slated.com
Scriptbook.ai

filmustage.com
Adobe Firefly text-to-
storyboard,
stable diffusion,
Krock.io, Boords

fal.ai, Unreal
metahumans,
leonardo.ai, luma.ai,
*Sora (open.ai),
Lumiere (Google)*

Vanity (MARZ), Gen-
1 / Gen-2 (Runway),
play.ht, Metaphysic,
Flawless, stable
diffusion (w/LoRa)

parrot analytics
largo.ai



Some Gaussian Splat Eye Candy ...

- [A 1930's New York City Skyline](#)
Generated from an old video recording
- [A fountain in Park Babelsberg, Potsdam, Germany](#)
Shot with my iPhone



“The Blue Rigi” (VR), Film University 2019

example of a simple “style transfer” of a painting



input image



output image



style pattern



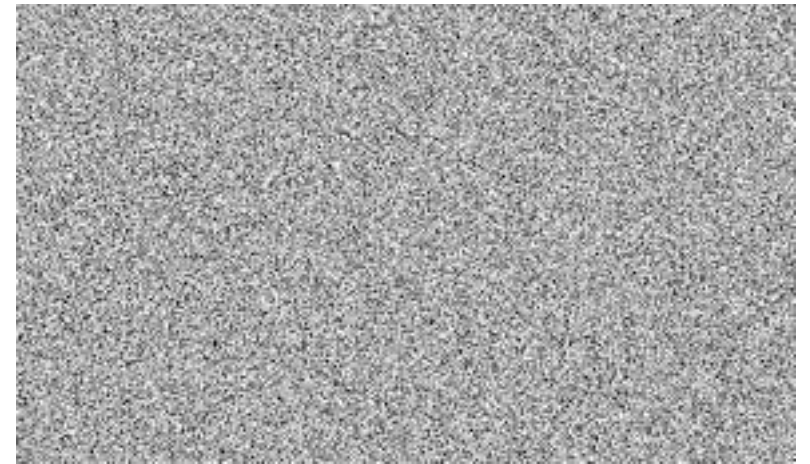
AI saved my day ...

- Several days of an illustrator's work saved (*efficiency*)
- Exactly what the customer wanted (*specificity*)
- High visual fidelity (*quality*)

... so what's the catch?



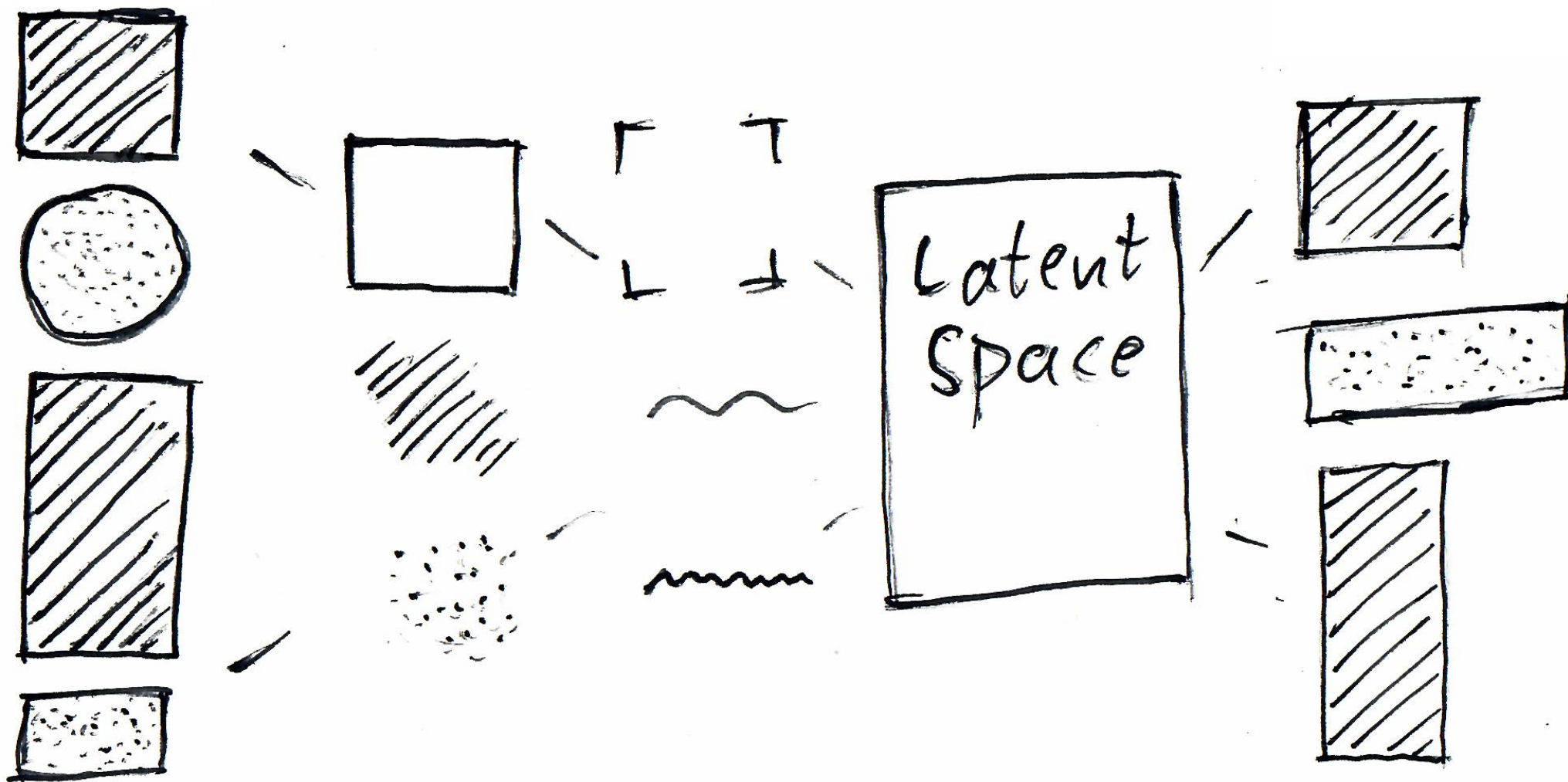
Pattern recognition vs. original outliers





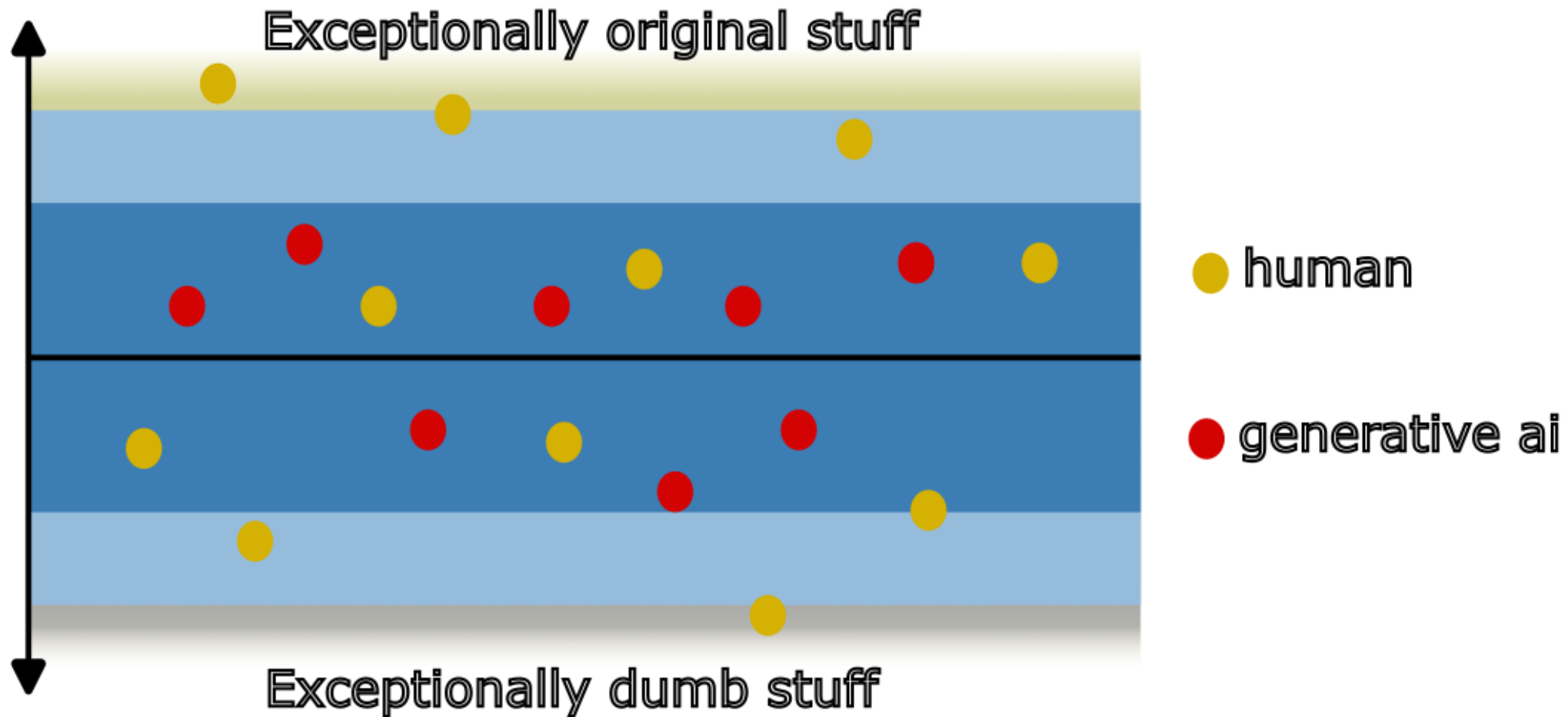
Principle of Deep Learning

... or how the world got square





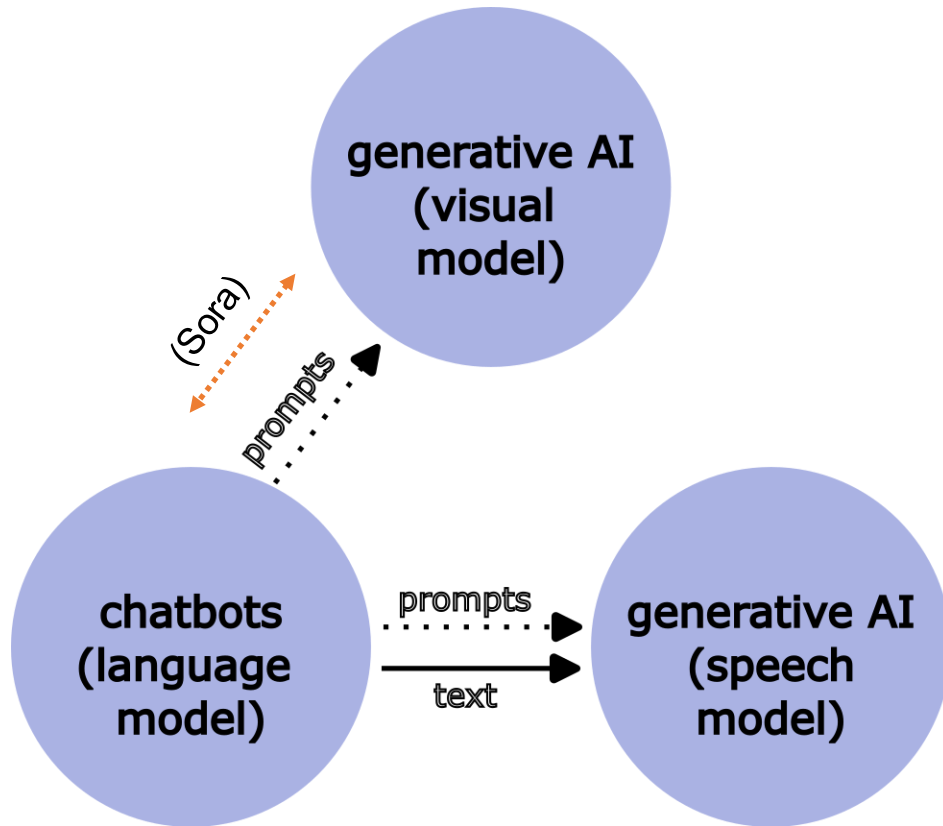
Human Creativity vs. AI Creativity



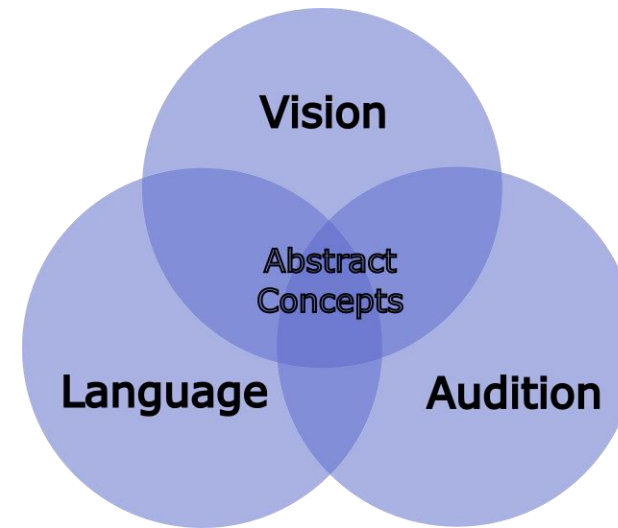


AI vs. Human

... or the origins of originality



Deep Learning AI:
Specialized Models,
sparse connections



Humans Brain:
General Models,
rich connections



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Prompts and source data

Tool: blockadelabs.ai



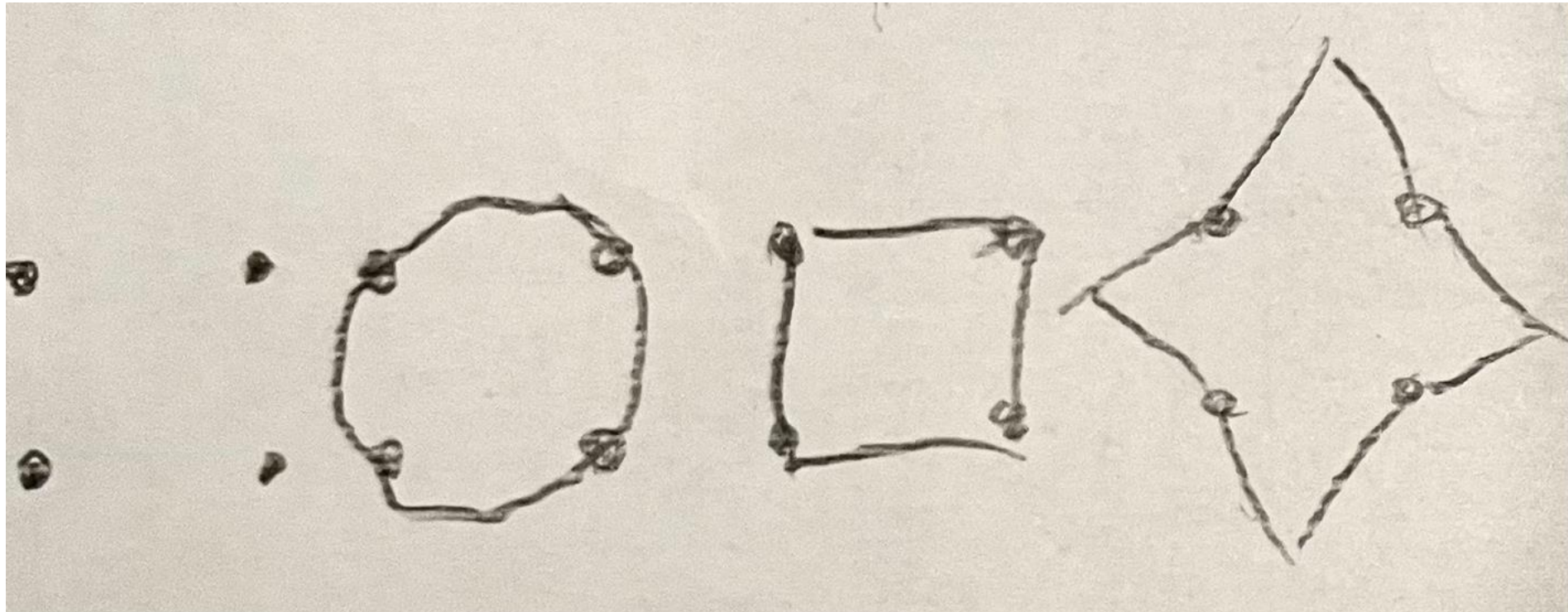
blockadelabs.com

✧ Remove this watermark with any premium subscription to Skybox AI by Blockade Labs

Prompt: "swiss mountain lake with blue rigi mountain range in the background, 3 old sailing boats on the lake and some birds in the sky at dawn time, painted in the style of william turner"



“Bias”: How the AI model shapes the output



Input

AI model A

AI model B

AI model C



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Out of Control: Results of Prompting

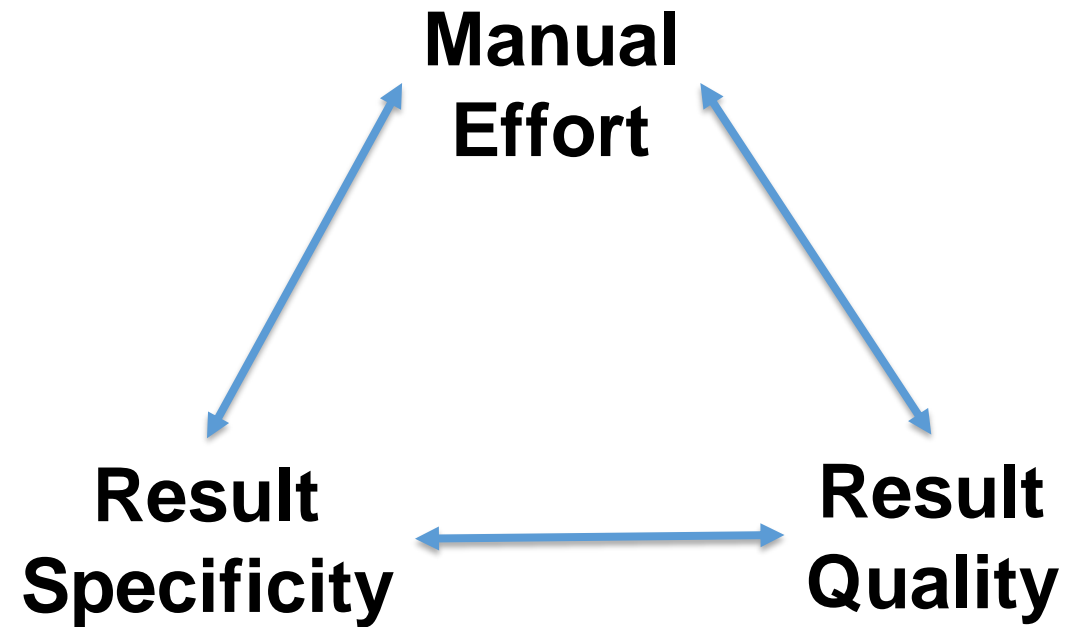
Tool: runwayml.com



Prompt: swiss mountain lake with blue rigi mountain range in the background, **3** old sailing boats on the lake and some birds in the sky at dawn time, painted in the style of william turner



The Generative AI triangle





The Blue Rigi – Process

Preparation	AI Processing	Postproduction
<i>Specificity</i>		<i>Specificity</i>
<ul style="list-style-type: none">-Shooting of 360° Video on the Lake Lucern (2 days)-Adding clouds and water structure to video (1 hour)-Choosing particular style pattern image (30min)	<ul style="list-style-type: none">-Style transfer with service deepart.io (15min)	<ul style="list-style-type: none">-Adding manual animations of clouds, birds and boats (4 days)-Adjustment of lightfall in the image (1 day)
<i>Quality</i>		<i>Quality</i>
<ul style="list-style-type: none">-High Quality & high resolution video recording		<ul style="list-style-type: none">-360° Compositing (1 day)-Blending and grading of original footage with stylized footage (1 day)



Artificial Intelligence ...

- **is a perfect copy, remix & paste machine**
(any imperfect demonstration today will be perfect in the long term, e.g. Runway Gen-2 => Sora)
- **allows non-experts to generate “good enough” results**
(in areas where low specificity or low quality is sufficient)
- **can yield amazing results if experts control input and output**
(if proper co-creation workflows are established and tools are well chosen)
- **is yet bound by laws of information theory**
(specific results need rich input or postproduction)
- **needs human input on relevance and originality**



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