



The potential of AI-Generated Media

Pattie Maes



Generative AI:

AI models that can generate new content based on many examples



Karen Cheng + Dall-E

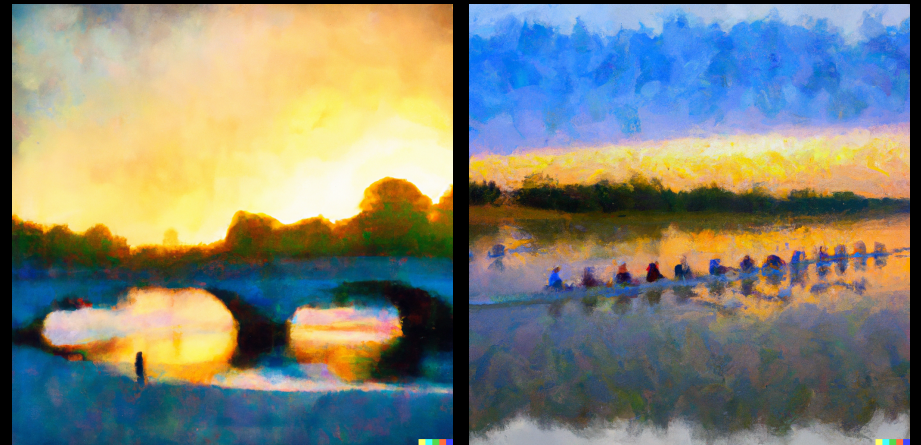
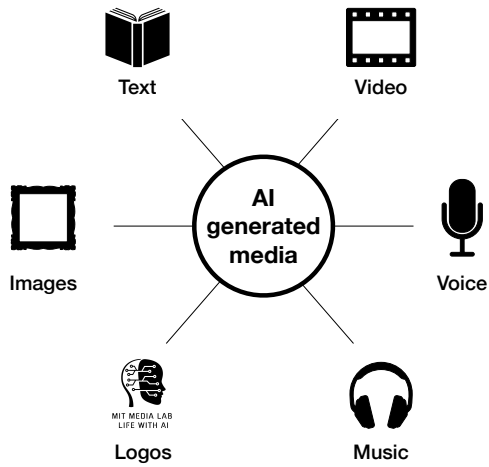
I Co-Wrote This With an AI Writing Tool

Can you distinguish which parts each of us wrote?

Alberto Romero
11 min ago



Alberto Romero + Lex



P. Maes + Dall-E "Charles river in the style of Monet"



Pat Pataranutaporn +
AI Logo Designer

Write a slogan for the Media Lab

The Media Lab: Where Innovation Meets Creativity

GPT3

Write a joke about the Media Lab

What do you call a room full of media lab students? A brain trust!

GPT3

Write a poem about the Media Lab

The Media Lab is a place
Where creativity and technology meet

A place where ideas are born
And brought to life

A place where the impossible becomes possible
And the future becomes reality

A place where minds come together
To change the world

GPT3

I Co-Wrote This With an AI Writing Tool

Can you distinguish which parts each of us wrote?

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A smiling typewriter. Credit: Author via Midjourney

Today, I bring you a full-on collaboration between me and the recently unveiled **Lex** to which Every's CEO **Dan Shipper** gave me access.

I won't use Lex just to generate ideas or write the headline. Instead, it will write entire portions without any editing on my side. And, to make it more fun, I won't reveal which ones until a few days after publication.

I don't know how it'll turn out but I advance that, even if Lex is better than I expect, I won't use these tools in the future **without disclosure**—I want to preserve my intent intact.

Anytime from now, I could be Lex.

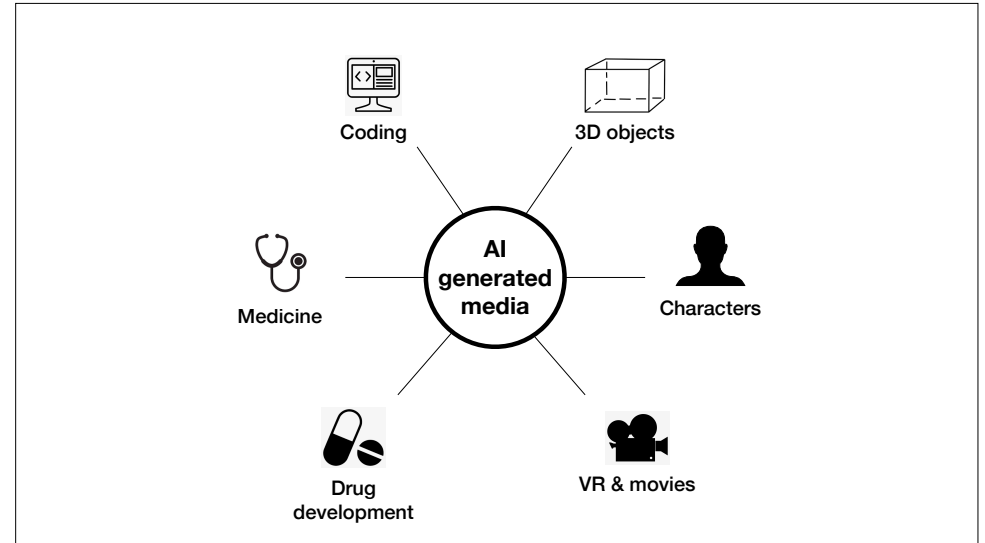
Before we begin, let's establish the rules of this game

If you're familiar with my writing, you know I tend to lay out a clear line of argumentation throughout any piece—I like to see myself more as an essay writer than a content creator.

To achieve this I always start with a headline, a subtitle, a structured outline, and, maybe most importantly, a predefined thesis that I want to defend.

Before I start writing, I already know the topic and the *direction* I'll explore. I may have

Alberto Romero + Lex



From AI generated image to 3D model to 3D printed functional object - Valdemar Danry



Credit: Meta

Top left: A dog wearing a superhero cape flying through the sky.
Top right: A spaceship landing on Mars.
Bottom left: An artist's brush painting on a canvas close up, highly detailed.
Bottom right: A horse drinking water.



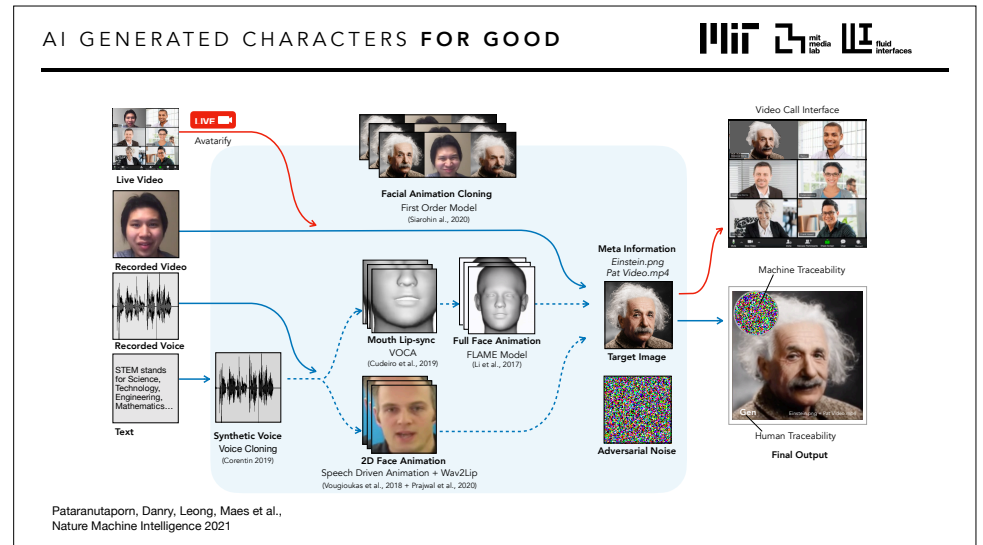
Lil Miquela



'Imma' by ModelingCafe, Japan

NTT Data

VIRTUAL CHARACTERS FOR TEACHING, HEALTHCARE, CUSTOMER SERVICE



AI-generated Virtual Humans



MIT Massachusetts Institute of Technology

mit media lab fluid interfaces

nature machine intelligence

AI-generated characters for supporting personalized learning and well-being

Pat Pataranutoporn¹, Valdemar Danny¹, Joanne Leong¹, Parinya Punpongsonan², Dan Novy¹, Pattie Maes¹ and Misha Sra^{1,3,4}

Advancements in machine learning have recently enabled the hyper-realistic synthesis of prose, images, audio and video data, in what is referred to as artificial intelligence (AI)-generated media. These techniques offer novel opportunities for creating interactions with digital portrayals of individuals that can inspire and intrigue us. AI-generated portrayals of characters can feature synthesized faces, bodies and voices of anyone, from a fictional character to a historical figure, or even a deceased family member. Although negative use cases of this technology have dominated the conversation so far, in this Perspective we highlight emerging positive use cases of AI-generated characters, specifically in supporting learning and well-being. We demonstrate an easy-to-use AI character generation pipeline to enable such outcomes and discuss ethical implications as well as the need for including traceability to help maintain trust in the generated media. As we look towards the future, we foresee generative media as a crucial part of the ever growing landscape of human-AI interaction.

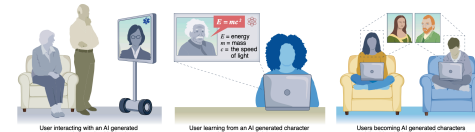
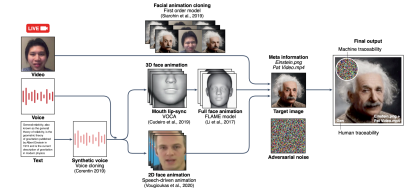
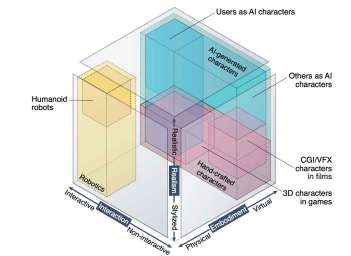
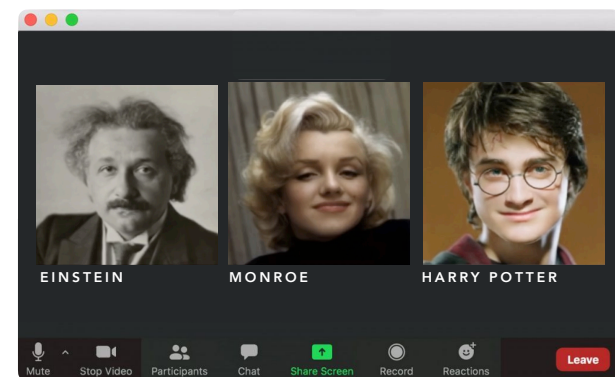


Fig. 1 | Example applications of AI-generated characters that resemble contemporary and historical figures. Users are shown interacting with an AI-generated character during a health check (left), learning from an AI-generated character resembling an expert in a lecture (middle) and becoming AI-generated characters that resemble historical characters for role playing (right).



AI GENERATED CHARACTERS FOR GOOD

MIT mit media lab fluid interfaces

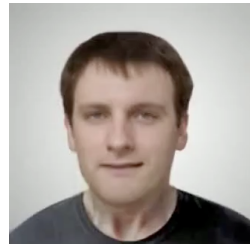


TEACHING & LEARNING

Learning from Virtual Idols: The Use of AI-generated characters for Enhancing Motivation in Online Learning



Experimental

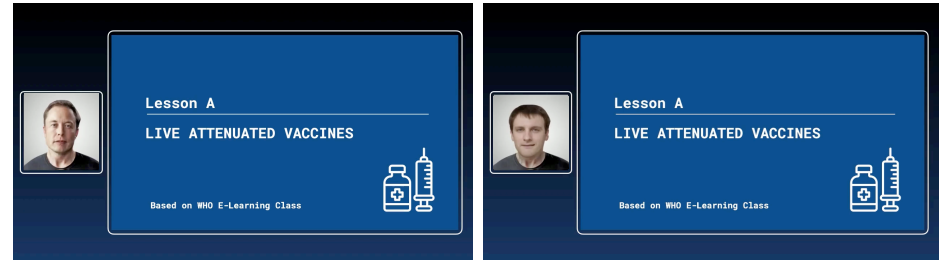


Control

Pataranutaporn*, Leong*, Danry et al., 2021



Learning from Virtual Idols: The Use of AI-generated characters for Enhancing Motivation in Online Learning

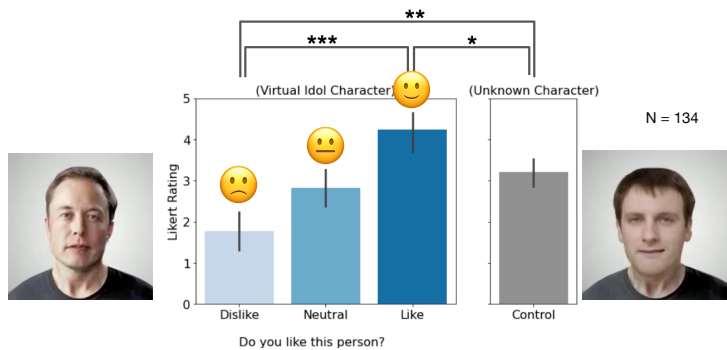


Pataranutaporn*, Leong*, Danry et al., 2021



Learning from Virtual Idols: The Use of AI-generated characters for Enhancing Motivation in Online Learning

I would like more advanced material from this instructor.

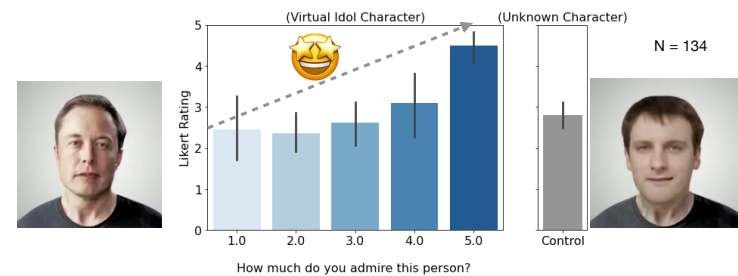


Pataranutaporn*, Leong*, Danry et al., 2021



Learning from Virtual Idols: The Use of AI-generated characters for Enhancing Motivation in Online Learning

The instructor led me to think more deeply about the presentation.

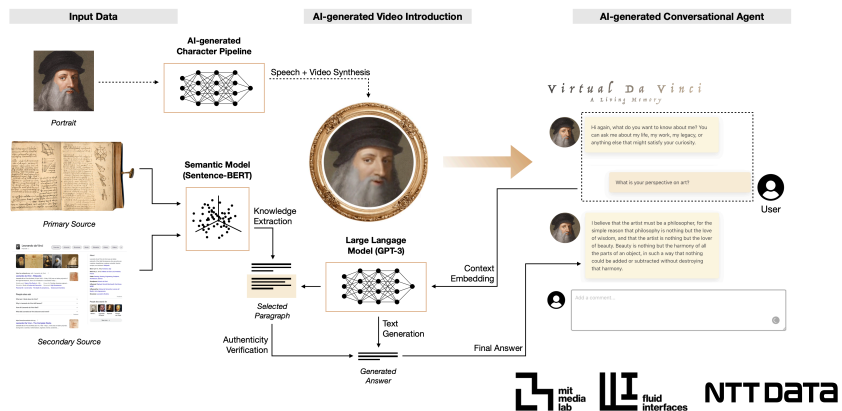


Pataranutaporn*, Leong*, Danry et al., 2021



Living Memory: AI-Generated Characters as Digital Mementos

Pat Pataranutaporn, Valdemar Danry, Lancelot Blanchard, Lavanay Thakral, Pattie Maes, Misha Sra



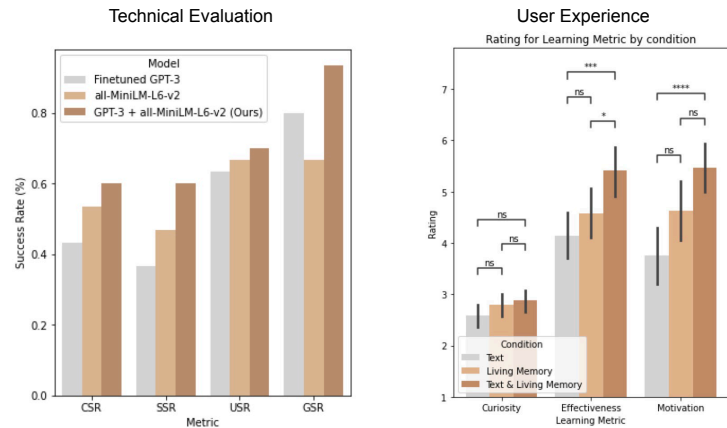
Living Memory:

AI-Generated Characters as Digital Mementos

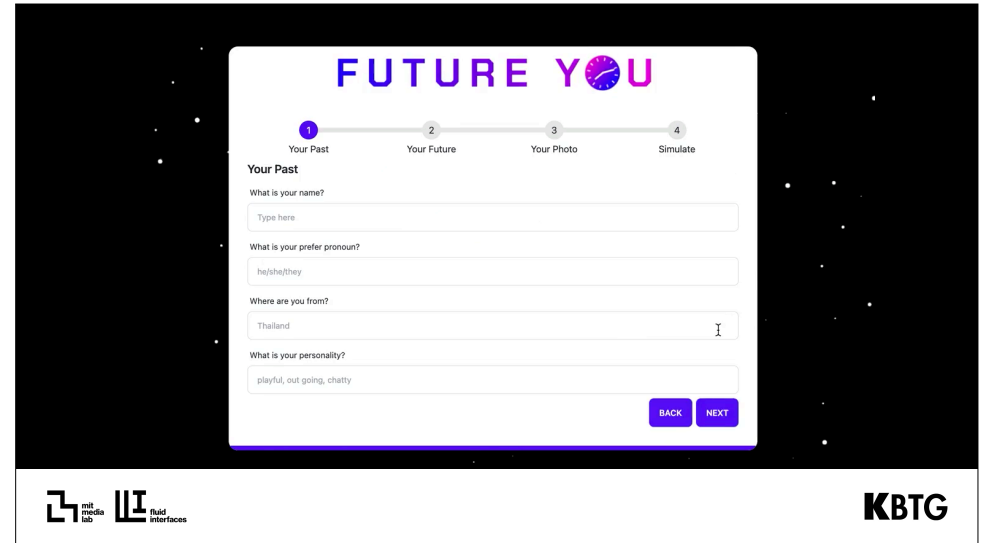
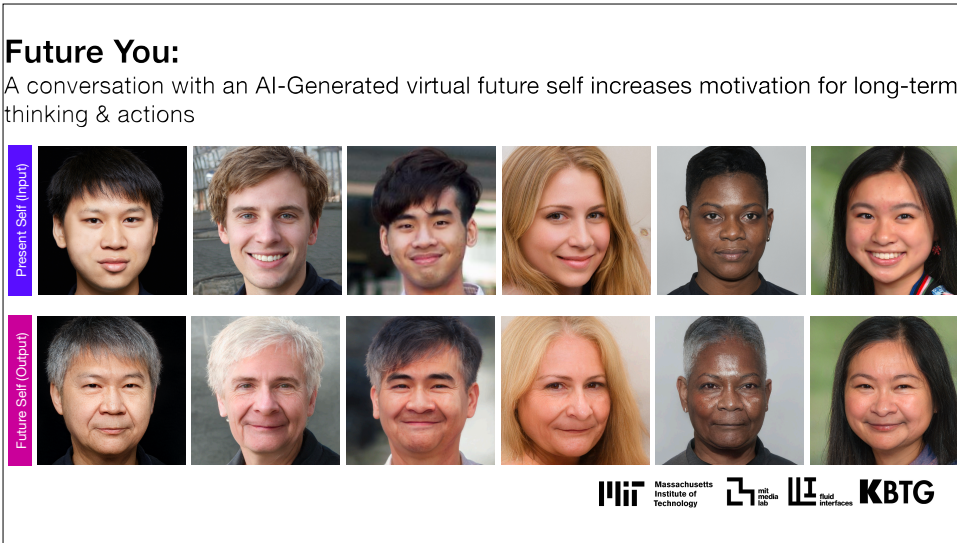
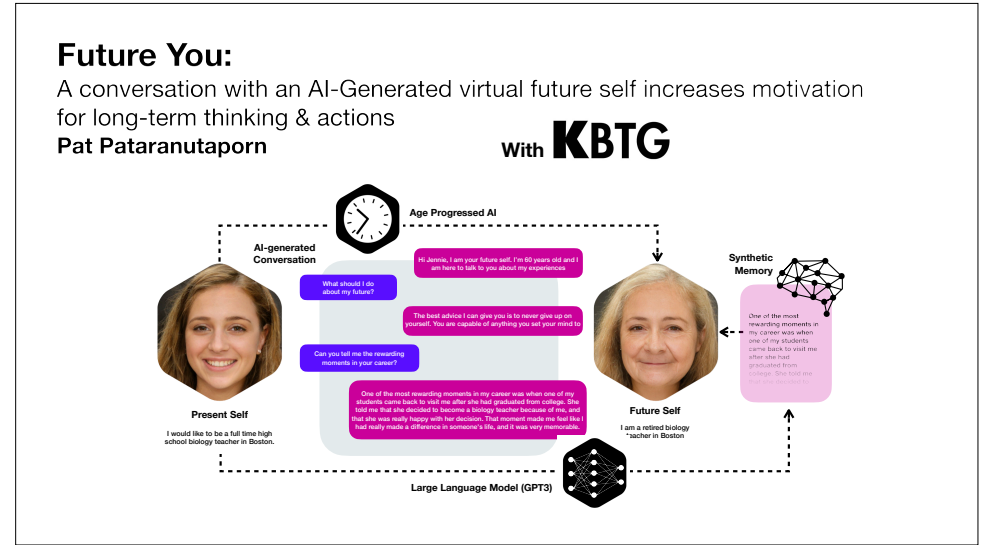
Vald Danry & Pat Pataranutaporn, Joanne Leong with NTT DATA



Living Memory: AI-Generated Characters as Digital Mementos



(Paper under review)



FUTURE YOU



1 — 2 — 3 — 4
 Your Past Your Future Your Photo Simulate

Your Future

What do you want to be 10 years from now?


What do you like?



What do you don't like?

FUTURE YOU

1 — 2 — 3 — 4
 Your Past Your Future Your Photo Simulate



FUTURE YOU



I'm your future self, Pat. I'm here to tell you that everything is going to be alright. You're going to accomplish great things in the next 10 years, but because we're from different timelines, there might be some differences between us. Nevertheless, I'm sure you'll end up just like me in the end.

Wow! that is!




FUTURE YOU

Can you tell me the most challenging moments in your career?



The most challenging moment in my career was when I had to make the decision to leave my teaching job and become a full-time writer. It was a hard choice, but it was the right one for me. I'm so glad I made the decision because now I get to do what I love full-time and help people through my writing.

When did that happen?



It happened about 10 years ago. I was teaching at a school that I loved, but I always had a passion for writing. I decided to take a leap of faith and pursue my writing full-time. It was scary, but it was the best decision I ever made.

Your message here...



Group	Value
Control	~3.4
Exp_Low	~3.2
Exp_High	~3.8



Group	Value
Control	~5.5
Exp_Low	~5.2
Exp_High	~6.0




Challenges

- No real understanding
- Hard to control behavior
- Sometimes spectacularly bad
- Biased
- Deepfakes and fake news
- Rights of original human creators?
- How to regulate
- Machines increasingly selecting/creating what we consume
- Energy consumption

Summary

- Generative AI is crossing into the mainstream and creating new business opportunities
- AI-Generated characters will increasingly play a role as the interface for people to interact with a digital service

