

# Origami and AI-Generated Images

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# Outline

- 1 Generative AI
- 2 How much skill or effort is needed?
- 3 Why?
- 4 So What?
- 5 The future?



# Introduction

- Focus on making images using Midjourney generative AI.
- Not a detailed technical explanation, nor will I cover other kinds of non-generative AI, e.g. OCR and language translation.
- Note: these presentation slides should not be taken out of context.



How much skill or effort is needed?

Why?

So What?

The future?

# Text to image: Create an image using a text prompt

origami elephant



How much skill or effort is needed?

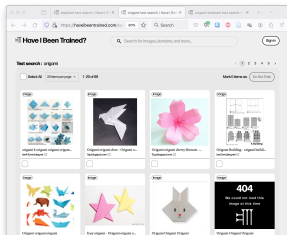
Why?

So What?

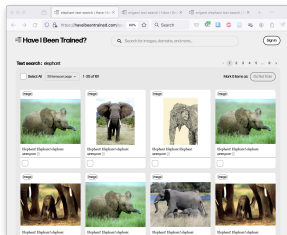
The future?

# Training data: Web scraping or custom data sets

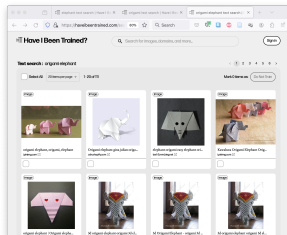
origami



elephant



origami elephant



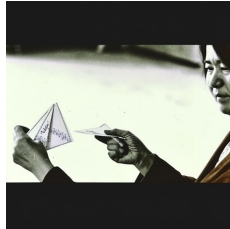
How much skill or effort is needed?

Why?

So What?

The future?

# Beyond the basics: Image to image



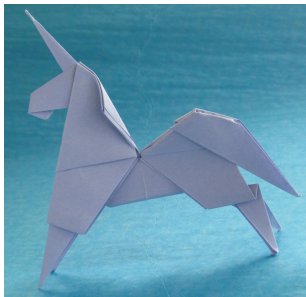
How much skill or effort is needed?

Why?

So What?

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## Beyond the basics: Image to text



A simple origami horse with wings, made from gray paper on a blue background. The unicorn is folded into an elegant figure and stands upright in the center of the picture. It has four legs that form two X's at its base, giving it six feet each. A small horn grows above its head. Its mane flares upwards towards one side while the other comes down to rest between both front paws. It seems ready for flight or battle. The overall effect gives off a calm and beautiful style.



How much skill or effort is needed?

Why?

So What?

The future?

# Beyond the basics: Outpainting





How much skill or effort is needed?

Why?

So What?

The future?

# Beyond the basics: Inpainting



How much skill or effort is needed?

Why?

So What?

The future?

# Beyond the basics: Varying



# How much skill or effort is needed?

- Easy** Sometimes, but often the result is not what you wanted or has flaws that are hard to fix
- Hard** Sometimes, but all technology has limitations. Some limitations may disappear over time, but not all?

As easy (or as difficult) as taking a photograph?



# Why?

- A “new” technology as disruptive as personal computers, social media, cryptocurrency or 3D printing (or not, as the case may be)
- Competitive advantage in creating artwork (or text)? But when everyone has the same advantage, no-one has an advantage.
- Explore image-making in ways outside your comfort zone, e.g. anime, watercolour, pattern-making, etc.
- A new medium?
- Inspire new origami?



# Why are companies offering generative AI?

- Who benefits?
- Deskill or replace workers: it's already happening
- Platform economy



# So What?

I learned art terms and artists new to me, e.g.

- knolling
- acrylic pour
- Junji Ito

As always, the terms other people use are important. I wanted marbled paper, but not enough training data? Acrylic pour gives similar results.

Results are only as good as the model and training data. Still cannot create a good traditional crane. Typical results are more like papercraft or low poly 3D renders.



# Issues

## Major AI problems

- bias
- hallucination
- plagiarism
- pollution
- computing power and the environment



# Image generation and origami creation

- “Mind sharing the prompt?” is like ‘Do you have diagrams?’
- Copyright and intellectual property
- A matter of taste.





# Consequences

- Slot-machine random reward or skilled technique? How much do we create what is in our minds vs. happy accidents or personal limitations?
- Photography made realism a side-issue (and changed how artists experienced the world), leading to impressionism, cubism, etc.
- AI makes technique a side-issue, leading to... a “democratisation” of image-making, like how social media democratised media, but created new gatekeepers.



# Consequences

- Can AI-generated images be copyrighted?
- Does training AI count as fair use, or is it sufficiently transformative?
- Copyright and intellectual property: you can't copyright a style.
- Is anything really new? 'AI is the flower, you are the bee.'  
David Holz
- 'there is no new thing under the sun' Ecclesiastes 1.9



# Post-scarcity?

- A firehose of content, a flood of synthetic data: images, text, video, sound, music.
- Our future is to clean up the outputs of AI?
- Enshittification: “Here is how platforms die: first, they are good to their users; then they abuse their users to make things better for their business customers; finally, they abuse those business customers to claw back all the value for themselves. Then, they die.” Cory Doctorow **Marshall McLuhan lecture**
- Train your own origami AI?
- Regulation and transparency

