ARTIFICIAL INTELLIGENCE: CAN A NEURAL NETWORK REPLACE AN ARTIST?

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Introduction

In recent years, artificial intelligence (AI) has rapidly entered many areas of our lives, from healthcare to finance. One of the most impressive and controversial areas of AI

application is art. With the advent of neural networks such as DALL-E and Midjourney, the question arises: can these technologies

completely replace an artist? In this article, we will consider the possibilities, limitations and consequences of artificial

intelligence in art, and also draw parallels between human creative activity and generative algorithms. 1. Historical context: AI in art

The idea of using technology to create art has been around since the advent of computers. The first experiments

with the rhythmic generation of works of art began in the 1950s, when artists and

programmers began collaborating. For example, Alan Turing's "Codes and Groups" set an undefined framework for 2 AI Technologies: How Do They Work?

Modern neural networks used to generate artwork are mainly based on deep learning algorithms, such as GAN and CNN (Convolutional Neural Networks). GAN includes two neural networks, a generator and a discriminator, which work in tandem. The generator creates new images, and the discriminator evaluates how closely they match real-life artworks.

Neural networks have evolved significantly since their inception. Modern models can be trained on huge amounts of data and are able to capture complex patterns, allowing them to produce high-quality and diverse art. However, despite their advances, they still have limitations related to interpreting the deep meanings and emotions that often underlie human art. Thus, in 2022, at an art competition in the American

state of Colorado, in the "digital art" category, the winner

was a participant who created a picture using a neural network, and

Cosmopolitan magazine presented an issue whose cover

was created by the DALL-E 2 program. Then

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the Midjorney program appeared, which focuses not on

realism, but on artistry.

In an interview with David Golts, the CEO

of the company that created Midjourney - "an engine for imagination", as

he calls his product. The most important detail in his story

is the number of employees: the new service, from the first days

competing with the products of large tech companies and winning the love of many

artists and just amateurs around the world, was created

by a team of 10 people. The very existence of such a startup

The first swallow in the form of a Cosmopolitan cover created by a neural network in 20 seconds, as we know, does not make spring, but the appearance of Midjourney, it seems, nevertheless, indicates a change of season in the field of application of images generated by neural networks in a wide range of areas, from media art to advertising and publishing. People in these areas will not be left without work, but they will have to learn quickly, too powerful and universal new tool has appeared on the market. And for us, the viewers, the most interesting thing begins, especially since the race is just beginning: Apple recently came onto the scene with a system for generating not just a high-quality flat picture by description, but a full-fledged 3D scene.

3 Comparison of human and machine creativity

One of the main arguments in favor of the fact that neural networks cannot replace the artist is the play of emotions and

contextual connections that a person brings to his art. Each artist draws inspiration from personal experience,

culture and time context. Their works reflect not only aesthetics, but also deep philosophical, social and emotional themes.

Neural networks, although they are able to create visually pleasing and original images, operate on the basis of

pre-trained data. They are able to combine and generate new forms, but they still cannot realize and express a unique vision of the world, as a person does. Art is not only a technical demonstration, but also

an expression of the artist's inner world.

4 Ethical and social aspects of using AI in art

With the development of AI, many questions arise about copyright. If a work is created by a neural network, who is its

author? How should we account for the works used to train neural networks? These questions call into question the integrity

of the artistic process and the need to create new laws and regulations governing the use of technology.

Improvements in AI technologies also affect the art market. On the one hand, it allows new artists to create works, on the other, it creates competition for traditional artists. Neural networks

can make art more accessible and democratic, but can they preserve its value and uniqueness in the eyes of society?

5 The Future of Art: Symbiosis of Man and Machine

Despite the threat that neural networks pose, they also open up new horizons for creativity. Contemporary artists are beginning to use AI as a tool that allows them to experiment with form, color, and

plot. Their works are becoming the result of cooperation between man and machine, which confirms that art

is in constant development. There is an assumption that the use of technology can lead to the creation of new genres and forms of art,

which will exist in parallel with traditional ones. This can lead to the expansion of the boundaries of human

creativity and strengthening the role of the artist as a creative specialist who uses AI for his own purposes.

Conclusion

So, the question of whether a neural network can replace an artist is multifaceted and complex. Artificial intelligence

is undoubtedly changing the world of art, opening up new horizons and opportunities for creativity. However, it should be remembered that

art is not only the result of work, but also deep human relationships, emotions and ideas that can only be

available to a person. In the future, it is much more likely that we will see a symbiosis between an artist and a neural network

than a complete replacement of one by the other. Artificial intelligence is becoming an integral part of the artistic process,

but it will not be able to completely replace an artist, since creativity and innovation remain a sincere expression

of human experience and emotions. In addition, a neural network can only create

digital art, while canvases, statues and installations can only be produced by a person. However, a neural network can

be a tool for artists. It facilitates labor processes, does routine work, and

leaves the creative part to a person. For example, an author

can come up with a concept and implement it using

tools that will simplify his work.

1 A dream tool or an existential threat: can a

neural network replace an artist | Forbes.ru

2 Artinvia Gallery, Anastasia Kuryanova.

3 Hash@Telegraph, Eva Litvinenko.