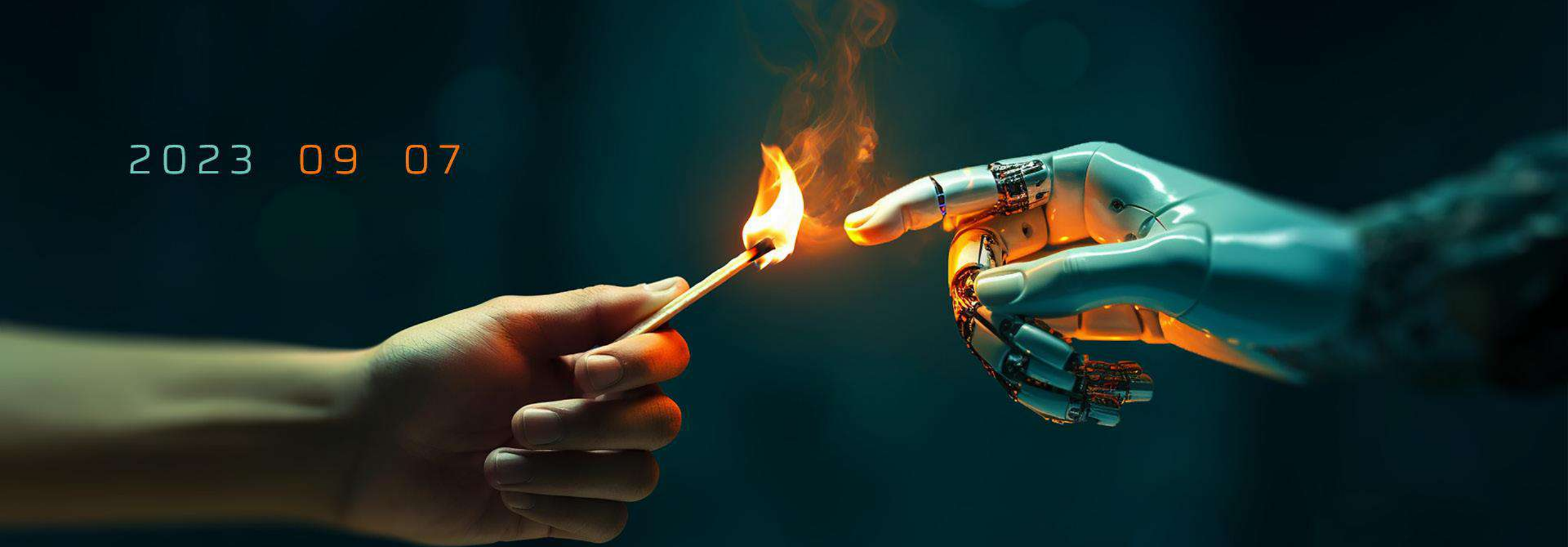
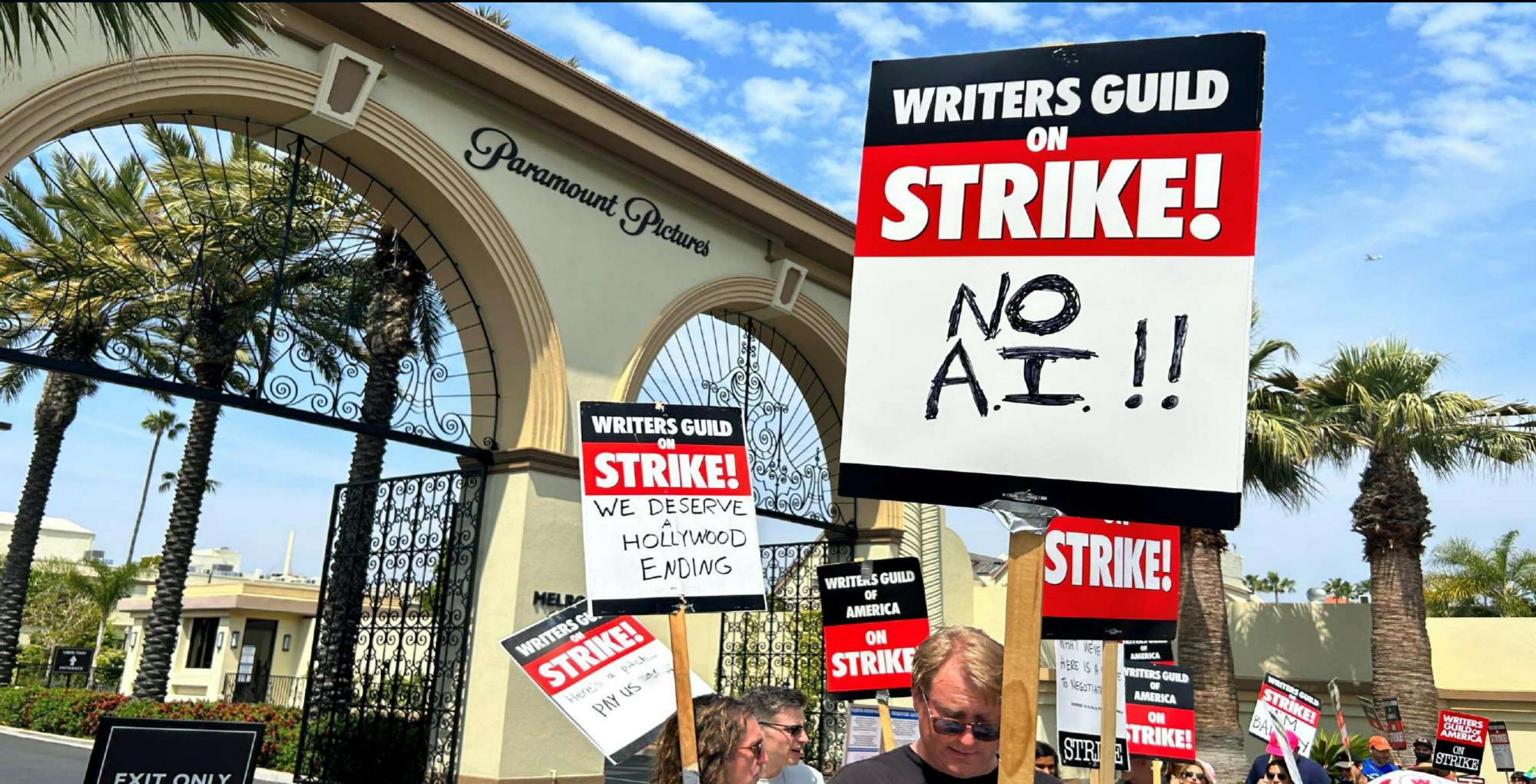


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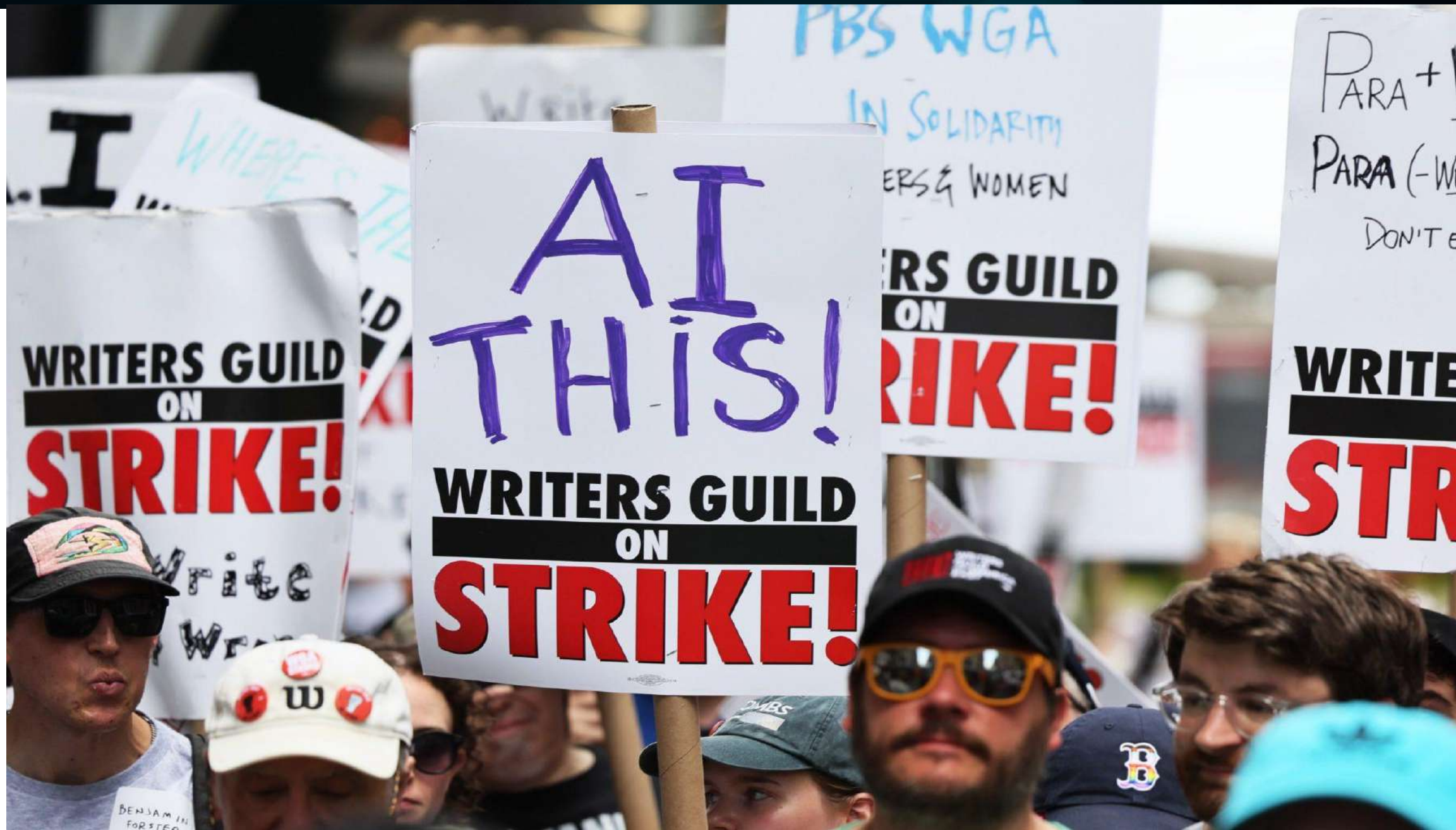
MESTERSÉGES
INTELLIGENCIA
az üzletben



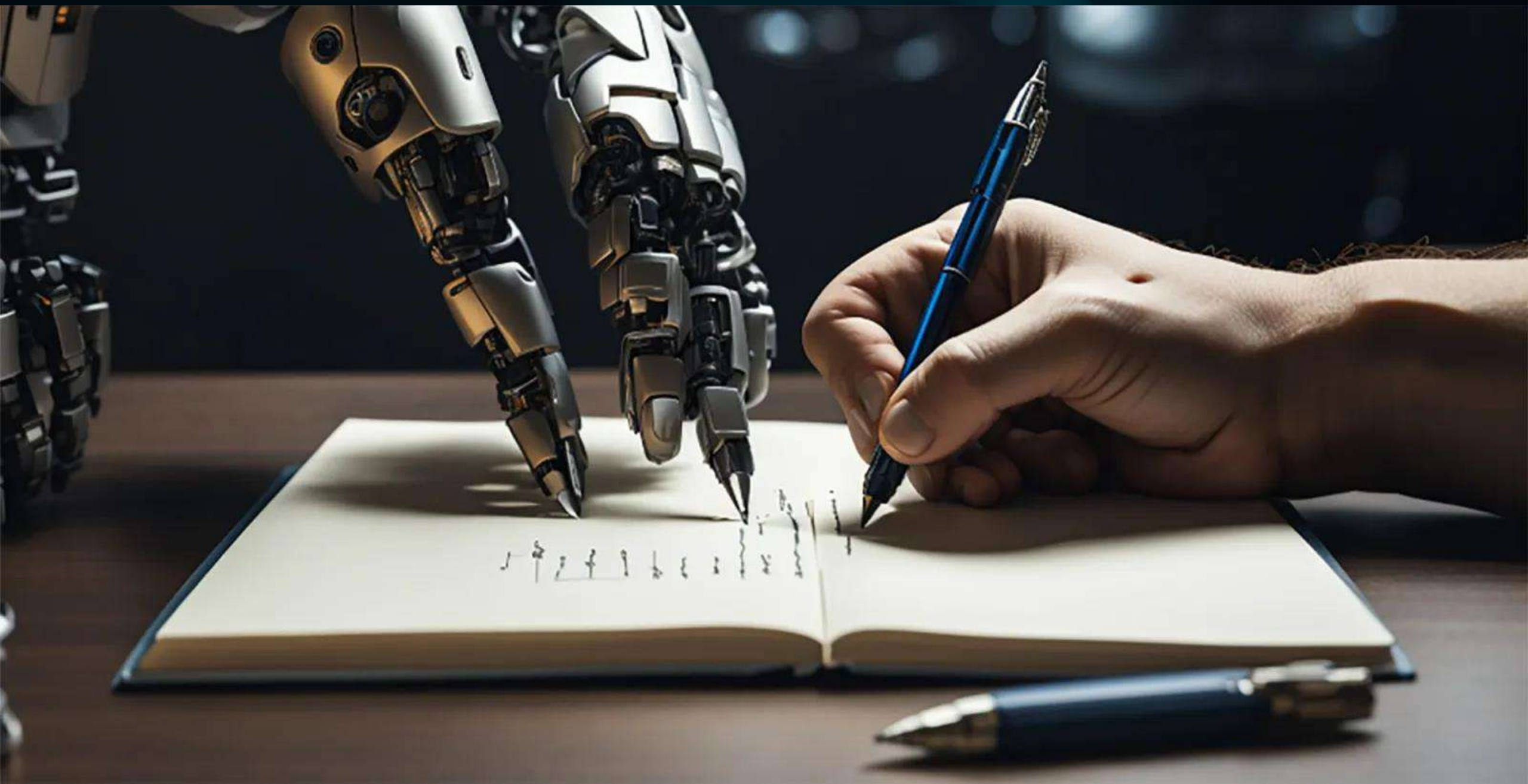






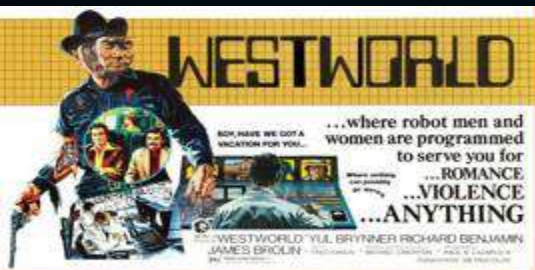






MESTERSÉGES INTELLIGENCIA

az üzletben

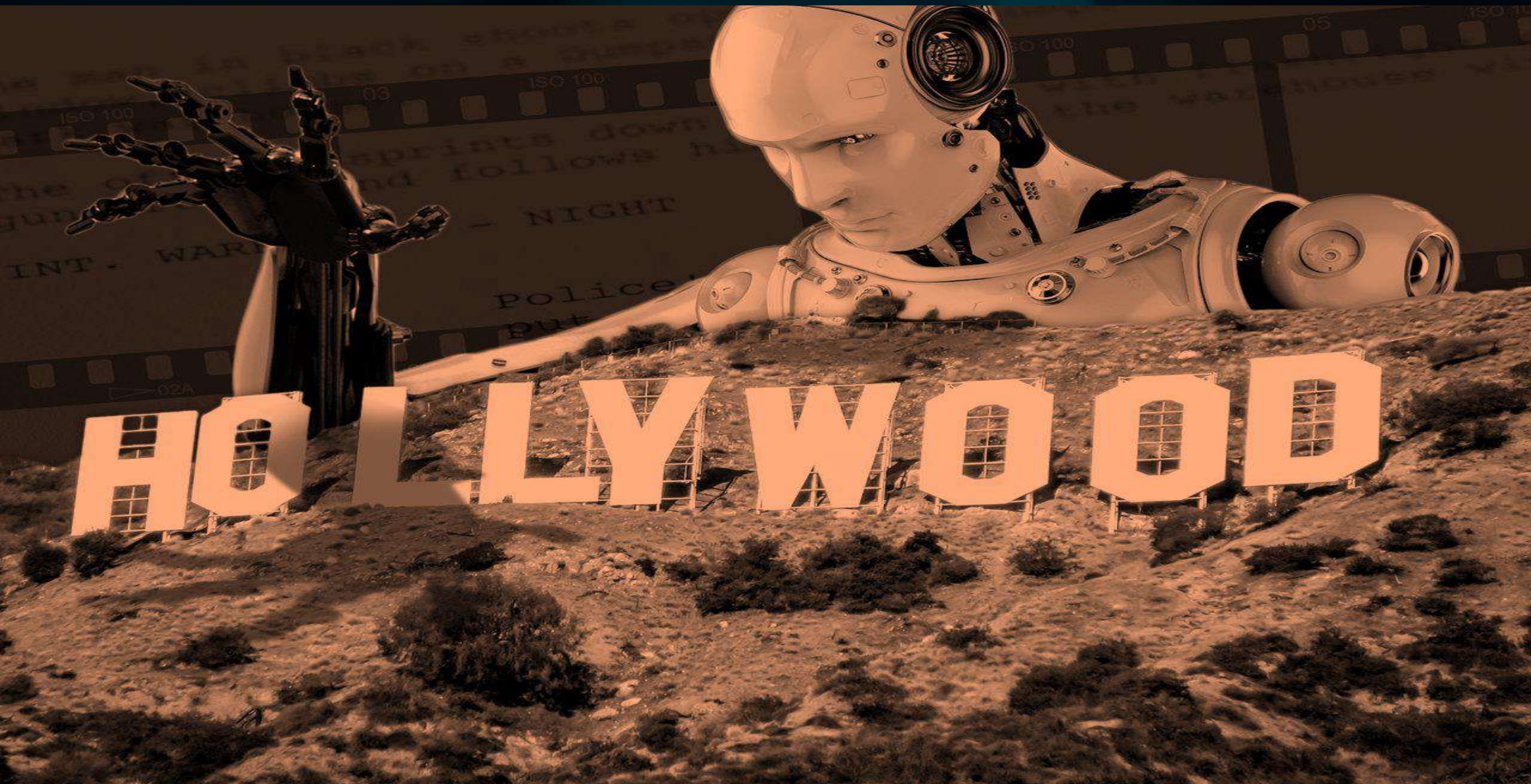


Balogh Áron

Oktató, Budapesti Metropolitan Egyetem (METU)

System Architect, fejlesztő, 3D technical artist...

Ez pedig az előadásom címe!



MESTERSÉGES INTELLIGENCIA

az üzletben



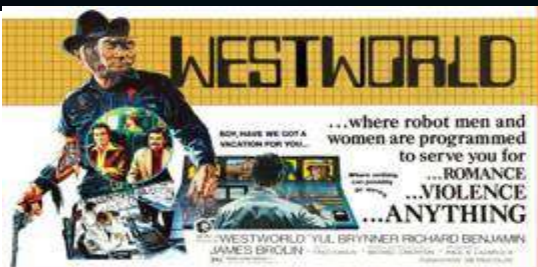
Mesterséges mozgóképdimenziók - az AI robbanásszerű térhódítása *Hollywoodban*

**Mesterséges mozgóképdimenziók -
az AI ~~robbanásszerű~~ térhódítása *Hollywoodban***

**Mesterséges mozgóképdimenziók -
az AI ~~robbanásszerű térhódítása~~ *Hollywoodban***

MESTERSÉGES INTELLIGENCIA

az üzletben

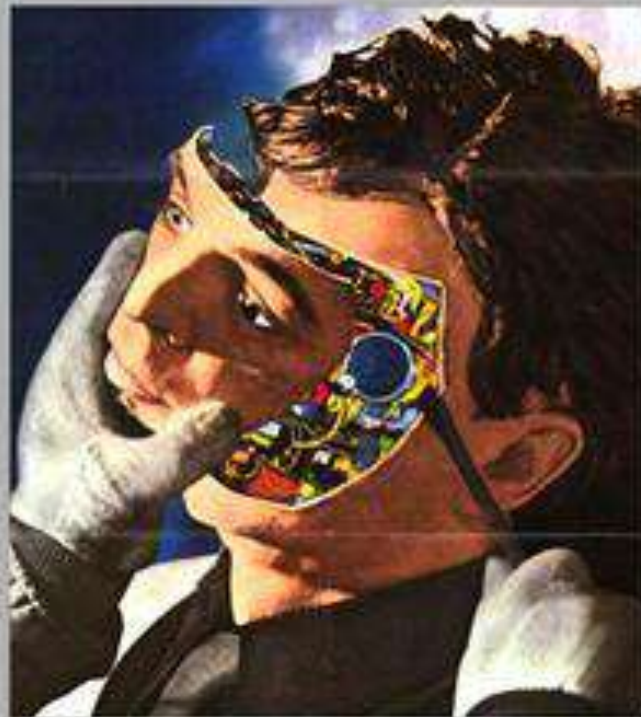


WESTWORLD

...where robot men and women are programmed to serve you for
...ROMANCE
...VIOLENCE
...ANYTHING



Is this you...or are YOU you?



FUTUREWORLD

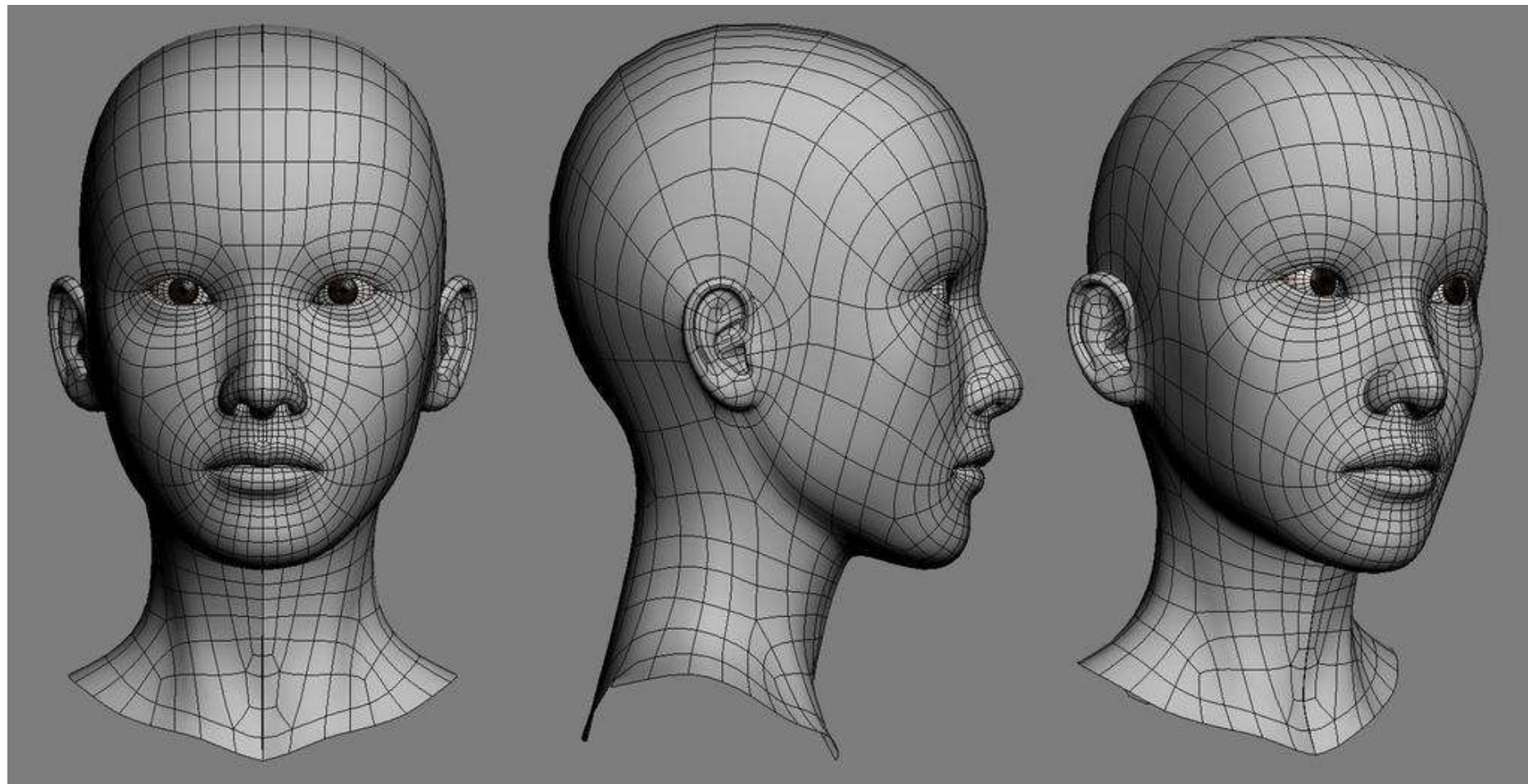
where you can't tell the mortals from the machines
...even when you look in the mirror!

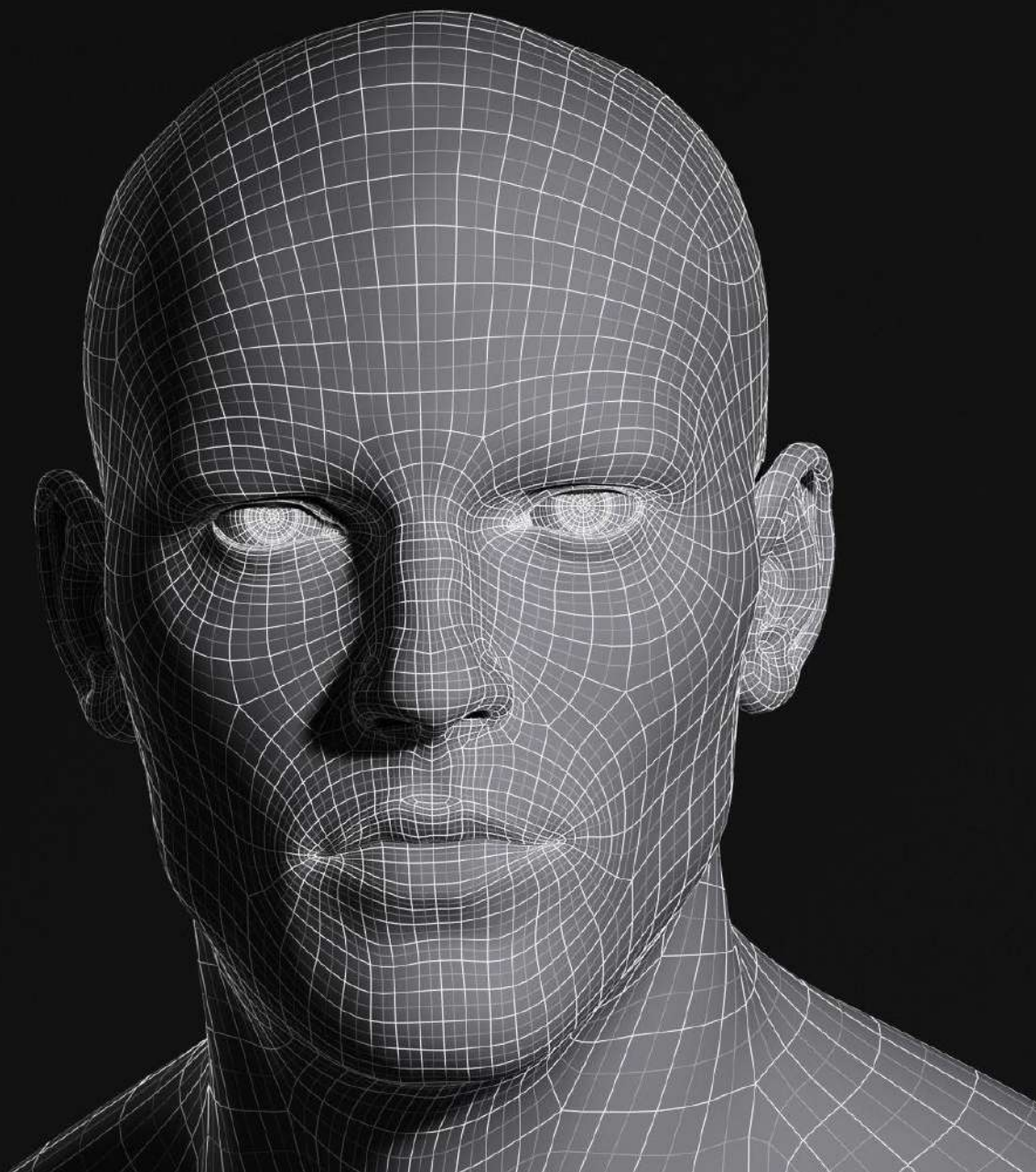
Starring
PETER FONDA · BLYTHE DANNER
in "FUTUREWORLD"
with **ARTHUR HILL**
STUART MARGOLIN · JOHN RYAN
and **YUL BRYNNER**

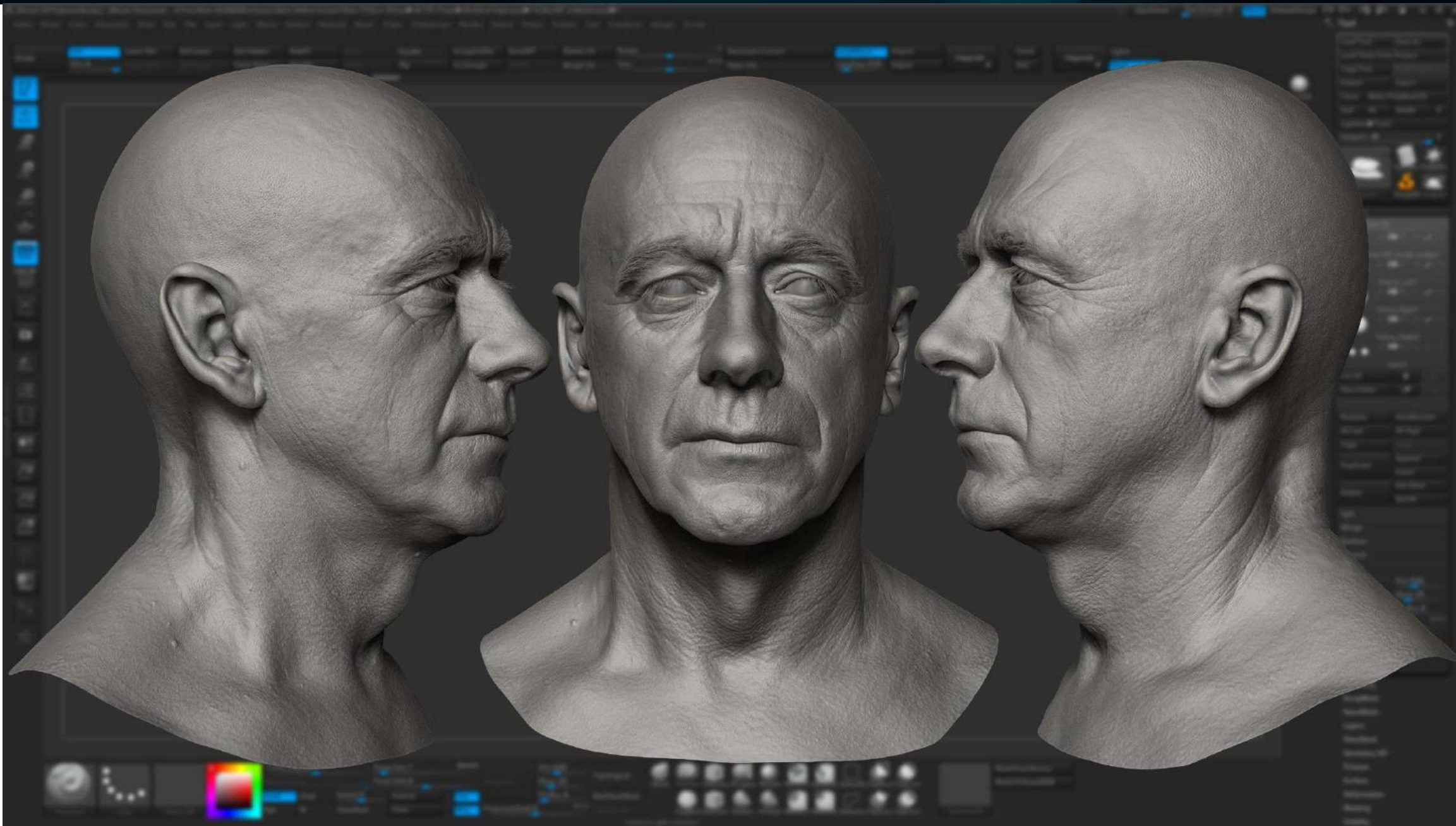


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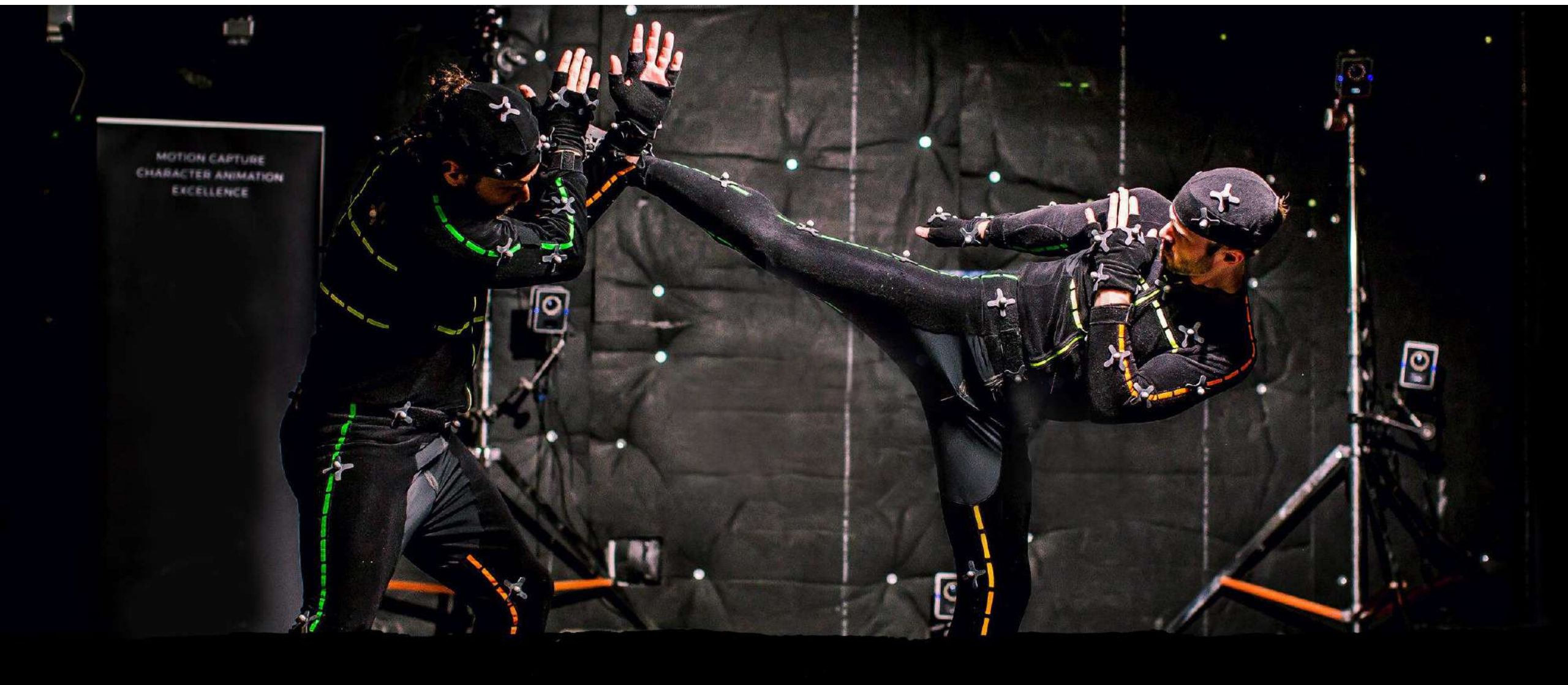






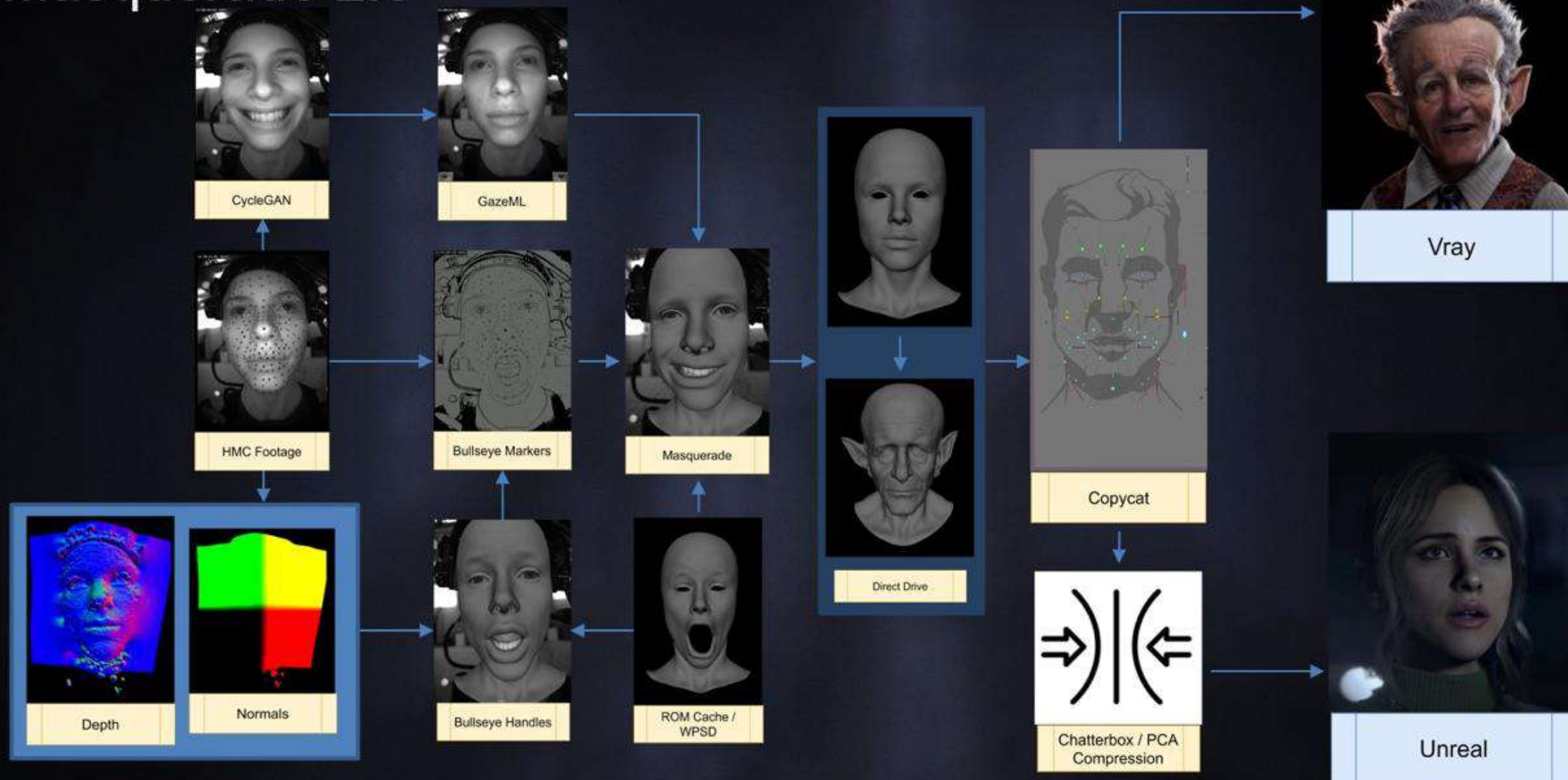


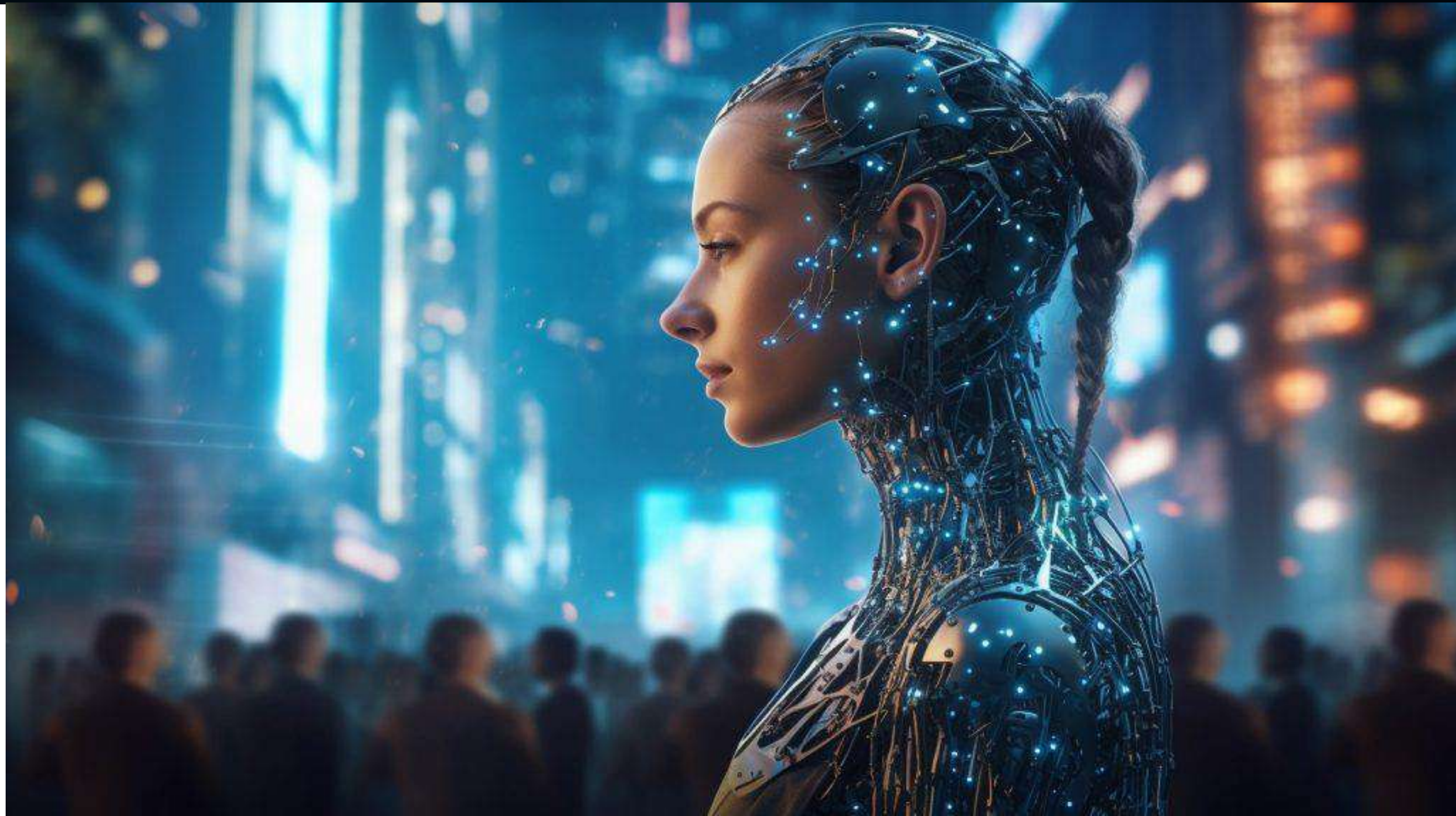






Masquerade 2.0





A film hibrid műfajjá változott, az alkotás gyakorlata is jelentősen átalakult; több –mint három- dimenziós, generatív, multiplatformos, adat- és adatbázis alapú, szkript-vezérelt, szenzoros, immerzív, adaptációs folyamattá nőtt, melyben egyre inkább jelentéstartalmat szerez a szoftveres-, WebGPU alapú 3D böngészőművészet, a gépi tanulás és a mesterséges intelligencia alapú mozgóképgyártás fogalma is. A szintetikus valóság deep fake-vel keltett illúziótereiben de-aging technológiával fiatalodnak meg a színészek, míg a generative ai avatarok le nem váltják a flux-okkal rögzített hősöket.

2D, 3D, 2.5D, 4D

AR, VR, MR, XR

2D, 3D, 2.5D, 4D

AR, VR, MR, XR

2D, 3D, 2.5D, 4D

Synthetic reality, Deep fake, De-Aging technology, 3D avatars, GAI

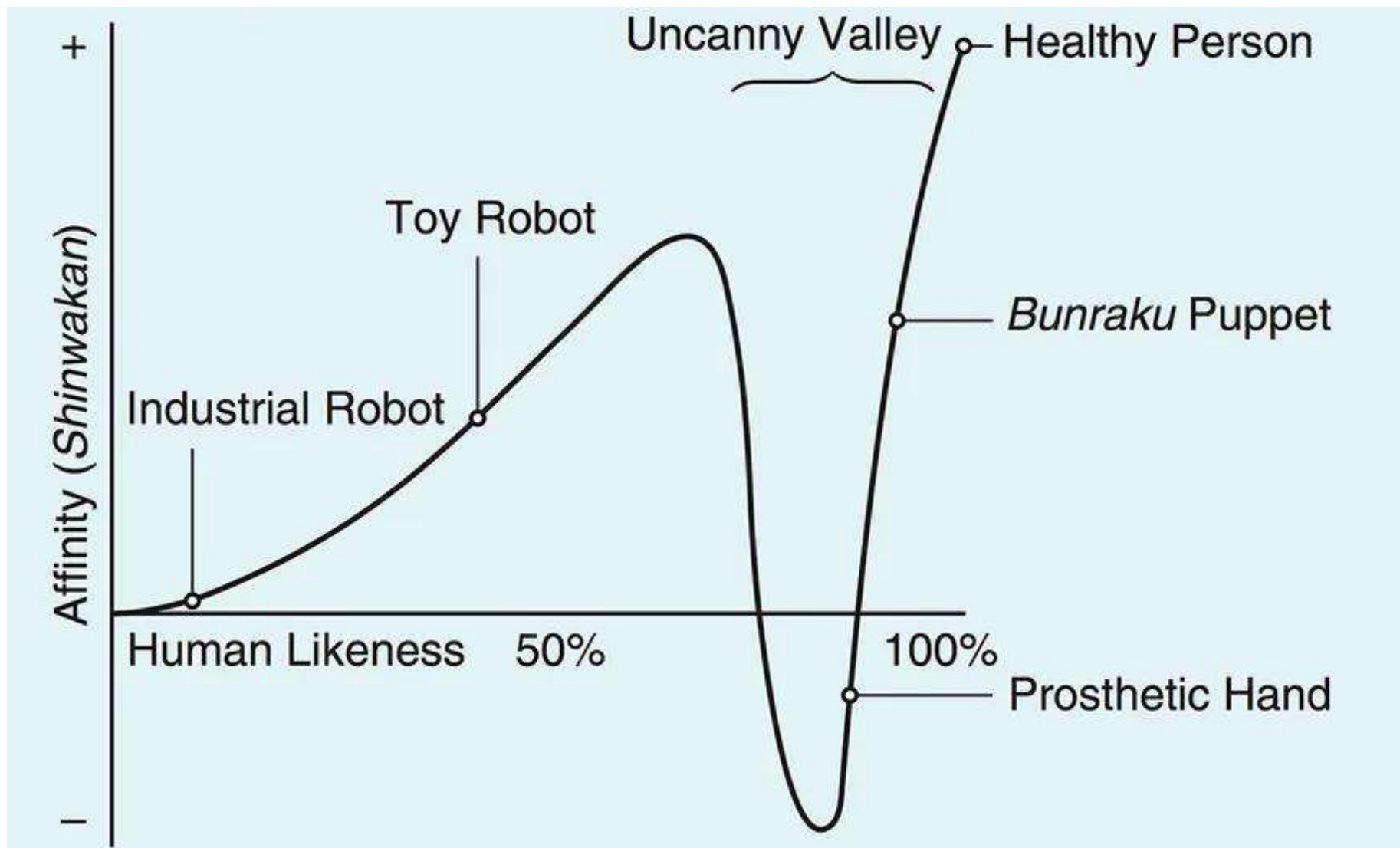
Synthetic reality, Deep fake, De-Aging technology, Avatars, 2D, 3D, 2.5D, 4D, Real-time, Rigging, Digital Twins, AI retopolgy, Synthetic Media, Facial Recognition, Motion Capture, Ray Tracing, Computer Vision, Shading, Lighting, Compositing, Texturing, Rendering, Volumetric Capture, Object Detection, Physical simulation, Keyframing, Sculpting, Mesh, Vertex, Polygon, NURBS, Bézier Curve, UV Mapping, Bump Mapping, Ambient Occlusion, Volumetrics, Particle System, Dynamics, DeepMind, Midjourney, OpenAI, TensorFlow, PyTorch, Blender, WebGL, WebGPU, Unity, Unreal Engine, Maya, Deep Learning, Cloud Computing, Quantum Computing, Algorithm, Data Mining, Big Data, WebVR, WebAR, WebXR, WebGL, WebGPU, AI, ML, MI, Bots, LLM, Three.js, A-Frame, 360-Degree Web Content, Virtual Reality Markup Language (VRML), X3D (Extensible 3D Graphics), 3D Web, 3D CSS, Real-time 3D Graphics, HTML5 Canvas 3D, Augmented Web Browsing, Mixed Reality Browsing, Virtual Reality Browsing, Web-Based Simulation, Web-Based 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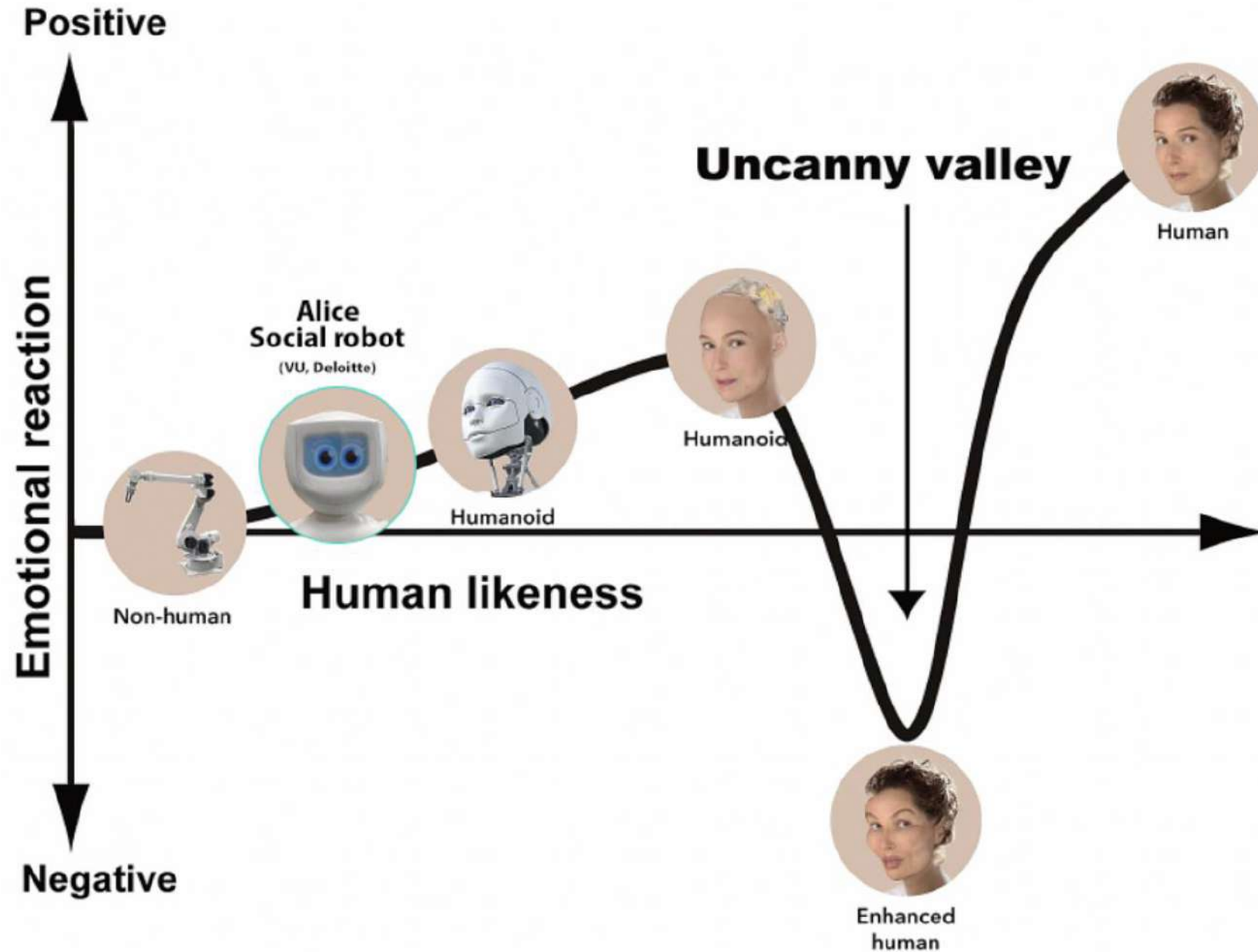
uncanny valley

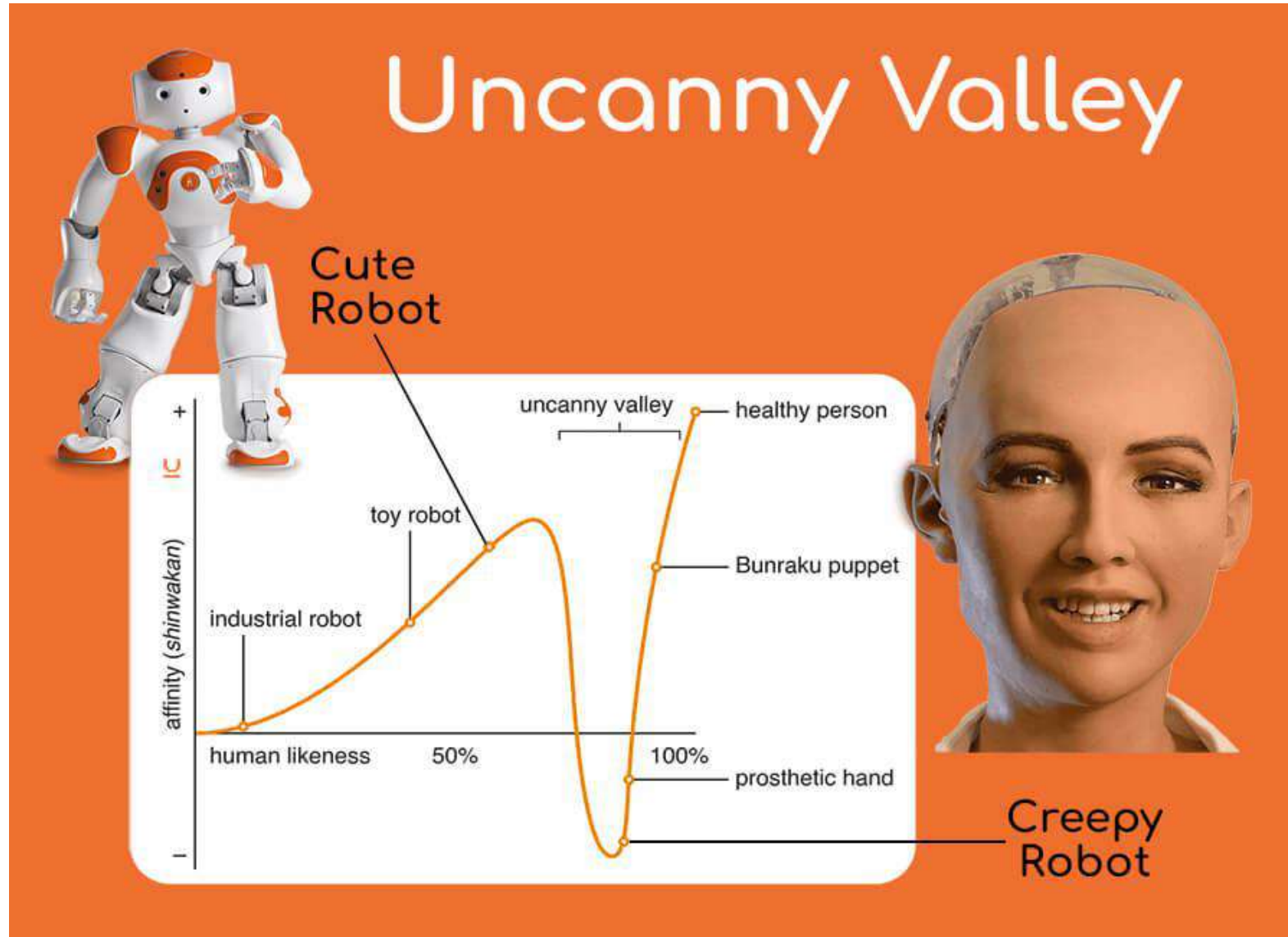
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uncanny valley

Borzongások völgye







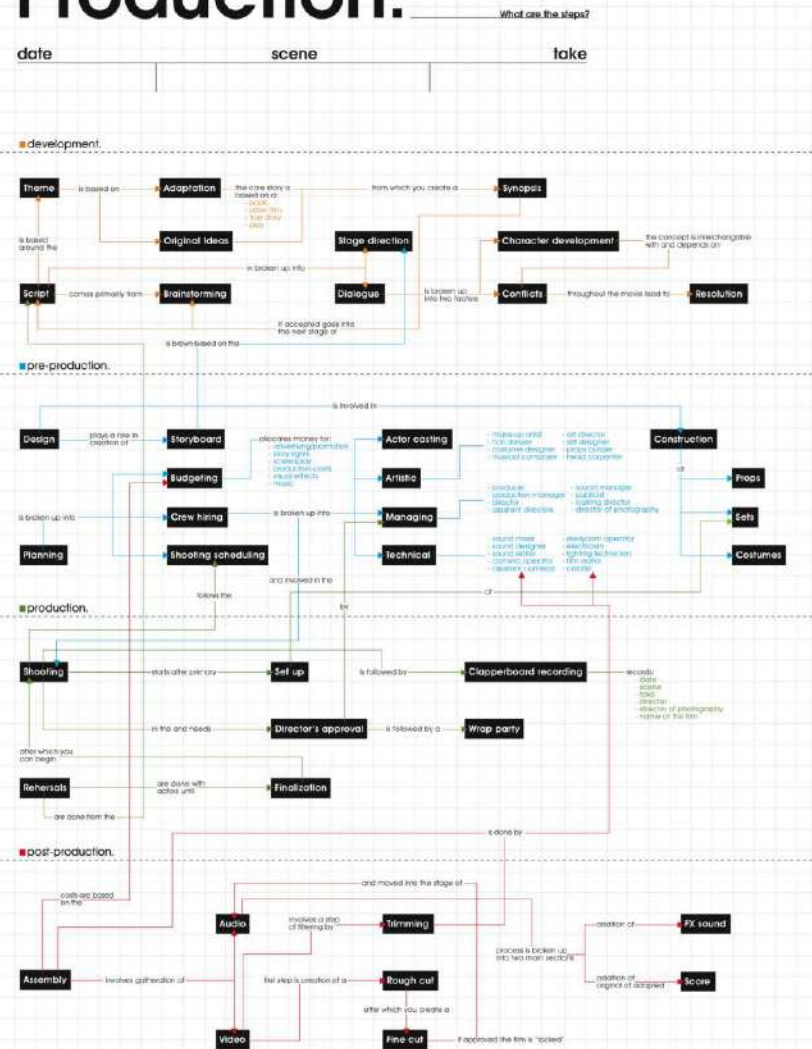




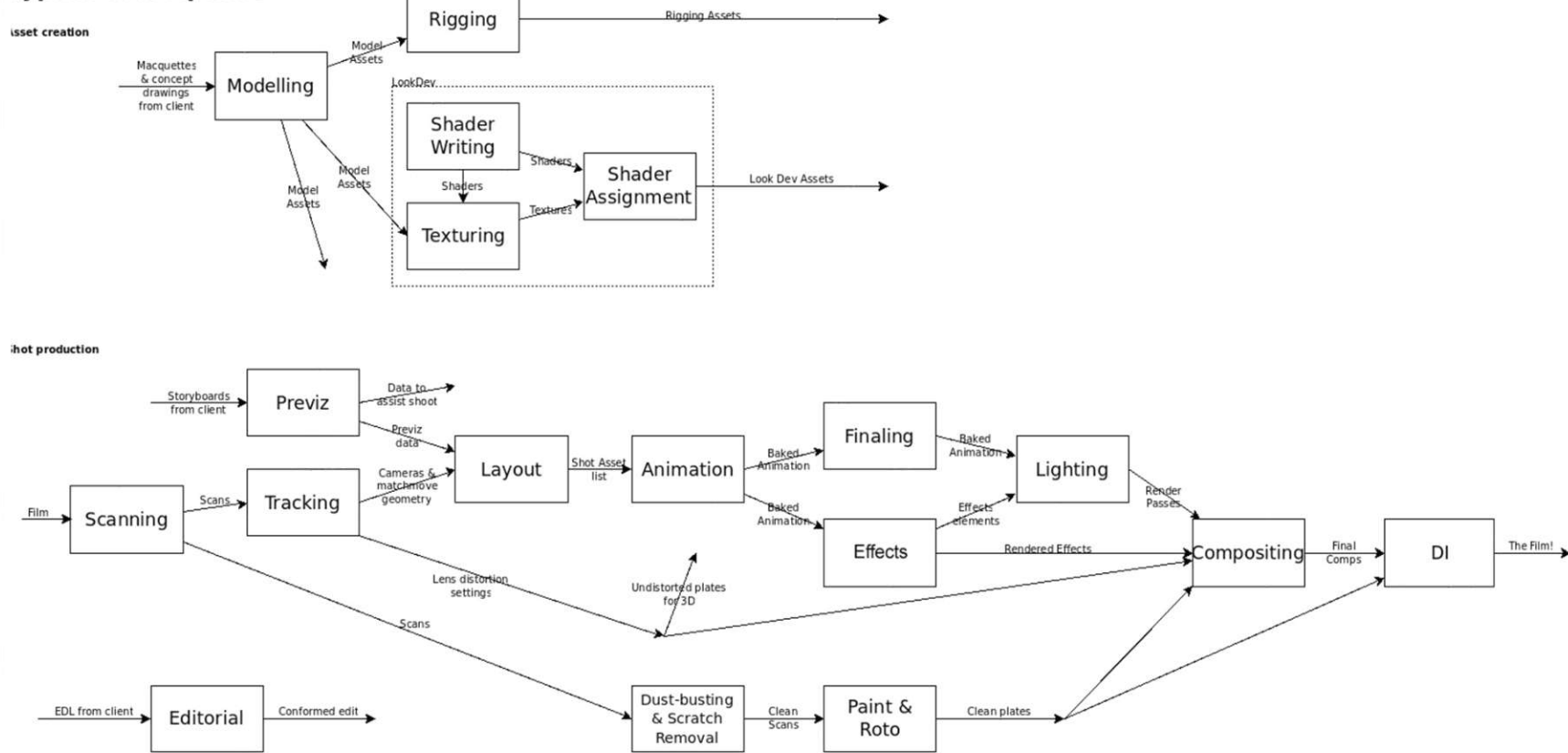


#deeptomcruise

Film Production.



Typical VFX Pipeline



An aerial photograph of a hillside covered in dense, dark green vegetation. Large, white, three-dimensional letters are mounted on the hillside, spelling out 'HO11Y1000D'. The letters are arranged in a single line across the middle of the frame. The background shows the rolling hills under a clear sky. In the lower right corner, a small cluster of buildings is visible at the base of the hill.

HO11Y1000D

MPC



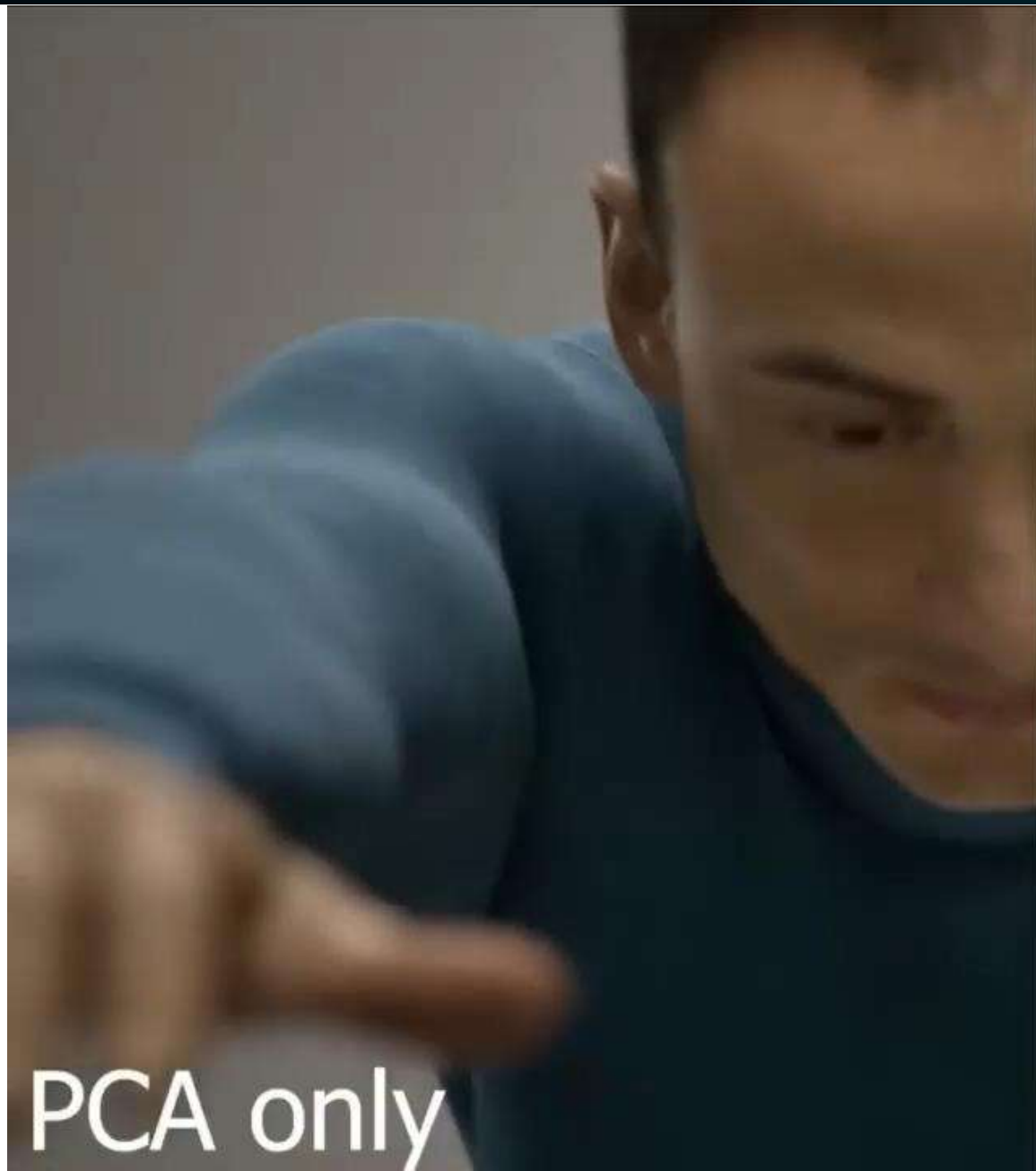




20th Century Fox



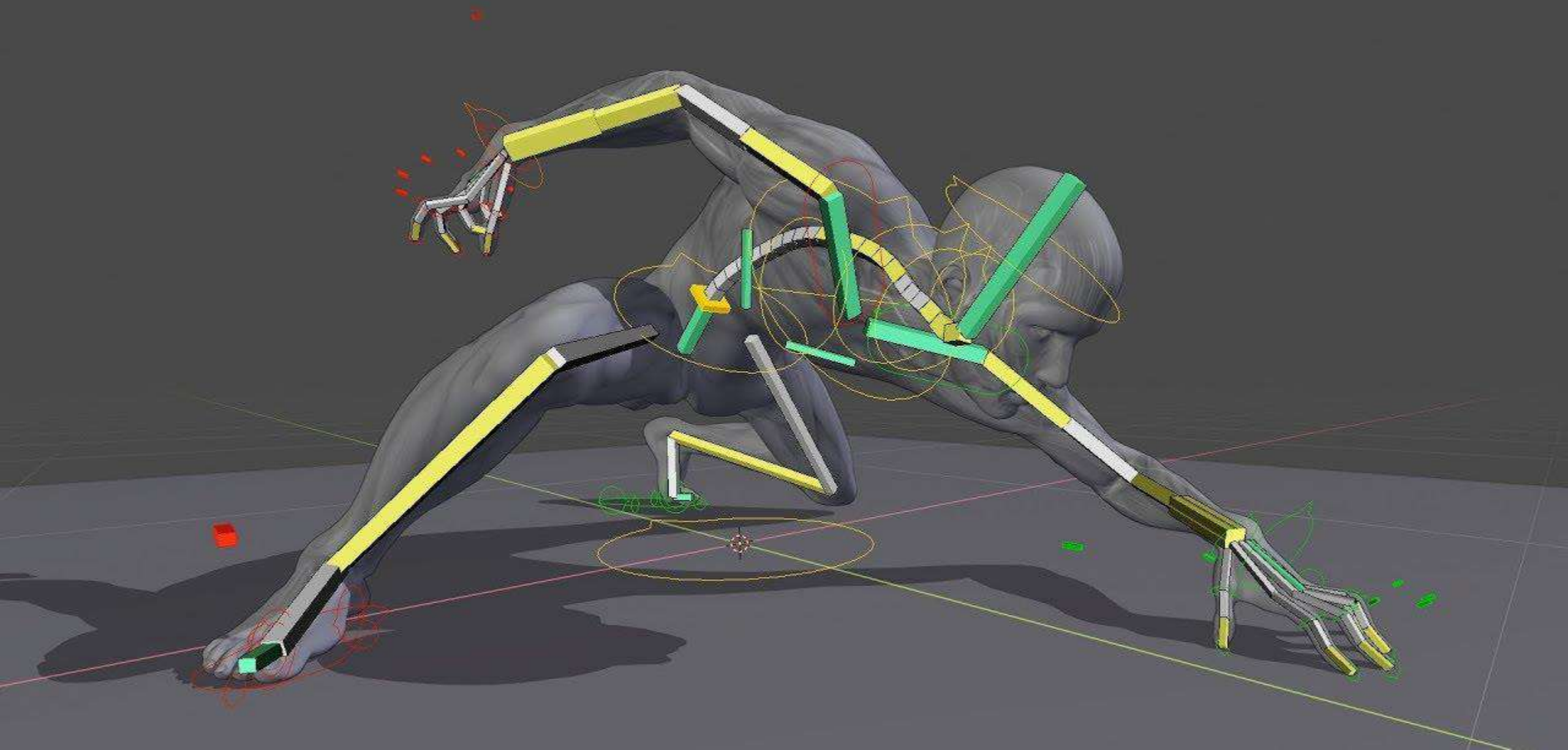




PCA only



PCA + NN



Pre production

Production

Post production

Pre production

- Production & planning

Cinelytic: <https://www.cinelytic.com/>

Vault AI: <https://vault-ai.com/>

Largo AI: <https://home.largo.ai/>

- Casting AI tools
- Scriptbook, storyboard
- Marketing
- Location tools

Wind River (2017)
Budget: \$11M

Predictive Forecast

Confidence Level	90%	70%	50%	30%	10%
Domestic Box-office	\$16,310,965	\$24,791,060	\$31,138,820	\$37,156,595	\$49,709,949
Domestic DVD/Blue-ray	\$4,868,579	\$7,399,760	\$9,294,472	\$11,090,688	\$14,837,676
Domestic VOD (SVOD, TVOD, etc.)	\$5,653,546	\$8,529,833	\$10,793,031	\$12,878,853	\$17,229,974
Domestic Pay TV	\$6,580,950	\$10,002,395	\$12,563,512	\$14,991,491	\$20,056,366
Domestic TV	\$1,414,868	\$2,150,460	\$2,701,086	\$3,223,088	\$4,312,008
Total Predicted Gross Domestic Revenues	\$34,828,910	\$52,936,510	\$66,490,923	\$79,340,717	\$106,145,976

Top 5 Countries

Country	% of total
USA	42.6%
China	10.3%
Germany	4.8%
UK	4.4%
France	4.1%

Top 5 Distributors

- Focus Features
- NBC Universal**
- Open Road
- A24
- Lionsgate

Talent Analytics

Talent	Role	Cumulative Median BO	Past 5 Median BO	Cumulative Median Budget	Past 5 Median Budget	Box-office Talentscore
Jeremy Renner	Cory Lambert	\$51M	\$188M	\$37M	\$47M	97.11
Elizabeth Olsen	Jane Banner	\$4M	\$43M	\$13M	\$126M	89.24

Production

- 3D
- Text-to-3D
- AI modelling
- Real-time rigging
- Real-time vfx
- Ai crowd simulation
- Facial replacement
- Body replacement
- De-aging
- Deep fake
- Mouth manipulation
- Flux





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Accelerate Your 3D Modeling

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Exclusive First Access For TurboSquid Artists



Your Imagination, Now In 3D

Magic3D: High-Resolution Text-to-3D Content Creation

Chen-Hsuan Lin* Jun Gao* Luming Tang* Towaki Takikawa* Xiaohui Zeng* Xun Huang Karsten Kreis Sanja Fidler† Ming-Yu Liu† Tsung-Yi Lin

*†: equal contributions



Overview

Magic3D is a new text-to-3D content creation tool that generates high-quality 3D meshes.

We provide users with new ways to control 3D synthesis, opening up new avenues to various creative applications.

Major benefits

- 🚀 **Fast** (40 minutes, **2x faster** than DreamFusion^[1])
- ✓ Uses **high-resolution** (512 × 512) diffusion priors

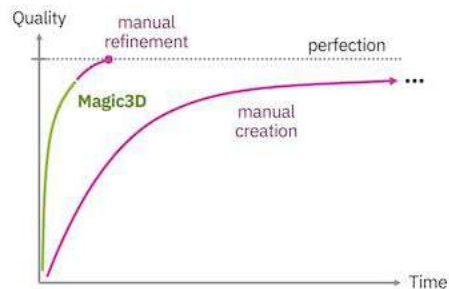
Potential applications

- 🎬 Movie/game production
- 🌐 Metaverse
- 🤖 Robot/self-driving simulation
- 🏠 3D designs

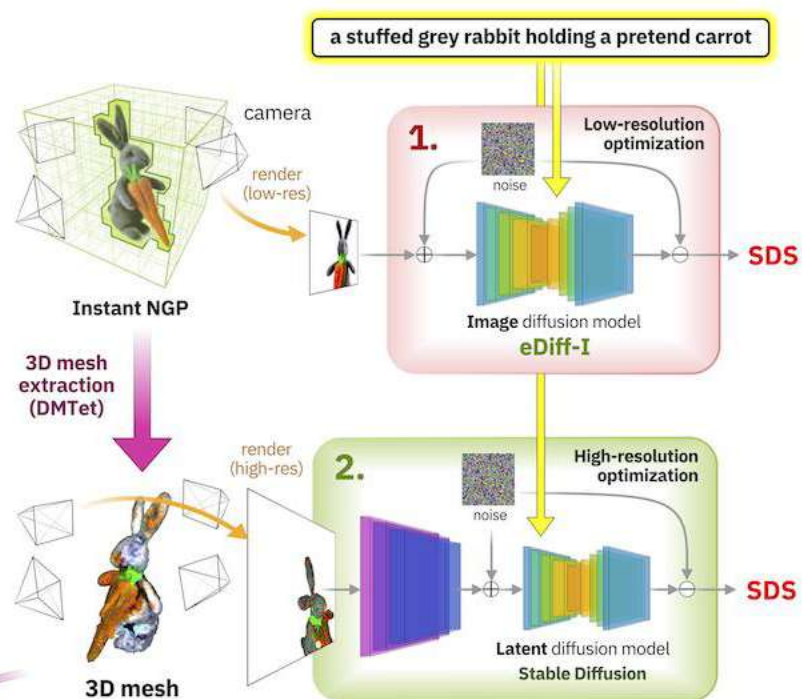


Our goal

- 🚀 Turbocharge expert 3D artists
- 😊 Facilitate 3D content creation for novices



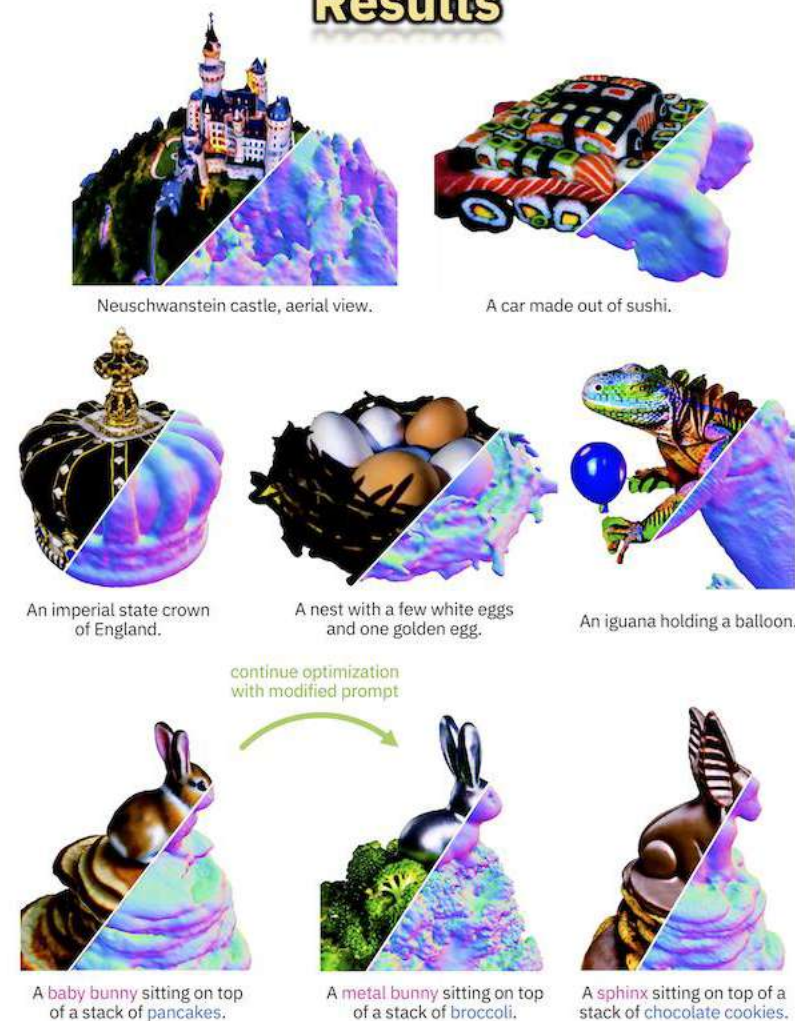
Approach



We optimize the 3D content over pretrained text-to-image diffusion models with SDS (Score Distillation Sampling) loss in a coarse-to-fine fashion, with the following procedure:

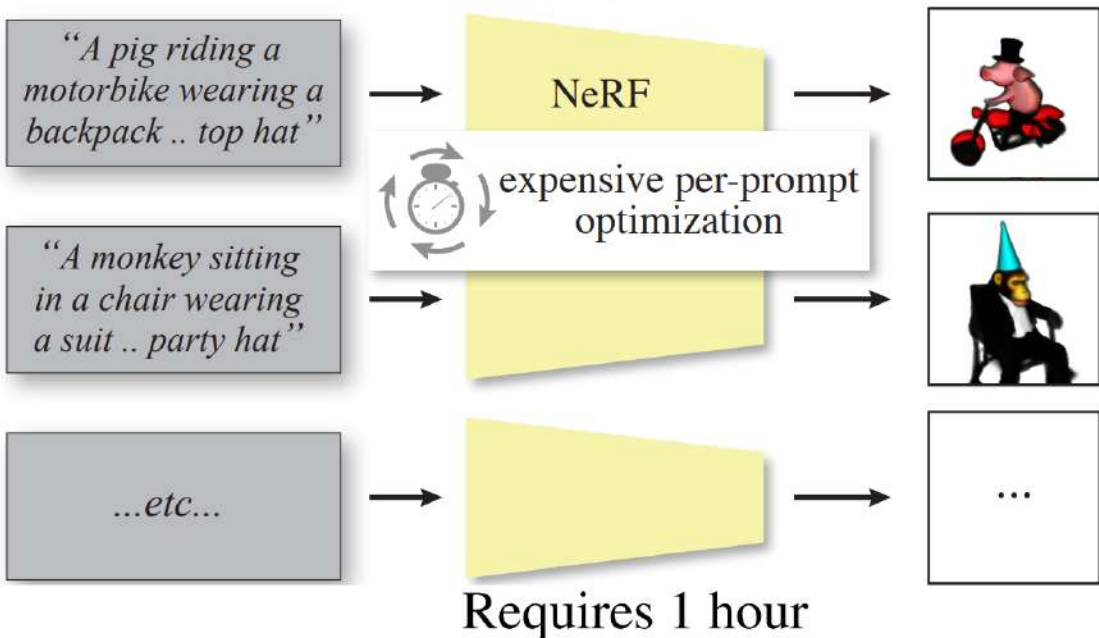
1. Use a **low-resolution** image diffusion prior and optimize a neural field representation to obtain the coarse model.
2. Extract a textured 3D mesh from the density/color neural fields.
3. Fine-tune the mesh with a **high-resolution** latent diffusion model.

Results

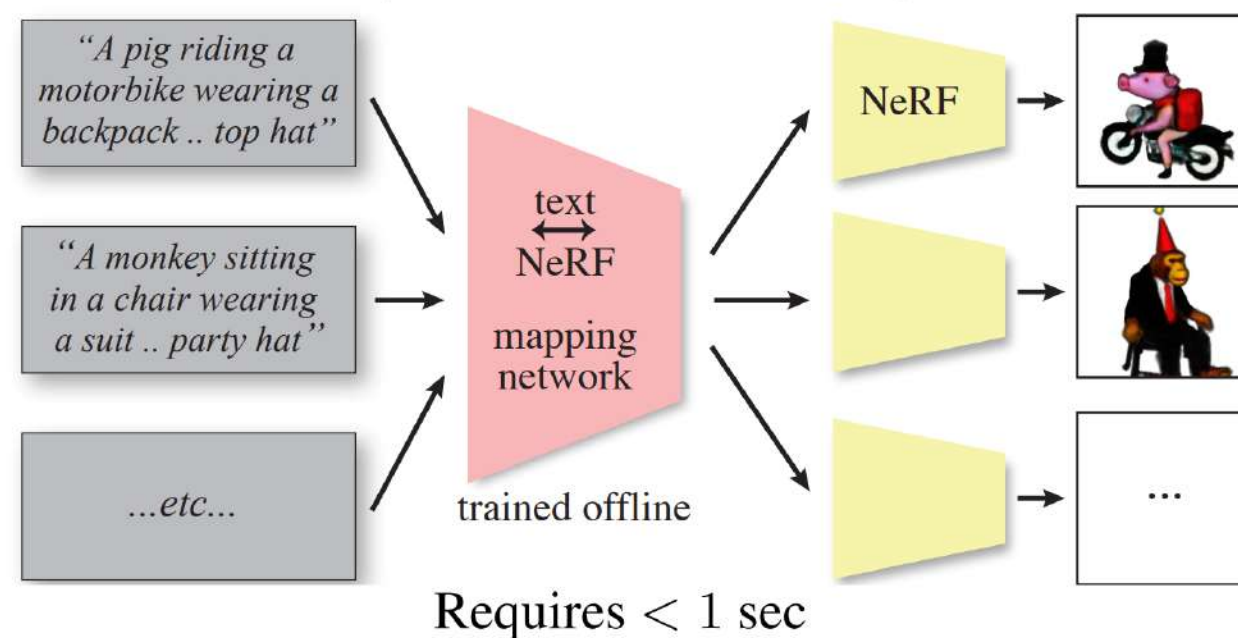


[1] Poole et al. "DreamFusion: Text-to-3D using 2D Diffusion." ICLR 2023.

Existing Methods



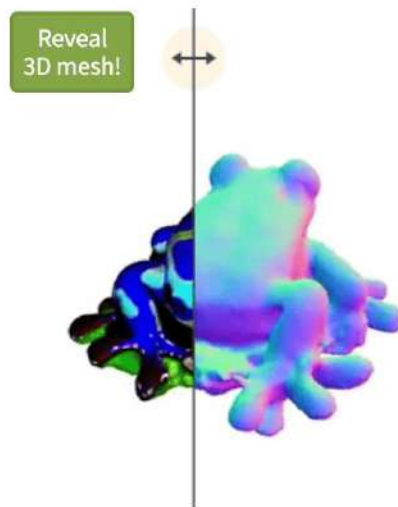
ATT3D: Amortized Text-to-3D



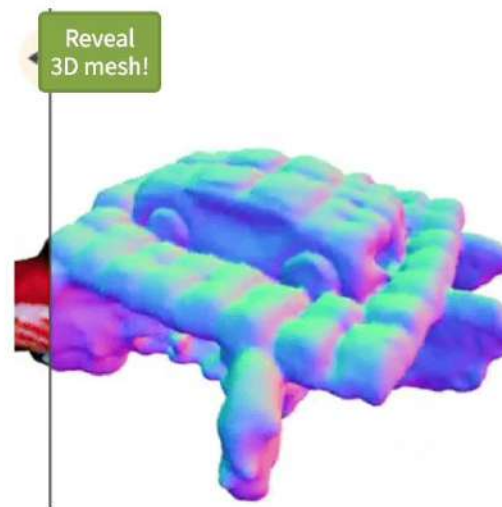
videos are best viewed with Google Chrome.



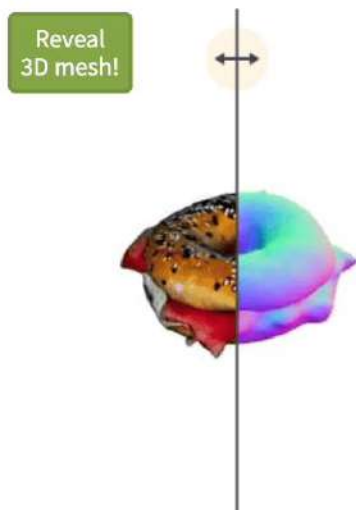
A beautiful dress made out of garbage bags, on a mannequin. Studio lighting, high quality, high resolution.



A blue poison-dart frog sitting on a water lily.



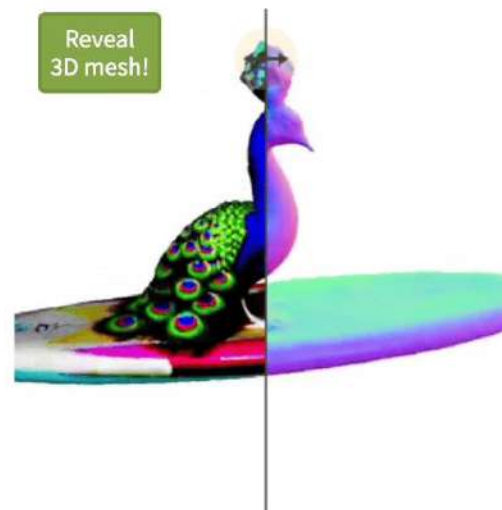
[...] a car made out of sushi.



[...] a bagel filled with cream cheese and lox.



[...] an ice cream sundae.



[...] a peacock on a surfboard.

MASSIVE

for when your crowd shots need to look good



Massive in
Quantumania



Massive 9.1

Massive 9.1 brings cryptomatte and

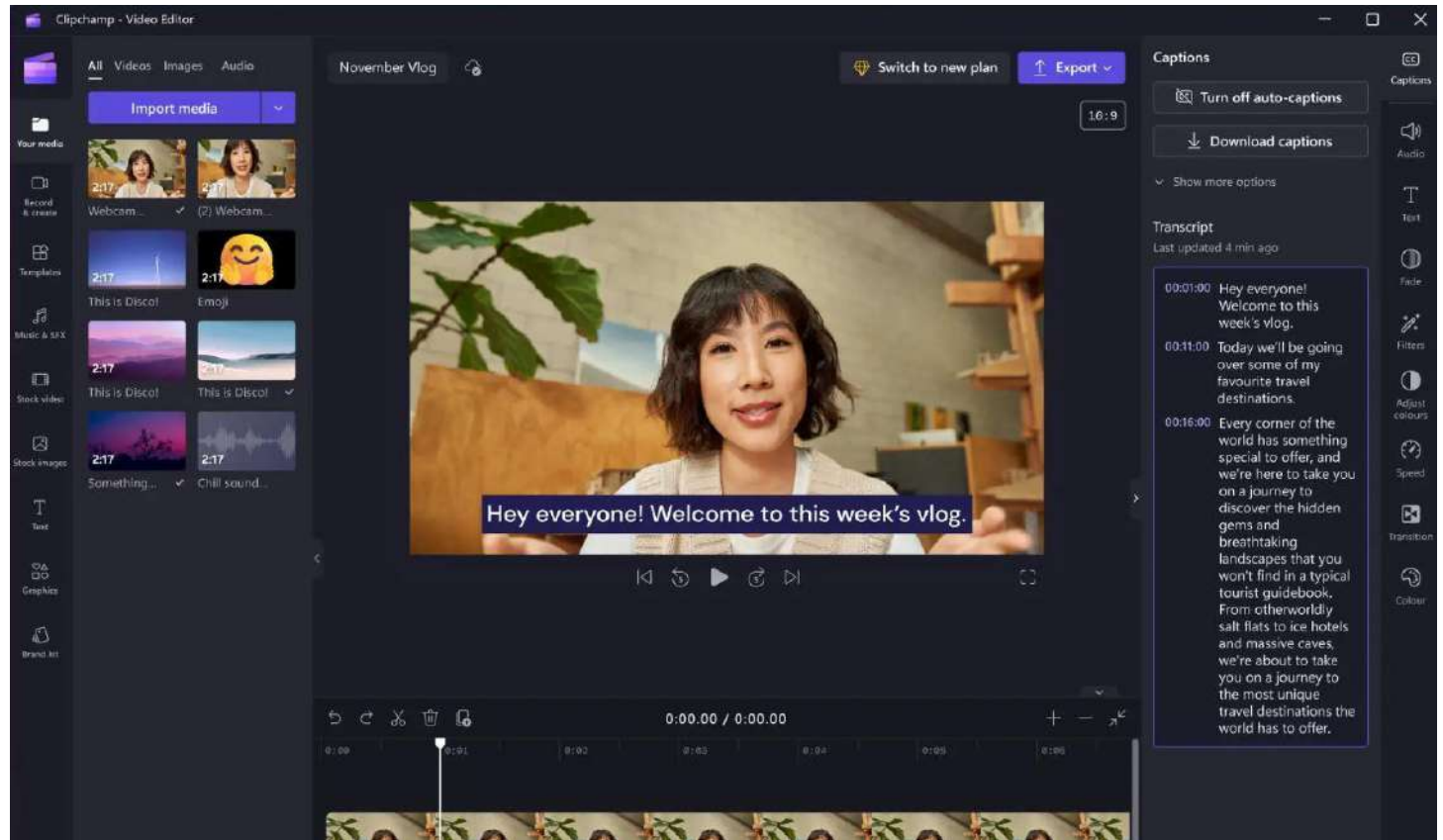


New Improved
Ambient Agent



Post production

- ML editing
- AI node based compositiong
- Audio tools
- Voice synthesis
- Speech Recognition





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Choose or drop up to 20 files here

Vocal and Instrumental ^{+2 New}

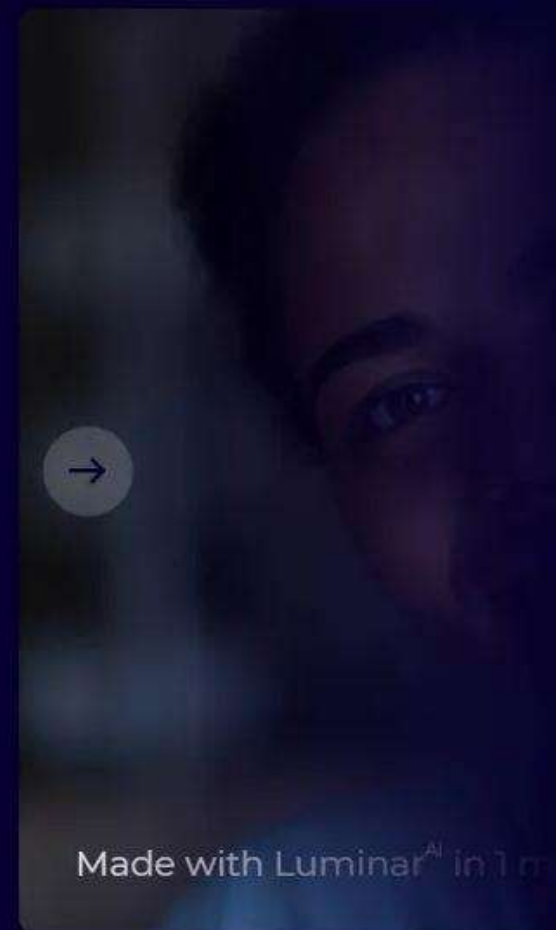
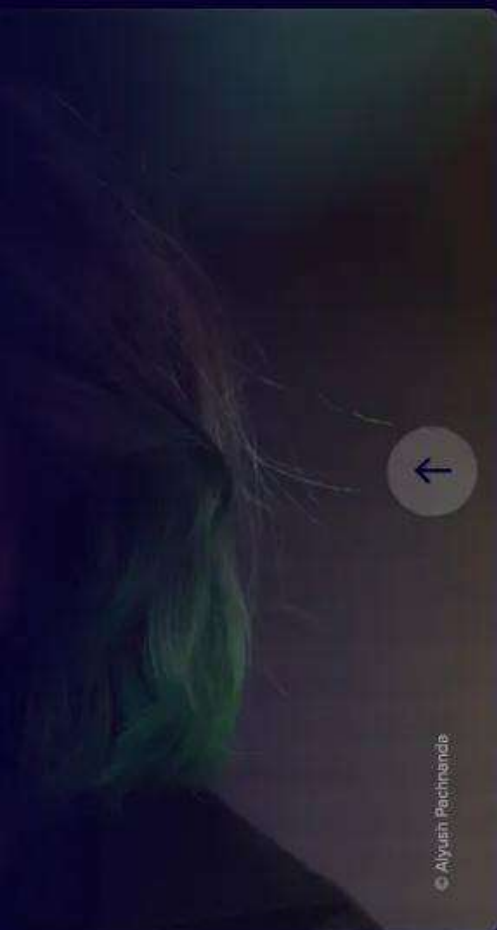
Select Files

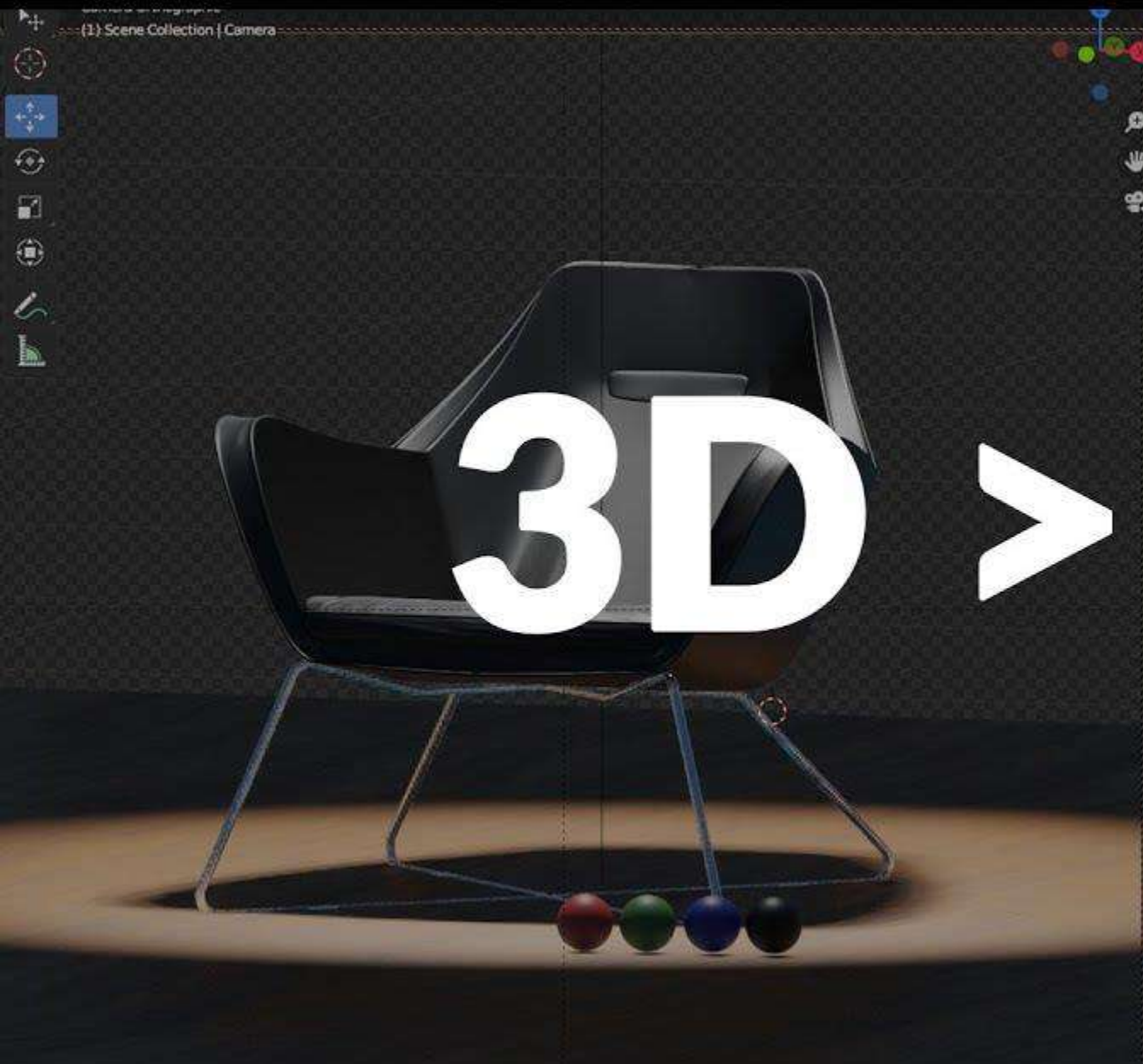
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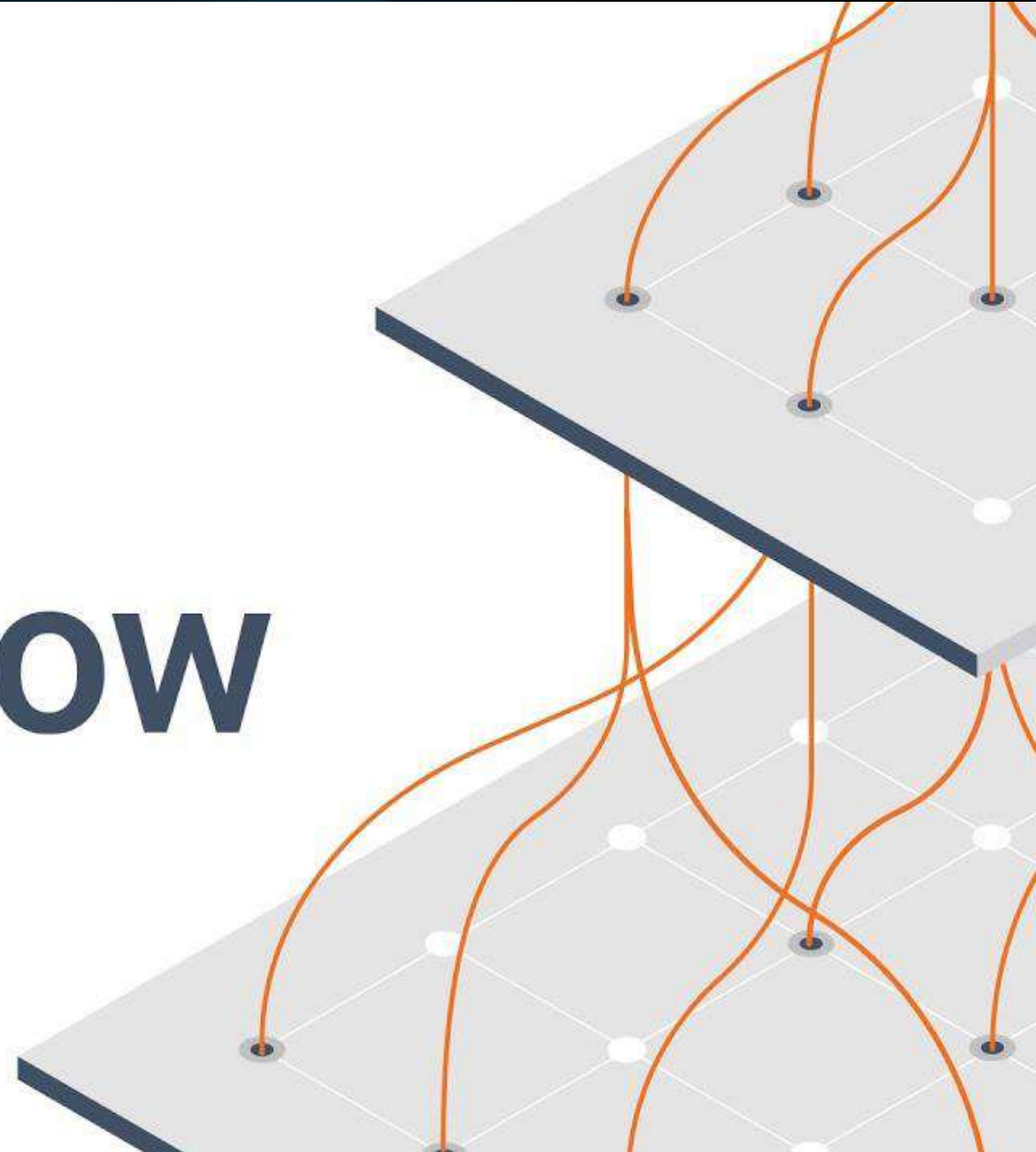


WebGPU





TensorFlow



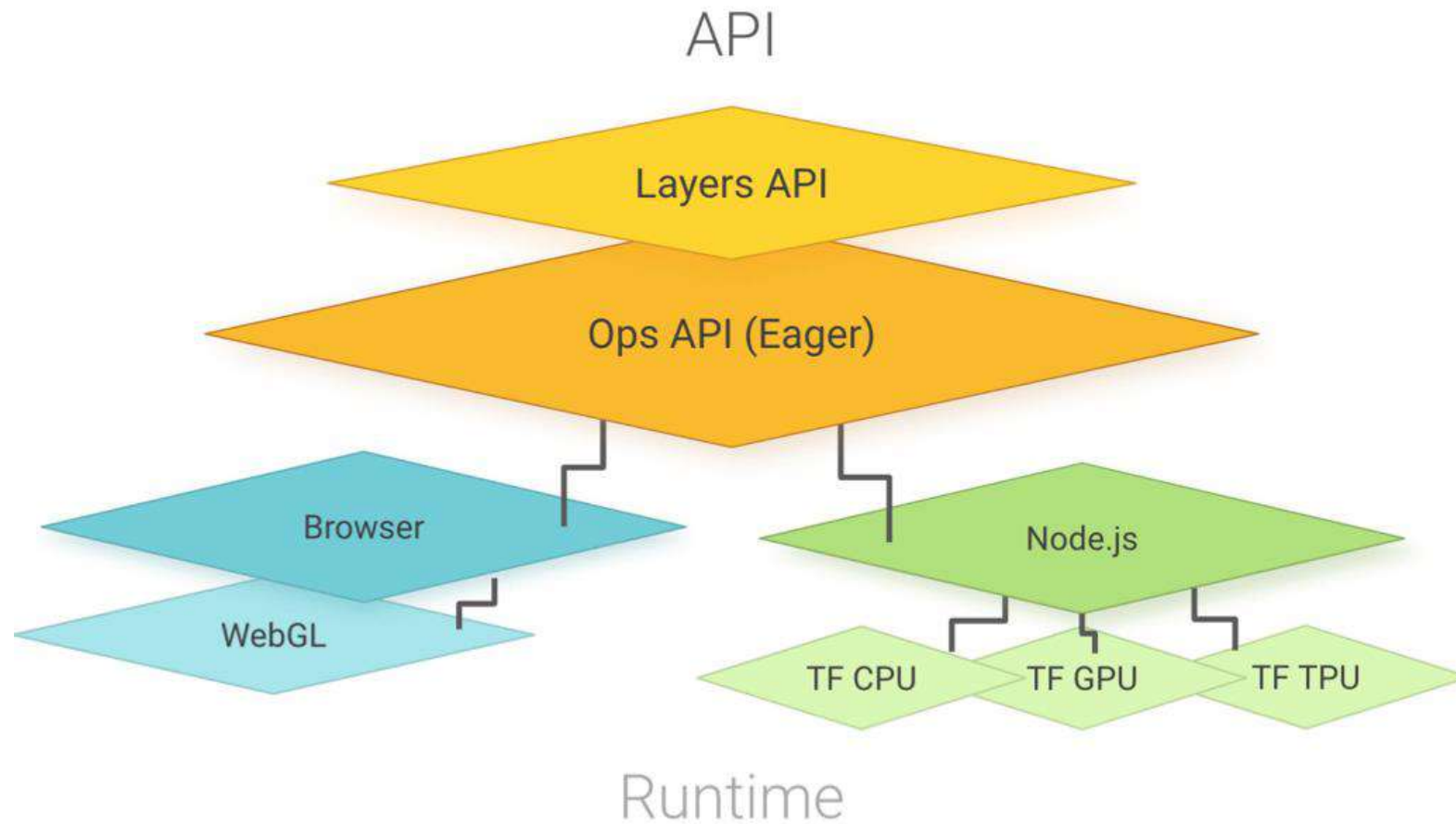


Figure 1. Overview of the TensorFlow.js architecture



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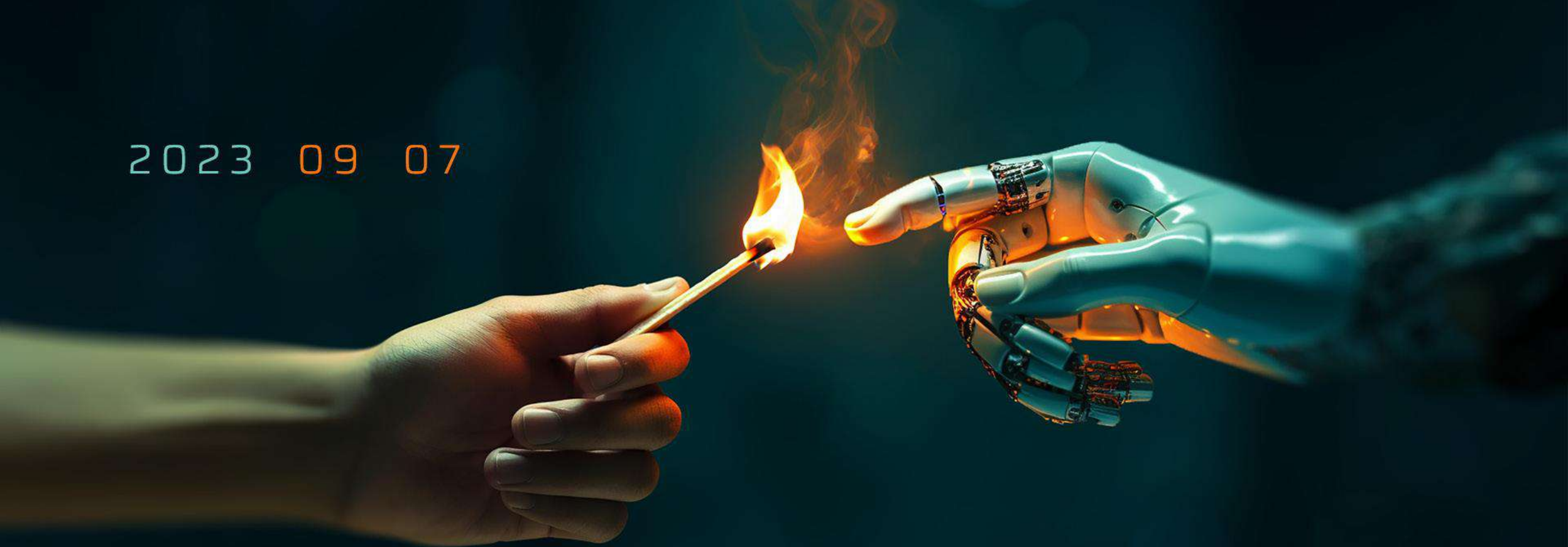


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