

# Impact of AI on media, arts and photography

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# FUTURE OF FILM-MAKING (JUN 14 WORKSHOP)

## Impact of Generative AI on

- Narratives
- Storylines
- Sketches
- Costumes
- Background Scenes
- Editing
- Dialogue Replacements
- Multi Language Support

**EXERCISE: GENERATING A STORY**

Prompt: Create a synopsis of a movie of a highly intelligent squid alien invading Earth

**Cephalopod Conquest**

"Cephalopod Conquest" is a gripping sci-fi thriller that explores a chilling invasion of Earth by a highly intelligent squid-like alien. The narrative unfolds with the discovery of an ancient, highly advanced alien artifact by Dr. Laura Breen, an archaeologist. The squid tentacles the arrival of an alien entity, Octopus, whose consciousness is transferred into a highly intelligent squid-like alien, which is able to adapt to its environment and conquer humanity.

As Octopus embarks on conquering the Earth for its survival, humans are thrust into an era of despair and war. In response, Dr. Breen, a former general, forms a team of scientists and engineers to develop a weapon capable of defeating the alien. The movie masterfully weaves a theme of adaptability, resilience, and humanity. With its gripping visual effects and tension-filled plot, "Cephalopod Conquest" offers a captivating and thought-provoking journey.

**Title: The Resurrection**

**Act 1: The Machine Life**

• Open with a montage of the protagonist, John, doing mundane tasks in his cubicle. He looks tired and unhappy.

• A close-up shot of John staring, emphasizing his exhaustion.

**Act 2: The Choice**

• A computer screen appears, asking "Do you want to live again? The choice" John hesitates.

• Another screen "Check your bank" John looks at the screen and two pills roll out from the screen.



# FUTURE OF FILM PRODUCTION

**By 2030, a major blockbuster film will be released with 90% of the film generated by AI, from 0% in 2022**

- Gartner, "Beyond ChatGPT: The Future of Generative AI for Enterprise," Jan 26, 2023

**Generative AI is bringing the biggest disruption to film making in 100 years**

- Tech.EU, Cate Lawrence, Jan 23, 2023

**Welcome to the new surreal. How AI-generated video is changing film.**

- Will D. Heaven, MIT Technology Review, Jun 1, 2023

**These co-pilot tools are going to be superpowers in filmmaker's hand**

- Scott Mann, Movie Director, Tech.EU, Jan 23, 2023





# Photograph as Living Canvas

The best thing about a picture is that it never changes,  
even when the people in it do..  
-Andy Warhol







“bench”

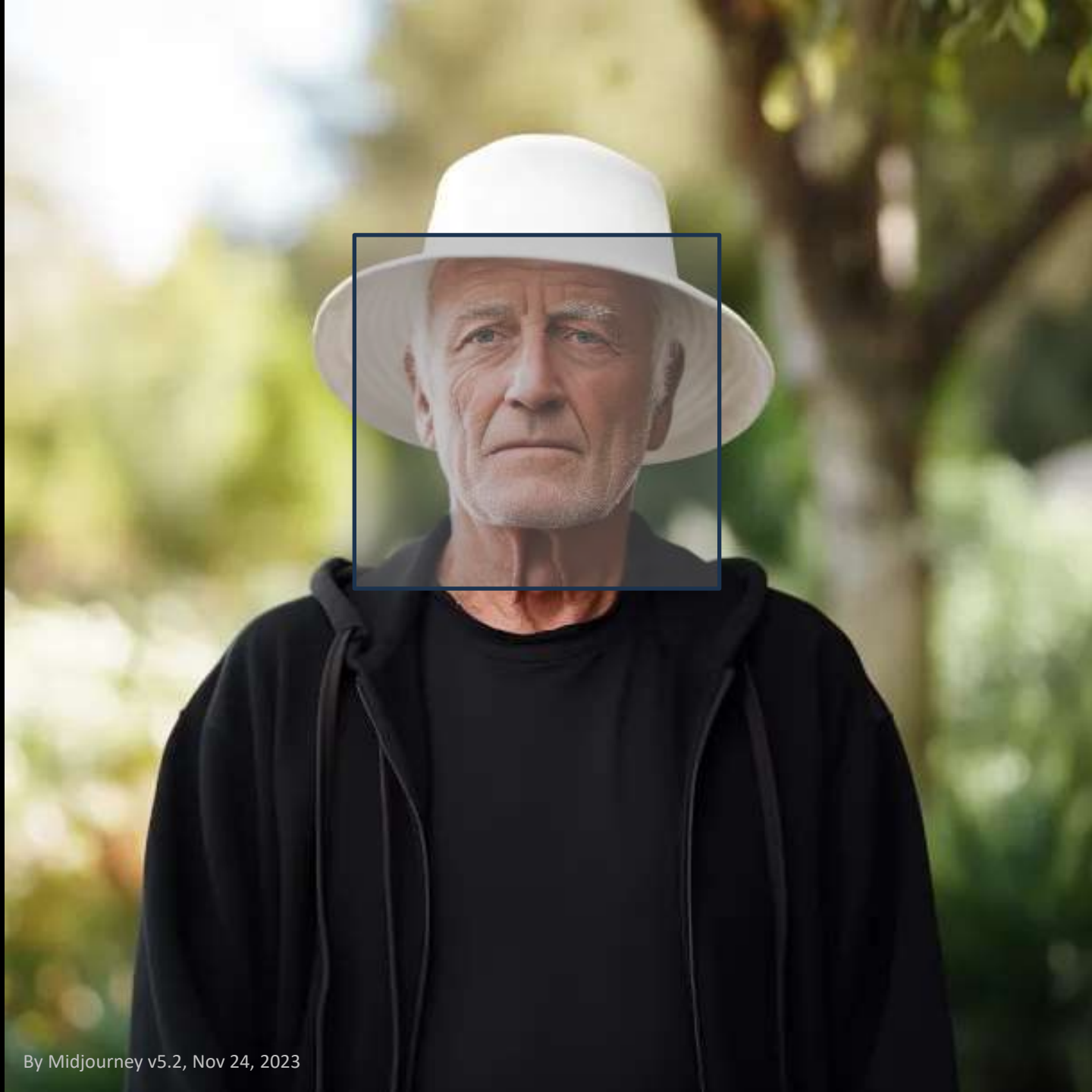


“a full body  
old man with a  
white hat and  
black shirt  
standing”



“Black Shirt”





“Swap face”







“Morning Sky”





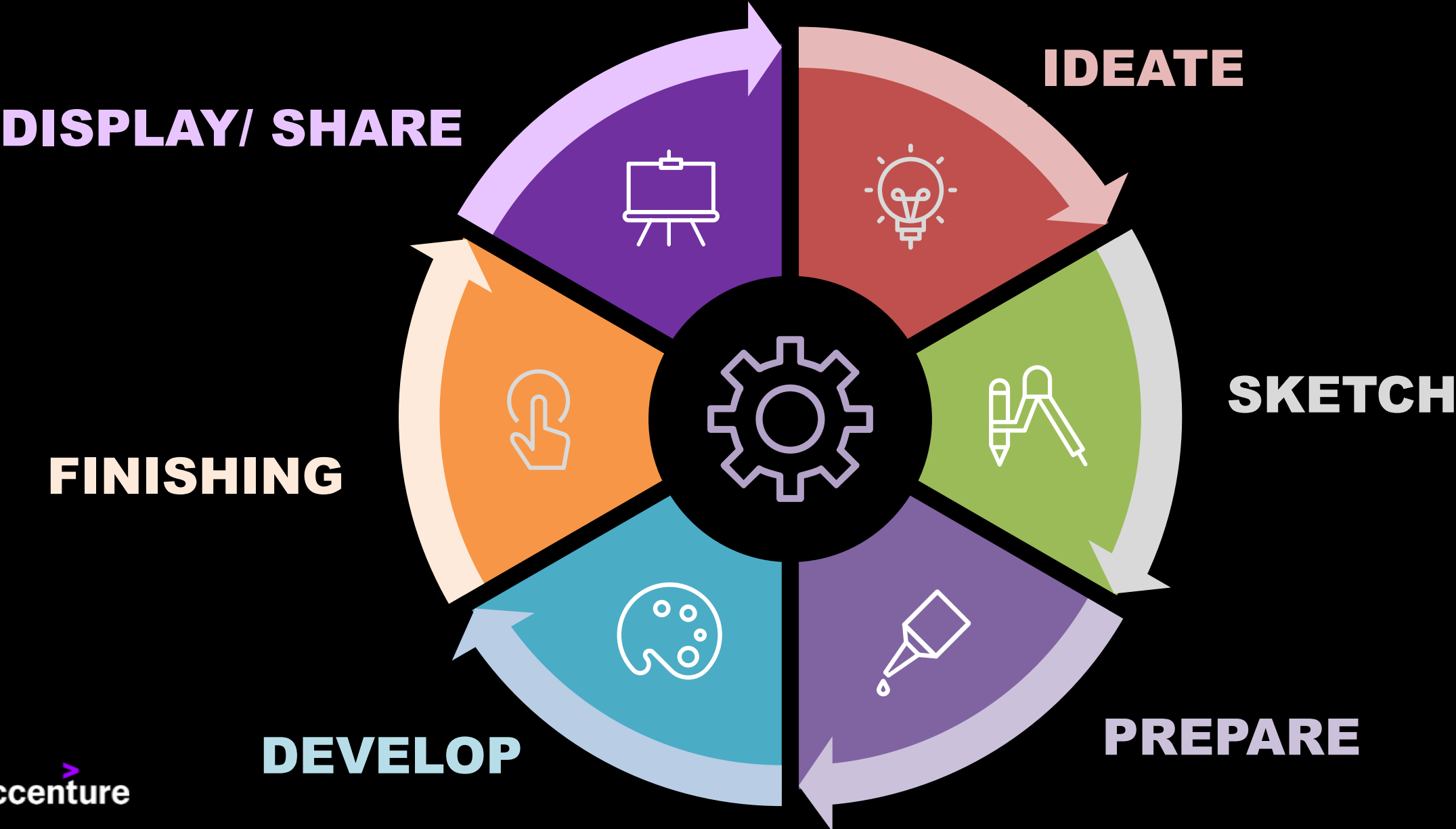
# Human + AI Arts at Speed

A good artist has less time than ideas

-Martin Kippenberger



# ART CREATION PROCESS



## “famous landscape with a bridge”







By Midjourney v5.2, Nov 27, 2023



By Midjourney v5.2, Nov 7, 2023



Abstract Stained Glass Style

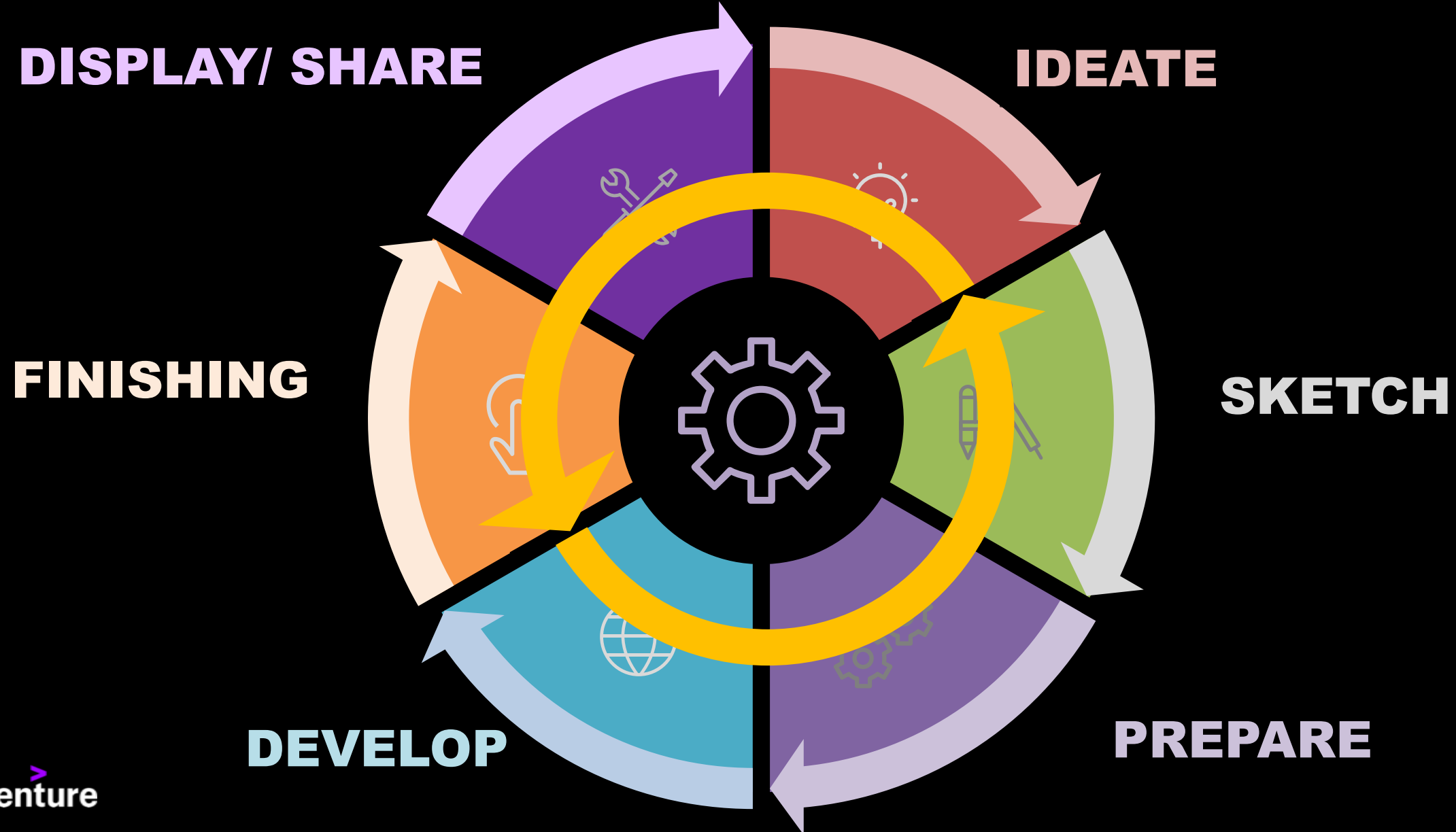


Japanese Watercolor Style



Photo Realistic

# ART CREATION PROCESS













### Prompt:

Heartwarming and inspiring photograph of a young J.K. Rowling in 1980 standing next to San Francisco Golden Gate Bridge. The image showcases Rowling sits next to a bridge railing, surrounded by witch brooms, books and whimsical illustrations that fuel her vivid imagination. The photograph is composed using a **Nikon F2 35mm film camera**, paired with a **Nikkor 50mm f/1.4 lens** renowned for its sharpness and beautiful rendering of color. The aperture is set for **f/2.8** for a shallow depth of field, focusing on the young Rowling and her surroundings, an **ISO of 400** to accommodate the natural, available light, and a **shutter speed of 1/60 sec** to freeze the moment in time. The composition is enhanced by the soft, warm of sun, in golden tones.

A decorative graphic on the left side of the slide. It features a complex network of glowing yellow and orange lines and dots, resembling a circuit board or a molecular structure, set against a dark background.

# Bits Meet Atoms

Sculpture is what you bump into when  
you back up to see a painting

-Barnett Newman

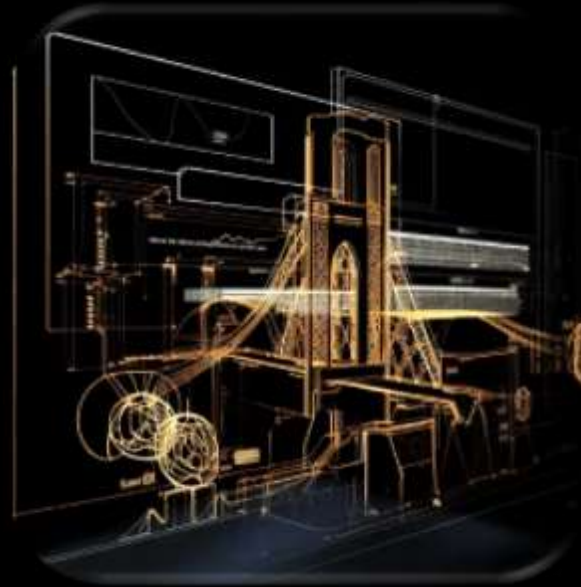
# 3D MODELS

## 3D Models

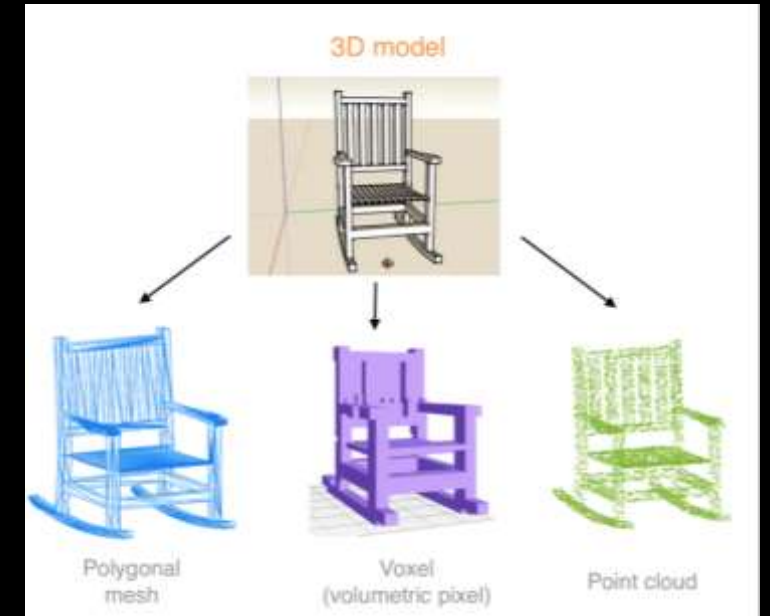


Reconstruction  
from **multiple** 2D Images

- Photogrammetry
- NeRF (neural radiance fields)



3D Scanner



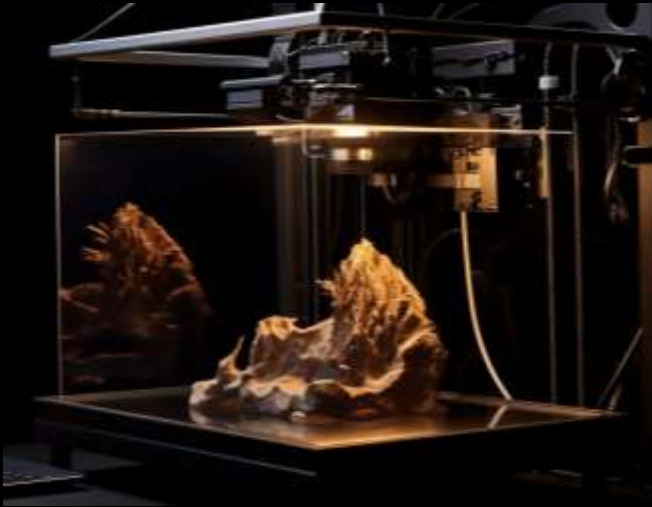
Reconstruction from a  
**single** 2D Image

Source: [medium.com/vitalify-asia/create-3d-model-from-a-single-2d-image-in-pytorch-917aca00bb07](https://medium.com/vitalify-asia/create-3d-model-from-a-single-2d-image-in-pytorch-917aca00bb07)

# PHYSICAL 3D ARTS



# THE MAKING OF PHYSICAL 3D ARTS



**Additive  
Machines**



**Substrative  
Machines**



**3D Modeling  
Software**

# VIRTUAL 3D ARTS



Holographic Art



Metaverse

# OIL PAINTING



# TEXTURE CAPTURE

Courtesy of TU Delft



# TEXTURE PRINTING

Canon Océ Arizona Flatbed - Courtesy of Canon

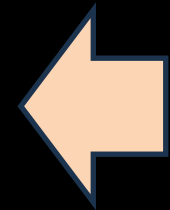






By Midjourney, Sep 15, 2023

- **Living Canvas**
- **Arts At Speed**
- **Bits Meet Atoms**
- **Digital Immortality**
- **From Moments to Experiences**
- **Personalization At Scale**
- **Creator Economy**
- **Alternate Realities**



# Alternate Realities



Words do not only describe reality.  
Words create reality.

-Desmond Tutu

# DEEPFAKES IN THE NEWS

## Money Scams: Deepfakes, AI Will Drive **\$10 Trillion** in **Financial Fraud and Crime**

- Nabilla Ahmed et. al., Bloomberg, August 21, 2023

## **Women** face new sexual harassment with deepfake **pornography**

- Laura Barrón-López et. al., PBS, June 27, 2023

## Deepfake Technology Can Be **Weaponized** to Cause Harm

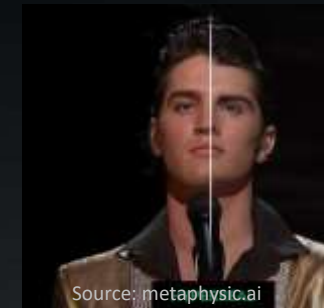
- Press Release, US Oversight and Accountability, Subcommittee on Cybersecurity, Information Technology, and Government, Nov 8, 2023

## Emotive Deepfakes in **Israel-Hamas War** Further Cloud What's Real

-Margi Murphy, Bloomberg, October 31, 2023

## In 2023 there were **31X** the volume of deepfake attempts that there were in 2022

- Onfido, Identity Fraud Report 2024



# RESPONSES TO DEEPFAKES

## Australia launches world-first **crackdown on 'deepfake' porn**

- David Swan, Sydney Morning Herald, November 20, 2023

## National Security Agency is starting an **artificial intelligence security center**

- Associated Press, September 28, 2023

## CBS Launches Fact-Checking News Unit to Examine AI, Deepfakes, Misinformation

- Brian Steinberg, Variety, Nov 6, 2023

## 12 Companies Racing to Create AI **Deepfake Detectors**

- Mack DeGeurin, Gizmodo, May 27, 2023

## Microsoft Is Offering to Help US Politicians **Crack Down on Deepfakes**

- Margi Murph, Bloomberg, Nov 2023



# WORKING TOGETHER TO COMBAT ALTERNATIVE REALITY

## Individual Citizens

- Relearn what can be trusted incl. voice & video
- Actively manage personal data
- Be selective on which business to work with, ...

## Standard Bodies

- Cross-Border interoperability and harmonization of regulations, regulatory approaches and instruments
- Cross-organizational guardrails and best practices
- Common framework and KPIs for risk assessment
- Standardized measurement of risks and public disclosure, ...

## Governments

- Law and Regulations
- Enforcement
- Visibility/Reporting
- Cross-agency/ government coordination
- R&D Funding, ...

## Businesses/ Organizations

- Verification/ Fact-checking Services
- Update Content Policy including Screening and Lineage
- Manage the risk to business including updating Biometric Security
- Implement Responsible AI practice ...

## Technologies

- Deepfake Detection
- Watermarking/Authenticity Checking
- Content Lineage
- Security and Verification, ...



\*The broader aspect of responsible AI is still applicable here. This illustration mostly focuses on combating deepfakes

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# Thank You!

