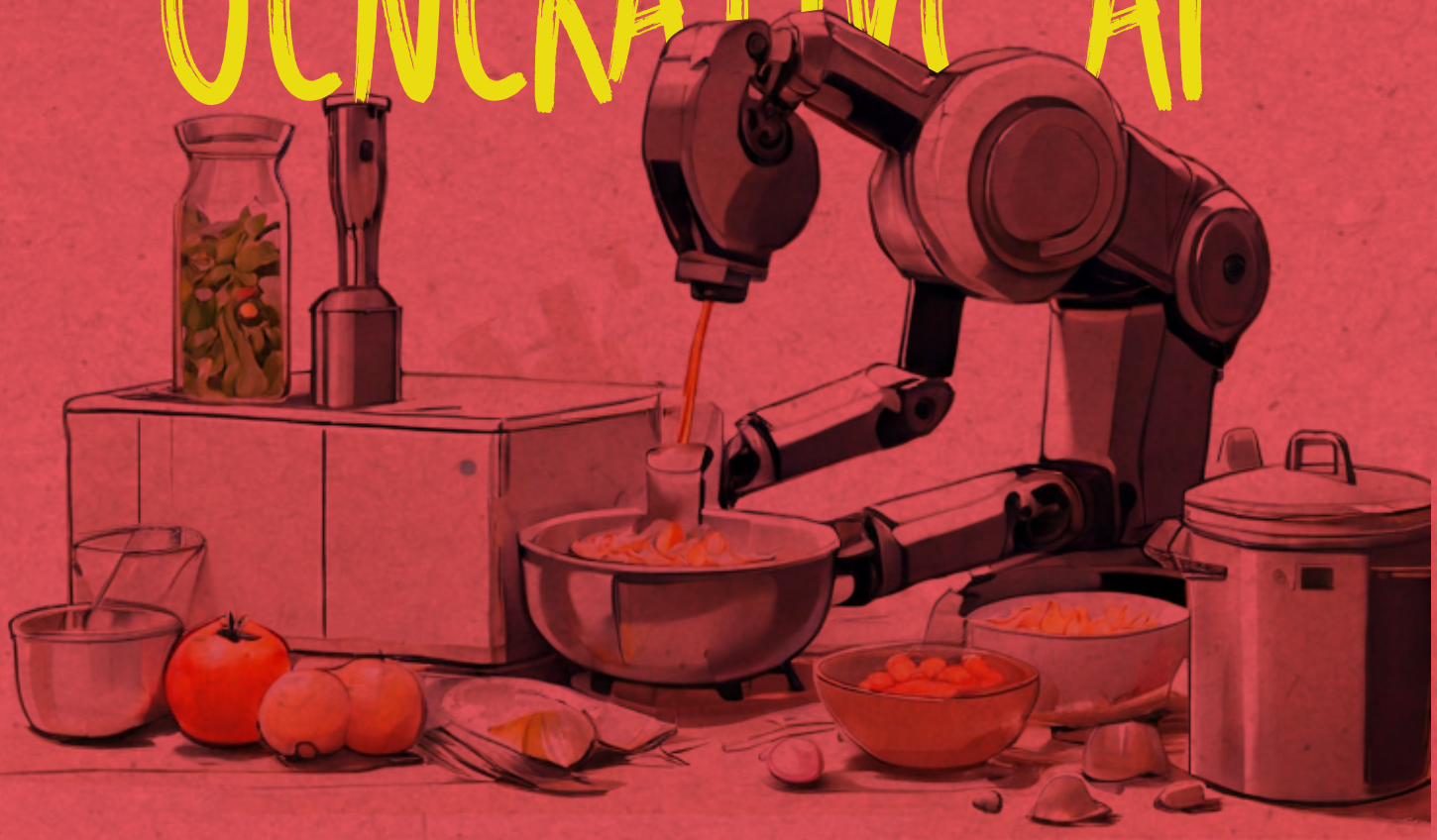
THE SECRET RECIPE TO ~~COOK~~ WORK WITH GENERATIVE AI



By: TK, Eleanor, Samantha

Get to know the ~~ingredients~~ Tools

How Generative AI works

Data Collection: A large dataset is collected, containing examples of the type of data the model is intended to generate. For text generation, this could be a collection of books, articles, or other textual data. For image generation, it could be a dataset of various images.

Training the Model: The generative AI model is trained on this dataset using a specific algorithm. For instance, in the case of text generation, models like GPT (Generative Pre-trained Transformer) are often used. During training, the model learns patterns, structures, and relationships within the data.

Learning Patterns: The model captures the underlying patterns and relationships present in the training data. For example, a text generation model might learn grammar rules, sentence structures, and semantic relationships.

Generating New Data: Once the training is complete, the generative AI model can be used to generate new, original data based on the patterns it has learned. For text generation, you input a prompt or starting phrase, and the model continues generating text in a coherent manner.

~~Grocery~~ Tools! Shopping!

Generative AI refers to artificial intelligence systems that have the ability to generate new content or data rather than simply analyzing and processing existing information. These systems are designed to produce novel outputs that may resemble human-created content. Here are some common applications and tasks that generative AI can perform:

Image Generation (text-image)

Generative AI, particularly models like Generative Adversarial Networks (GANs), can create realistic images. These generated images can range from entirely new and imaginative scenes to realistic faces that do not correspond to real individuals.

Text Generation (text-text)

Generative AI models can be trained to produce human-like text. This can be applied to tasks such as automatic story generation, poetry creation, or even generating coherent and contextually relevant sentences in natural language.

Music Composition (text-audio)

Generative AI can be used to compose music by learning patterns and styles from existing compositions. The model can then generate new pieces of music based on the learned patterns.

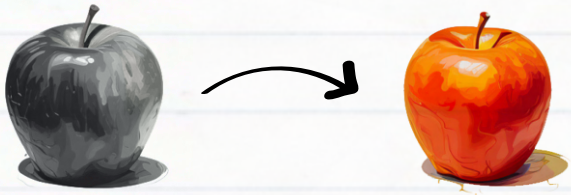
Video Generation (text-motion)

Similar to image generation, generative AI models can be used to create synthetic videos. This could involve generating new scenes, altering existing footage, or even creating entirely computer-generated animations.

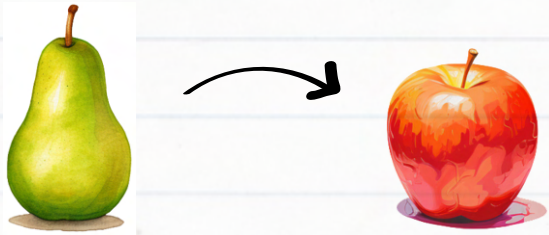
Which ~~apple~~ AI best fit to your dish

Apple

DALL-E [Image Generation]:
DALL-E: Also created by OpenAI, DALL-E is a variant of the GPT-3 model that is specialized in generating images from textual descriptions. It can create unique and creative images based on textual prompts.

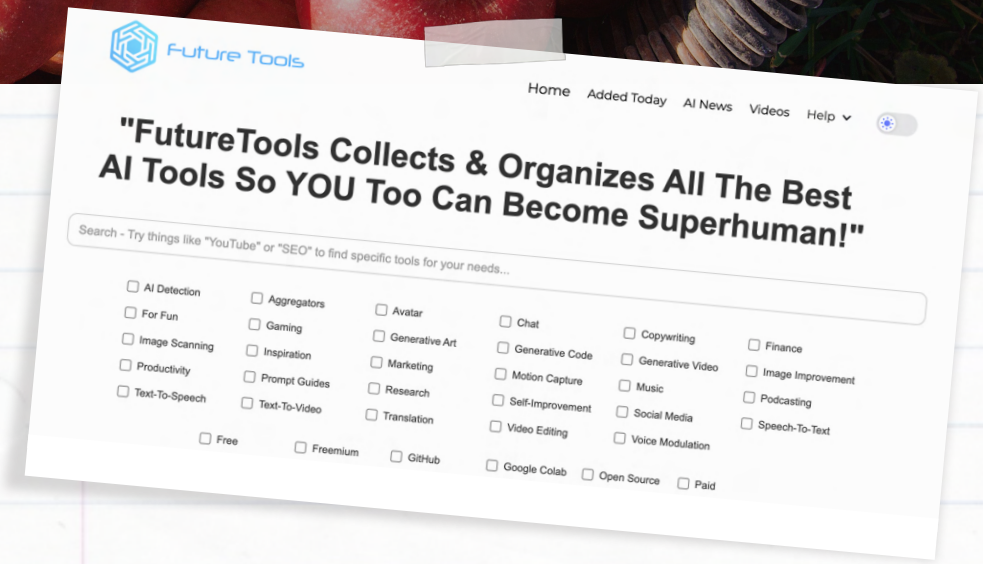


Pix2Pix [Image-to-Image Translation]:
Pix2Pix: This model is used for image-to-image translation, converting images from one domain to another. It has been applied to tasks such as turning satellite images into maps, black-and-white photos into color, and more.



StyleGAN [Generative Adversarial Network for Images]:
StyleGAN: This is a generative adversarial network [GAN] designed for image synthesis. It's capable of creating high-quality and realistic images. StyleGAN has been used for creating deepfakes, art generation, and other applications.

More Generation Tools!



Can't find your prefered tools? try look it up at: *www.futuretools.io*

the archive that have more than 2,000 tools in every field!

Apple

An apple a day keeps doctor away.

GPT Models (Generative Pre-trained Transformer):
GPT-3: Developed by OpenAI, GPT-3 is one of the most advanced generative language models. It can generate coherent and contextually relevant text based on input prompts. GPT-3 is used for various applications, including natural language understanding, code generation, and more.

Apple

WaveGAN (Generative Adversarial Network for Audio):
WaveGAN: This GAN is designed for generating audio, particularly realistic sound signals. It has been used for tasks like generating musical instrument sounds and speech synthesis.

But first!

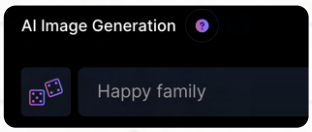
Before we cook, there's something to be aware of

1

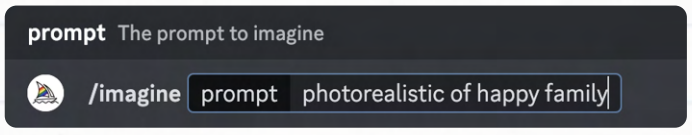
We have biases, and so does AI.

One of the biggest concerns of working with generative AI is getting biased results from it. Since the systems operate on large datasets from the internet, where people post various perspectives online, the outcomes of generative AI can unintentionally lead to stereotypes or alienate certain demographics. For example, if the training dataset predominantly features images of a specific demographic, the generated content may only favor that group of people without inclusivity. Therefore, awareness of this issue is crucial, and advertisers should address it by using diverse data, refining prompts to be more specific, and regularly checking and adjusting the AI's results to meet ethical standards.

Therefore, within the AI bias issue, it can lead to a challenge of cultural appropriation.
For example, try writing a prompt like 'Happy family' in AI image generation.



Leonardo.ai



Midjourney

Generate!

The results

Leonardo.ai

Midjourney

There's bias in it

The AI's results from both platform surprisingly depict the 'happy family' in a similar outcome, showing Caucasian-looking family only, with no other skin tones represented. It also portrays a complete family with a father, mother, and children, whereas in reality, a happy family can consist of any number of members, with or without parents or children.

Moreover, the generated images only show a stereotypical family, overlooking the possibility of a happy family having same-sex parents. These results present very subjective pictures, implying that only certain group of people are considered to be a happy family.

Then, how can we solve this problem?

How can we make the images a better version?
It is as simple as the advertiser writing prompts with extreme specificity, **leaving no room for the AI to interpret** anything that appears in the image. Therefore, advertisers should already have the desired result picture in mind to prompt writing and generate the images. It is also important to remember not to stereotype when generating these pictures and always consider inclusivity to avoid AI biases.

Let's try to generate again with more specific details. 'Japanese family consist of four member, father, mother, daughter, and son happily helping each other to make dumpling together in the kitchen. With the cola bottles on the desk.'

Leonardo.ai

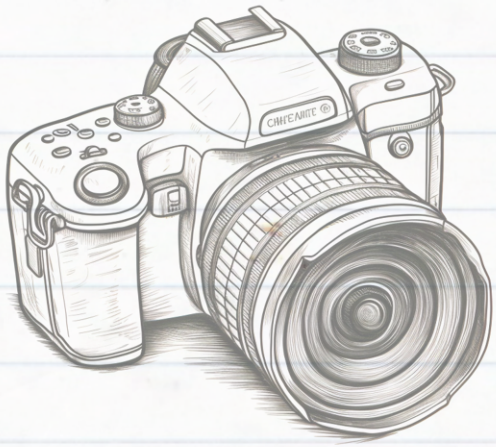
Midjourney

Look at how with just a few more details, the image becomes more lively and feels more natural. By adding details like activities or having the character do something in the picture, rather than just smiling at the camera, you can add character and personality to the image, which is important to convey the campaign messages. Therefore, practicing writing prompts, not only for image generation but for all kinds of generative AI, can also help reduce AI bias and achieve the envisioned result for the ad campaign.

*Not so secret recipe to write prompt

Try to think of these details:

The lighting
The color scheme
The artistic styles
The camera shot
The camera angle
The camera setting
The camera lens and brand



Each little detail can make a different to the generated image.
Here's an example of our *Head chef's portrait*

Artistic style — Camera model — Camera lens

/imagine prompt: photography shot by nikon d5300, 50 mm, DSLR,

Action details

realistic, portrait of a man chef wearing a chef hat, intense gaze,

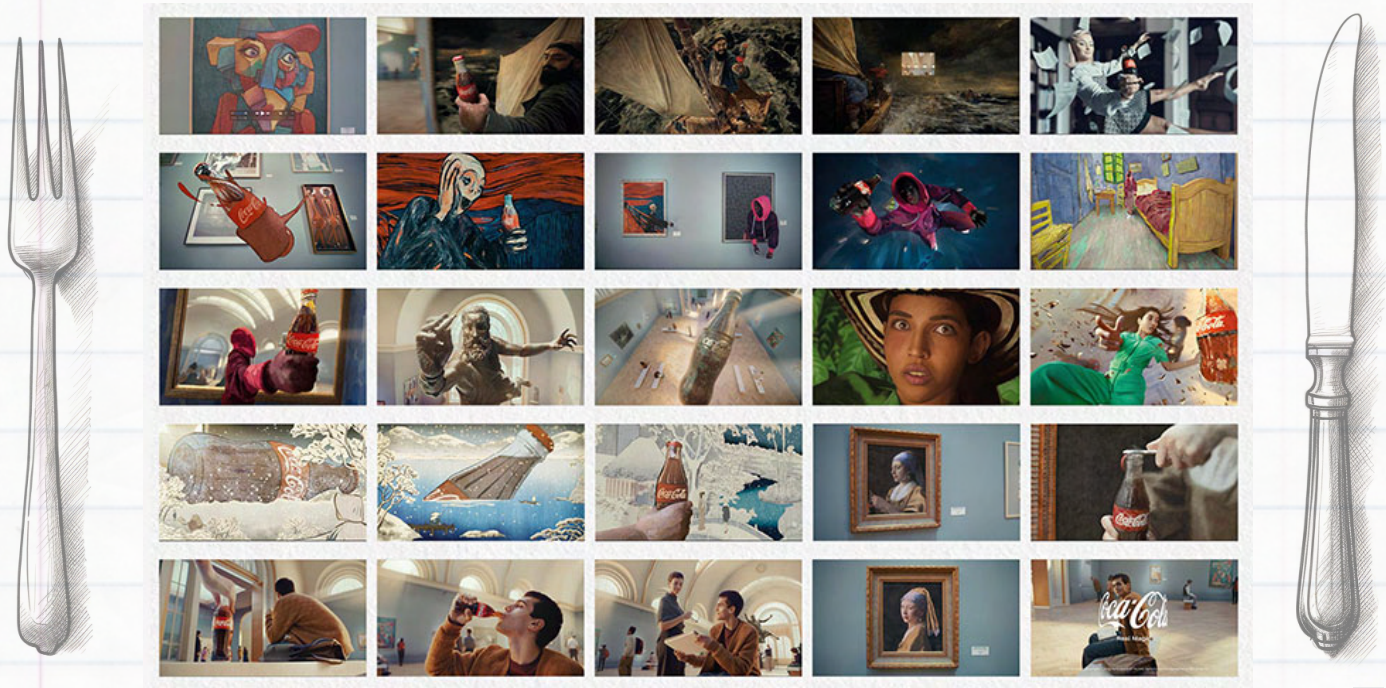
busy kitchen as a background.

Or take a shortcut, *Templates for Prompt!*

Take a look at: *www.blueshadow.art/midjourney-prompt-commands/*
Browse through the generated contents, find your preferred style and use that prompt as a template to generate your work!

② Portion Control *(generated content)* & Industry Standards

Deciding on the proportion of generative AI in advertisements can be a challenge. Should it be integrated entirely, or is there a limit to consider? While there is currently no definitive industry standard, a cautious approach is essential. Striking a balance between human creativity and AI assistance is crucial to maintain the authenticity and effectiveness of the advertising campaign. Agencies then, must think about the messages they wanted to convey and how AI can support the message, not just for the sake of the trend.



video source: https://www.youtube.com/watch?v=VGa1imApfdg

Take a look at Coca-Cola's masterpiece advert from 2023; they have found a nice balance between the use of AI and human production. The campaign is clearly understandable, featuring a bottle of Coca-Cola passing through famous paintings such as those by Andy Warhol, Edvard Munch, and many more. The product image changes through each artistic style, highlighting the power to use AI effectively to showcase different styles within a short amount of time.
This clearly emphasizes the ability to grab the audience's attention and keep them engaged by constantly changing the artistic style throughout the entire video. Integration with camera work, the hard work of the VFX and editing team makes this advert feel seamless and trustworthy. Therefore, with a campaign like this, the initial concept and idea have to come from your imagination, and then AI can work its magic to bring your thoughts and ideas to life.

In conclusion, leveraging generative AI in advertising presents exciting opportunities but demands a thoughtful approach. Advertisers should carefully considered data sources for transparency, navigate copyright considerations, and determine appropriate usage percentages. As the industry continues to evolve, remaining vigilant and proactive in understanding the ethical and legal implications of generative AI will contribute to successful and responsible integration into advertising campaigns.

3

Current Debates and Issues

Copy right, Data Sources, and Transparency

One of the nightmares of using generated content commercially is the risk of being sued. Even though OpenAI has stated that their AI is trained from publicly available sources for which they hold licenses, it remains questionable since there is no proof, and they won't make their dataset public. With over hundreds of millions of sources and data, there might be a chance that the AI could inadvertently pull out copyrighted work to generate content [Gowran, 2022]. Additionally, while platforms claim that their generated content can be used for commercial purposes, such as DALL·E [Hutchinson, 2022], it is essential to carefully review the terms and conditions to determine if they offer consultation or financial assistance in the event of legal action. Some individuals take advantage by generating images and selling them on stock-image platforms. On the other hand, Getty Images has started to ban the upload and sale of AI-generated content [Hutchinson, 2022].

However, regulations according to the use of ai generated works are still blurry, some of the country might start to consider of getting a solid rules and some other country still trying to figure it out. What is sure for now is that we really need clear regulations that clearly state what we can and cannot do with AI-generated content.

As in UK, the Institute of Practitioners in Advertising [IPA] have published the key principles for advertisers, including agencies, on the use of generative AI in advertising.

Check out this link to learn more details on using AI in advertising:

https://ipa.co.uk/news/industry-principles-for-generative-ai/?utm_lead=comms&utm_format=newsletter&utm_campaign=noncampaign&utm_source=adupdate&utm_medium=email&dm_i=4HV2,1KP7S,6E1KM7,7DEAT,1

Commercial Use and Copyright Issues

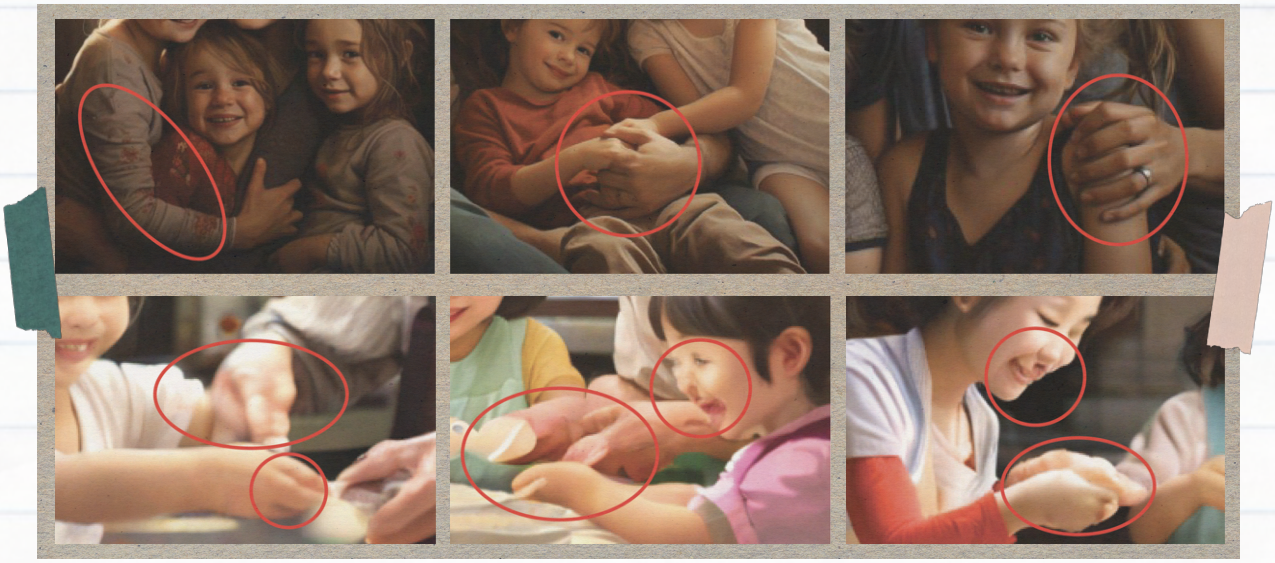
The idea of using AI for commercial purposes or as merchandise is still questionable, as AI does not entirely create the artwork on its own but rather gathers data from multiple images online to produce the final product. There are also many cases where artists have claimed that certain platforms have stolen their artwork or used their artistic style to generate pictures [Gowran, 2022]. However, it still comes down to the question: If we write the prompt to generate an image, do we consider ourselves as authors and own the rights to that image? If not, then who would be the author for that? In Builtin's article [2023], there's a quote from Daniel Gervais, a professor at Vanderbilt Law School, who has mentioned that if a machine and human collaborate and work together, the copyright will only focus on the man-made part. But can this apply to the context of generated content or not? Herbert Smith Freehills [2023] has mentioned that there are four possible solutions to this identifying author issue:

1. There is no author.
2. The author is the creator of the AI system, having enabled the creation of the work by building and training the AI system.
3. The author is the user of the AI system, having instructed the AI system to create the work.
4. Some combination of [1]-[3] above.

Before serving
Don't forget!
Quality Control

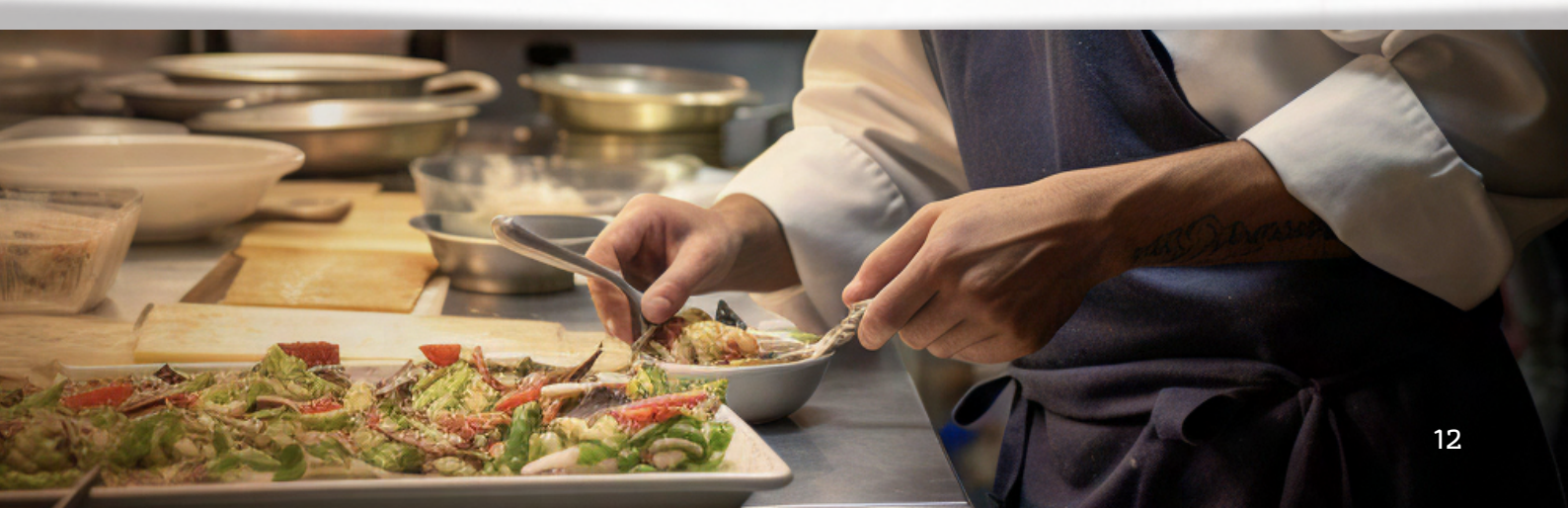
4

Using generative AI in advertising brings great efficiency and creativity, but it requires careful quality control and ensuring brand safety. Although AI can create appealing visuals and text, there's a risk of incomplete or grammatically incorrect outputs.



If your intention is to use these generative images as part of your advertising poster or billboard, the details have to be perfect. Especially when enlarging it to the size of a billboard, don't forget to scrutinize every detail of the image and fix all the weird shapes created during the generation. As seen in these examples, the most common error of generative AI appears to be on the human body parts, especially the hand. We observe a lot of incomplete, weird-looking shapes, unproportional arm lengths, and even hands with extra fingers. Therefore, this requires a thorough post-production process to improve the content for the best campaign results.

In summary, to get the ideal image, you may have to generate multiple times, refine the prompts until you get satisfactory base images. Later on, we can customize and adjust the image to look more complete as desired in the post-production process.



Challenges in generated AI content

Not only the image generated content can be a challenge, but all of the AI-generated content is. The use of generative AI across various modalities, including text, image, voice, and motion, introduces specific challenges in content quality.

Word-to-word generation may yield incomplete sentences or grammar errors, necessitating thorough review and editing.

Example

Original prompt: 'The book that I read yesterday was fascinating.'
AI-generated output: 'The book what I read yesterday was fascinating.'

The model incorrectly replaced the relative pronoun 'that' with 'what,' resulting in a grammar mistake.

Original prompt: 'She is the person whom I trust the most.'
AI-generated output: 'She is the person who I trust the most.'

In this example, the model mistakenly replaced the relative pronoun 'whom' with 'who,' which is a common grammar mistake.

Voice generation may lack natural dynamics, making it crucial for advertisers to fine-tune and enhance the voice output.

Example

Original prompt: 'Describe the beauty of a serene sunset by the beach.'
AI-generated output: 'De-scribe the beau-ty of a se-rene sun-set by the beach.'

In this example, the AI adds unnatural pauses between syllables, lacking the smooth and natural dynamics of speech, resulting in a less realistic voice generation.

This is an English dubbed video by ElevenLabs. The dubbing doesn't adjust the speaking speed according to the language habit, but according to the length of the corresponding Chinese, which sounds very unnatural.

http://xhslink.com/crrNYy

Motion generation may lead to non-smooth transitions and awkward images, emphasizing the importance of post-production efforts to refine and ensure a polished final product.

Since everyone has access to generative AI, the agency has to put more effort into making the outcome. In this case, the outcome has to look and feel more professionally made than the premade template of generative AI. For example, people can now create short videos, reels, and TikToks under a minute using the auto-generated function to create their content. Therefore, as for agencies or brand the expectation from audience become higher which they expected to see something beyond what they capable of.

Example

It‘s supposed to be a cat on a walk, but at the end of the video the cat turns into a human being.

video source:
https://www.xiaohongshu.com/discovery/item/64db1f290000000000a01b1d7?app_platform=ios&app_version=8.11.1&author_share=1&share_from_user_hidden=true&type=video&xhsshare=CopyLink&appuid=598173756a6a692da62a553c&apptime=1704726832

The Potential Future

Elevating Advertising Creativity and Efficiency

- Medical Diagnostics and Imaging:
Artificial Intelligence (AI) has the potential to transform the field of medical diagnostics and imaging. By leveraging advanced deep learning algorithms, AI can analyze medical images with incredible accuracy and speed, improving the accuracy of medical diagnoses. One of the primary benefits of AI-powered medical diagnostics is the ability to detect patterns in medical images that may be difficult or impossible for human doctors to identify. This means that AI can help diagnose various diseases, including cancer, cardiovascular issues, and neurological disorders, at an early stage, when they are most treatable. Furthermore, AI can assist doctors in interpreting medical images, providing them with additional insights and helping them make more informed decisions. Overall, the integration of AI in medical diagnostics and imaging has the potential to improve patient outcomes and save many lives.

- Autonomous Vehicles:
Artificial Intelligence has revolutionized the automotive industry with the development of autonomous vehicles. Self-driving cars rely on advanced AI algorithms that use machine learning and deep neural networks to interpret complex traffic scenarios and make real-time decisions. These algorithms enable autonomous cars to analyze vast amounts of data from sensors, cameras, and other sources, allowing them to navigate the roads safely and efficiently. The AI-powered technology in autonomous vehicles is constantly learning and improving, making driving safer and more accessible for everyone.

- Natural Language Processing (NLP) in Virtual Assistants:
Virtual assistants have come a long way in recent years, thanks to the advancements in natural language processing (NLP), a subset of artificial intelligence (AI). By leveraging NLP, machines can understand and respond to human language with a high degree of accuracy, making it possible for us to interact with them in a more natural and seamless way. One of the most popular applications of NLP is in voice-activated assistants like Siri, Alexa, or Google Assistant. These virtual assistants are designed to respond to natural language commands and queries, allowing users to ask questions, set reminders, or perform various tasks without the need for any complex commands or interfaces. The beauty of NLP-powered virtual assistants lies in their ability to not only understand human language but also to learn from it. Over time, these assistants can become more personalized and responsive to individual users' needs, making them an indispensable part of our daily lives. Overall, NLP has demonstrated machines' enormous potential to understand and respond to human language, opening up a world of possibilities for more intuitive and intelligent interactions between humans and machines.

- Financial Fraud Detection:
In today's world, the financial sector has become one of the most vulnerable industries when it comes to fraudulent activities. However, with the advent of Artificial Intelligence (AI), detecting such activities has become much easier and efficient. AI has revolutionized the way banks and financial institutions operate by analyzing and processing vast amounts of financial data in real-time. By using machine learning algorithms, AI is capable of identifying unusual patterns and transactions that may indicate fraudulent activities, such as credit card fraud, identity theft, or money laundering. This helps prevent fraudulent activities from taking place and ensures that customers' financial data is safe and secure. With the help of AI-powered fraud detection systems, the financial sector can deliver a more secure and trustworthy banking experience to its customers.

- Personalized Learning in Education:
Artificial Intelligence (AI) has the ability to revolutionize the field of education by offering personalized learning experiences that cater to each student's unique learning style and abilities. Adaptive learning platforms leverage AI algorithms to evaluate students' strengths and weaknesses, and then provide educational content that is tailored to their individual needs. This approach helps to enhance student engagement and understanding, optimizing the learning process and leading to improved academic performance. By utilizing AI-powered educational tools, educators can create a more dynamic and effective learning environment that fosters critical thinking, problem-solving, and lifelong learning skills.

- Advertising Industry:
AI can be a highly useful tool that helps people in the advertising industry decrease their workload and focus more on creative ideas. It can benefit any job, whether you are a designer, marketer, project manager, advertiser, or any other role. The hours of work can be significantly shortened to just one hour with the assistance of AI. It can help us create mood boards, storyboards, mockups, and much more (Johnston, 2023). It's still hard to believe that it takes only a few years to develop all these kinds of generative AI tools, and who knows, in the future, there could be much more interesting tools that could help advertisers even more!

Teamwork makes a dreamwork!

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