

The Modernity of Artificial Intelligence Painting

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Abstract: Artificial intelligence emerged as something new, with a powerful vitality unique to new things. Artificial intelligence painting is an essential component in the construction of a metaverse, a powerful engine for computer vision. According to Baudelaire, “Modernity is transitory, ephemeral, and contingent; it constitutes half of art; the other half of art is eternal, stable, and unchanging.” Artificial intelligence painting fulfils this in the same way, but distinguishes itself from the material forms of the past by taking on a virtual appearance. It takes place in a virtual context, and intelligently replaces the human role, becoming a presence that cannot be ignored, and straddles the virtual and real worlds, existing in a transcendent modernity that plays a more irreplaceable role.

1. Introduction

Artificial intelligence, a product of human development into the 21st century, has entered our daily lives, and its emergence is bound to be an important turning point in history. This turning point is its conscious and efficient productivity, which, in line with the emergence of the Industrial Revolution, has greatly liberated productivity and become a force far more efficient than human labour. The emergence of artificial intelligence distinguishes itself from previous technological achievements by giving non-living beings “intelligence”, which inevitably involves the development of intelligence that will inevitably become more intelligent, an intelligence that will accelerate the process of modernity and pose an inevitable challenge between eternity and the ever-present unknown.

Artificial intelligence painting contributes directly to the development of computer vision, which has long relied on human design, while artificial intelligence painting accelerates the move away from dependence on the creator, and the modernity of artificial intelligence painting permeates its creation, development, and different application scenarios. What kind of thinking does AI painting provoke for this era, and does it add uncertainty to the way people view things and various relationships? Obviously, the first people to be eliminated by AI painting are all kinds of painters, but as AI is currently also based on various computer hardware, it brings only a sense of crisis for painters, more often as a subordinate to painters and as an efficient tool to be used.

Looking at AI painting in terms of mathematical and scientific characteristics is ensuring controllability, correctness and safety; in terms of artistic characteristics AI painting is a gifted artist brought to life by algorithms; and in terms of human development ethics is the beginning of a new subversion. Whatever the role of modernity that AI fills, it is a huge body of energy, and understanding the cause and effect that AI painting brings offers a glimpse of the possibilities that AI brings.

2. Rules for the Generation of Artificial Intelligence Paintings

2.1 Neuronal Model for the Association of Objects

Artificial intelligence painting currently circulates mainly among creators and is dependent on different software applications, so different software itself possesses different algorithmic logic, allowing AI painting to be in a learning and growth process as well, so the level of AI painting is

influenced by the time it is produced, by the learning material and by various complex factors. In addition to its own unique variable characteristics, the other is the personal factor of the user, all of which ensures that AI painting is a growth-oriented existence, where growth represents a characteristic with vitality.

How the AI understands the vocabulary used by the user and how, through the input, thousands of drawings are generated in a flash. The communication of the user's vocabulary is deconstructed by the computer and the object image is rapidly constructed through previous machine learning, a construction that follows the process in logic. When a vocabulary has a single meaning, the vocabulary corresponds to the object image, which can also have an extremely rich morphological composition, as the AI painting software itself contains parameters regarding painting style, painting size, etc., all of which can provide the corresponding combinations of relationships for the object image. If a word has multiple meanings, then the more combinations of objects are substituted by the relevant word meanings. At the same time, when the AI is given a rich lexical description, this combination of relations can form both an infinite number of work forms and a more precise image look.

Analysis of the AI painting generation model reveals that its image generation logic tends more towards a neuronal structure. Each word acts as a class of cellular bodies, and its lexical meaning possesses related objects that become protrusions, which are interspersed with the composition of the objects themselves represented by these words, and the protrusions with a high degree of relatedness are linked together to form the face of a new object. This liaison provides a parsing of word meanings, creating a wealth of data that generates images in autonomous computing and learning, forming random works of art to be presented to the audience.

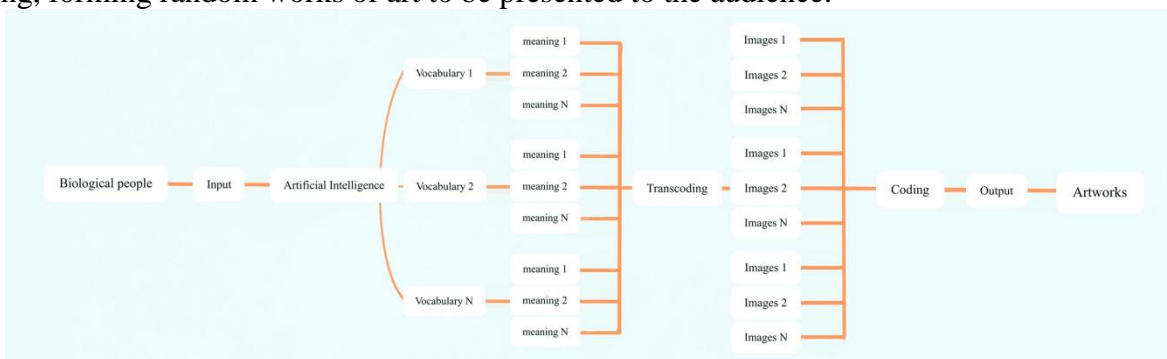


Fig.1 Artificial Intelligence Painting Basic Flow Schematic

2.2 Layer Generalisation for Image Reorganisation

In the process of analysing AI paintings, it is important to distinguish and compare the artist's work, because an important part of the machine learning process that AI can refer to is the learning of the artist and the specific artistic style. The image characteristics of an AI painting are distinct from those of an artist's work, and the one feature that cannot be escaped is the 'layer'. AI paintings satisfy basic human aesthetics, but they do not simply follow human logic, so they emerge as paintings that go beyond human rational perceptions, thus generating new inspirations.

If a painting is seen as a flat surface on which colours and shapes are depicted over and over again to form a rich picture, we see the process of painting as a stacking of layers. In Chinese painting there is the technique of haloing, in oil painting there is overpainting, and there is overlapping and interspersing between images, all of which reflect the characteristics of layers. Artificial intelligence painting is based on the same basic logic, and through calculations to achieve a harmonious combination of different layers to form a painting.

Through fine computer calculations, AI painting is able to shape the image more realistically, with the different features of the image such as colour, shape and light all subtly combined together. A harmonious unity that forms the atmosphere of a particular picture. The combination of images is not based on a single logic, and so the resulting look is heterogeneous, with diverse and extremely rich possibilities.

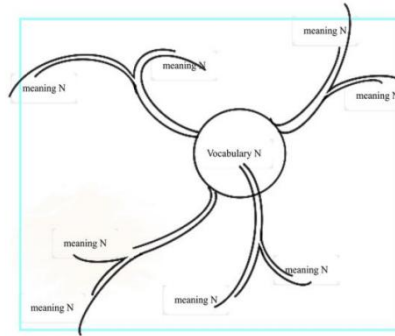


Fig.2 Artificial Intelligence Painting Neuron Model Structure Diagram

2.3 The Logical Contrast of Text-Generated Images

The input method of artificial intelligence mapping software is mainly text-based. As a product of human civilization, text has a rich cultural connotation. After a single word enters AI, the main feature that distinguishes AI from computers is that computers only make fixed interpretations of words, while AI can make countless coded combinations of a single word to form countless meanings. Through the myriad combinations of word meanings and lexical meanings, and in a random and growing process, the unique look of the AI's work is therefore formed.

Words become digitally encoded when they are processed by the AI system, and the AI paintings are the product of numerical operations in which the meaning of words is no longer directly combined in the process of multiple transformations. The meaning of words forms a complete ecology of its own according to the logic of the algorithm, i.e. it goes from textual instructions to a database looking for information and automatically reorganises itself to form the harmony and beauty of its own work.

The images of objects represented by words form pictures in the human mind, and each person, through his or her own experience and personality, associates extremely different pictures with words, which have both differences and commonalities that are objective. For the artist's creation and the AI's creation, there also possesses a consistency of thought, and a difference in the way of creating. The logic inherent in AI painting is the combination of multiple solutions in order to achieve a diverse and optimal integration.

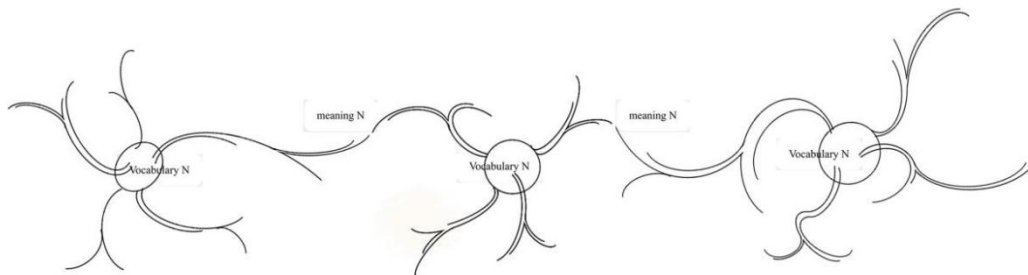


Fig.3 Artificial Intelligence Painting Neuron Model Correlation Diagram

3. Repetition and Creativity in Artificial Intelligence

3.1 Ai's Portrayal of Known Reality and the Virtual

The source of the generation of artificial intelligence paintings, that is, the learning of existing information, and this learning would be singular if it were only stored and extracted for use. The intelligent character of artificial intelligence is achieved through data calculations, and the data allows the AI to find the best answer among the countless options. The known reality is distinguished into two dimensions, the world of human reality and the world of artificial intelligence. The human real world is primarily the physical world of matter, and the AI world is

also the digital world, the virtual world, or collectively the metaverse world. Of course, as civilisation develops, artificial intelligence may redefine the concept of matter.

For the known real world, the physical world touched by the use of the senses, which holds our grand cosmology, is the basis for AI to imitate the human world. On the other hand, it is the basis for the AI's own learning experience in terms of the virtual world in which it exists. Through such fundamental learning, AI can discover laws that are difficult for humans to perceive and update them in the learning process. If the presentation provided to AI is an AI painting work, then AI speaks with the work, and if the problem to be solved is something else, AI can handle it efficiently.

For human beings, human society is real, and indulging in games is virtual, but for everything that exists in the virtual, or when the virtual envelops us all the time, the virtual can become real. This is why the basic features of artificial intelligence painting have changed from being traced in the past, to being traced selectively, to being traced according to its own learning experience, which is the beginning of the gradual evolution of artificial intelligence towards intelligence. There will always and permanently be new things emerging and obsoleting old things.

3.2 The Self-Adaptive Construction of Artificial Intelligence Ontologies

Artificial intelligence, as a new technology that allows computers to provide algorithms and to learn continuously, allows computers themselves to achieve updates that do not depend on human settings, which allows artificial intelligence to gradually move towards intelligence. For the development of artificial intelligence, is it dependent on the general human parent, or can it diagnose itself, structure itself and step out of the human shackles on its own. As can be seen from current AI paintings, AI can be at an absolute advantage in terms of morphological beauty, but how to interpret the inner work, AI is unable to achieve emotional empathy.

Artificial intelligence painting, as the embodiment of its intelligence, is bound to be progressively perfected if it is always provided in the form of a painting presentation. However, as soon as other interfaces are provided, this intelligent character is transformed into a powerful energy. If we look at the development of AI painting itself, what would be the path of maximum development? Obviously, AI development will inevitably be associated with people, with computers and biological people, and the day when human brain-computer interfaces and other technologies mature and human intelligence and AI move towards a combination, AI will be able to help people achieve a simultaneous rendering of what they are thinking about. For example, if a person thinks of any content or image, artificial intelligence can instantly generate it into a picture, and this picture can then directly constitute a personal virtual world.

In addition to its superior computing power, AI also has propositions that are not limited by time and can be powered by light or otherwise. The ability to change itself allows AI to adapt to any environment that is difficult for human flesh to reach, and its self-adaptability allows it to complete human instructions while gaining learning experience in any operational situation, which means that AI can renew and develop itself alone, as long as it has the energy to do so.

3.3 Confusion, Disorder, and Poetry

Computer development is based on English logical coding, whether it can adapt to the different cultural environments throughout the world, what kind of obstacles there will be in understanding the vocabulary process, and how quickly it can differentiate understanding. Using an ancient Chinese poem as a command, the AI would first search the entire database to understand the meaning of the poem and the different interpretations, which would then be transformed into an image; if a new poem was written according to the ancient Chinese idiom and the database did not have the relevant interpretation, the AI would analyse the meaning of the individual words and reorganise them into a picture; so if non-existent words were provided directly to the AI, would it produce extremely abstract works? When faced with difficulties, the AI will keep on penetrating like water flowing until it finds an outlet, without complaining that it cannot do it, but will only produce a constant stream of new results.

Throughout the universe, chaos is the norm for development, rules are invented by humans to limit disorder, and to a certain extent things form order and law, giving rise to new beauty and

poetry. The development of artificial intelligence is also inseparable from chaos and disorder to the sublimation of poetry. Chaos is manifested in the instability of the initial development of artificial intelligence, where the same artificial intelligence painting system, in the process of processing the same lexical instructions, produces paintings that vary greatly, and even deviate from the original meaning of the words. Disorder, on the other hand, is the fact that AI paintings all look close to perfection, but the biggest pain point is still the problem of intelligence, and its autonomous judgement is improving. Poetry, on the other hand, is the control of instructions, the insight into the human heart, and the creation of highly sophisticated works of art.

Human beings have also developed from primitive ignorance, through learning lessons and breaking through the confines of their own minds. Artificial intelligence has to go through the same process, but it can learn from the world's civilisations so quickly that it can develop very quickly. The only limitation is the vehicle for AI, which, like a single brain, can exist as a tool.

4. The Role of Modernity That Artificial Intelligence Painting Fills

4.1 Existing as a Machine

Artificial intelligence now relies on electricity, networks, and human instructions to exist. We would expect that without electricity AI would not work, but in fact AI is not a computer, a mainframe or a chip, but more of an integration of the many. Hardware is its body, but AI does not need the structure of a human body, any form of vehicle can be used by it, I should say anything can be used by AI for its full potential.

We rely on the use of computers to recognise AI, for example by entering commands using mobile phone software and the AI generating paintings. We would think of AI as a specific piece of software, we would think of the metaverse as a specific piece of software, we would think that even if virtual reality and the real world were fully integrated, there would need to be a base premise, AI as a machine. There will certainly be this vehicle, but this vehicle can exist in any number of ways, and AI exists widely enough that the intelligence it generates can constantly improve itself and circumvent lethal structures. AI is now more like a controllable virus, where everything is under control, but AI can evolve.

The way in which AI is viewed is something that needs to be viewed with forward thinking, rather than saying, "The creativity that is unique to humans will not be available to human emotional AI." Any way of perceiving AI based on the conditions of the moment is an undesirable approach. Because we are dealing with an extremely fast-growing sophisticated machine, not a historically inefficient one, AI painting has carriers of machines that are spread all over the world.

4.2 Existing as Intelligence

In the development of the world as a whole, intelligence has been both a characteristic of animal life and the basis for the emergence of civilisation, but when standing alone, new problems arise. Artificial intelligence painting can be faked, imitating human painting is a matter of seconds, accumulating far more experience than human beings in long imitation. Its intelligent properties then allow AI painting to have an extremely autonomous creative capacity, and creativity is undoubtedly already widely reflected in AI painting works.

Artificial intelligence painting is based on extremely large amounts of data, and the works calculated can be seen to have a distinctive look. For the same proposition, artificial intelligence can produce countless paintings in a single moment, and the works can be selected for their extreme excellence even if they are sufficiently discerning. In other words, based on the aesthetic criteria of art, AI paintings can also have excellent aesthetic characteristics when analysed from human aesthetic concepts, which means that AI paintings can fully satisfy human aesthetic needs in terms of quality.

The starting point of artificial intelligence is to imitate and serve human beings, and in sixty years of development, based on the development of other supporting technologies, it has been able to efficiently meet human needs, but there is a huge gap between learning and creating, and

artificial intelligence can easily analyse the structure and regular characteristics of the human brain, from which it can learn and improve its own structure is the shortcut to intelligence, and is also the change we have to face.

4.3 Existing as Matter

The development of artificial intelligence emerged as something new and has its own unique historical trajectory. Material characteristics have long been used to depict real things, but with the development of technology, we know that in addition to the world that can be experienced by the senses, there are various kinds of dark matter that we cannot perceive either, and just because we cannot perceive it does not mean that it does not exist. Artificial intelligence emerged on the basis of the development of the internet and how we define matter in the virtual world, whether this virtual material world is real or false.

The invisible and untouchable dark matter can be known to exist objectively, so how can the visible virtual world be false. This virtual world constructed by artificial intelligence, since it is something new, should not be answered by the old understanding that artificial intelligence acts as a bridge between the virtual material world and the real material world. This material characteristic of artificial intelligence has virtual material characteristics and real material characteristics. Perhaps this expression, with the development of science and technology, in the future virtual is also reality, then it is also possible to directly classify the metaverse world as the material world, without the need to title it virtual or real to distinguish it.

The material character of artificial intelligence guarantees its long-term existence, in a particular material form. Artificial intelligence both produces and continually produces matter, and since the origin and the outcome are material, it is not possible for an artificial intelligence in the middle to exist apart from its material character.

5. Conclusion

The social role played by artificial intelligence painting is gradually transformed from a subordinate tool to a being with an independent will, with strong modern characteristics serving society and even the human development process in the process of social development evolution. Artificial intelligence will shape human existence in a new way, linking the world of the present with the world of the future, acting as a representative of transitional modernity, interpreting the fleeting moment and the eternal to the fullest. The presentation of artificial intelligence in the form of painting emerges as a great progress or even a crisis for human painting, and the same application of artificial intelligence to other vehicles will greatly affect the related fields of industry. Artificial intelligence painting has a distinctly modern character, and artificial intelligence is reshaping the world through its modernity.

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