Research on Visual Art Creation in the Context of Artificial Intelligence

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Abstract

Nowadays, the era of rapid development of science and technology, informationization and artificial intelligence has arrived. Visual arts have also achieved new breakthroughs and development. At present, visual arts have realized the transformation of digitalization and intelligence with the help of information technology, and brought more special visual experiences to people by using its rich information resources in richer forms. The application of artificial intelligence in people's lives is also a very common form. At present, more experts and scholars discuss how to better express art by using artificial intelligence has become the main problem of visual art creation. More experts will dig deep through the characteristics of artificial intelligence and visual art expressions, and find the advantages and ways of combining each other to make innovative changes. This paper discusses and analyzes the research on visual art creation in the context of artificial intelligence.

Keywords

Artificial Intelligence; Visual Arts; Creative Research; Methods and Measures.

1. Introduction

In 1950s, scientists put forward the idea of artificial intelligence. With the emergence of this research, artificial intelligence was born and developed. With the advent of subsequent computer equipment, a large amount of data and information and the research of staff, artificial intelligence has made further breakthroughs and made greater achievements. By the beginning of the 21st century, it has been able to make a series of activities imitating human beings through computers, such as speech recognition and computer vision. The famous one is to use Go artificial intelligence system: Alpha Dog defeated Go masters Li Shishi and Ke Jie. Nowadays, visual art creation under artificial intelligence has also been paid great attention, and relevant scholars and experts are exploring and pursuing unremittingly to tap the potential of artificial intelligence.

2. Research at Home and Abroad

2.1. Domestic Situation

In order to adapt to the trend of the times, China has begun to promote artificial intelligence. Government departments have issued a series of policies focusing on artificial intelligence, promoting industrial development, and making it clear that artificial intelligence is the main direction in the information age. Leading domestic enterprises, Tencent, Baidu and other companies are actively involved in the research of artificial intelligence. For example, Tencent has set up an artificial intelligence laboratory as early as 2016, spending a lot of money, introducing more excellent R&D personnel, and creating a cloud platform to process images,

voice and other functions. Baidu has also established Silicon Valley Artificial Intelligence Laboratory and Deep Learning Research Institute. Alibaba mainly focuses on the e-commerce industry, develops the visual platform, realizes intelligent image generation, and changes the traditional design mode. China's artificial intelligence is mostly used in service, finance, medical care and other fields, and its development speed is extremely fast. Compared with many years ago, the patents and research results on artificial intelligence have also increased significantly [1].

2.2. Research Abroad

At present, artificial intelligence has attracted the attention of all countries in the world, especially the developed countries such as the United States and Japan, which have successively launched a number of strategies, focusing on artificial intelligence projects, including autonomous driving education, smart cities and other fields. Google, the company with the largest investment and the most research results in artificial intelligence in the global field, has developed artificial intelligence projects for many years and launched a distributed deep learning framework. The output images produced have a strong personal style, which makes the world amazed. Moreover, according to the research, there are many achievements in artificial intelligence abroad, and industry giants are actively involved in the research of artificial intelligence, but in comparison, the application of artificial intelligence in artistic creation is still relatively lacking [2].

3. The Significance of Visual Art Creation Research in the Context of Artificial Intelligence

The rapid development of information technology and artificial intelligence has brought great impact on artistic creation and affected the content and form of art. At present, more artists begin to use artificial intelligence and computers to create art. The use of artificial intelligence has changed people's lifestyle, revealing that it has become a trend to express visual art with artificial intelligence everywhere in life. This is also a new feature of the times, which uses rich content and information to enrich artistic expression, and takes science and technology as the starting point to explore more novel ideas and novel paths.

Research on artistic creation under artificial intelligence environment can help artistic creators save a lot of time and improve work efficiency. Designers can concentrate on artistic creation, exert their imagination as much as possible, and explore more innovative materials. When using artificial intelligence to create visual art, it will promote designers to learn more innovative ability and deepen their professional quality, and their works can represent the thinking of the current era.

The application of artificial intelligence in visual arts also helps art creators to improve their personal thinking, develop creative methods, and learn to learn new tools and methods to improve their personal works. The application of artificial intelligence will open up a new way of visual art creation, meet the needs of more contemporary young people and cater to market conditions. At the same time, this way is also beneficial for art creators to improve their personal ability, explore imaginative creative techniques and methods more deeply, and give full play to their personal imagination [3].

4. The Opportunities and Challenges Faced by Visual Art Creation under Intelligence

4.1. Artificial Intelligence Technology Creates New Forms of Artistic Creation

The influence on intelligent art will hit some traditional art creators. At present, the world consciousness is gradually moving towards intelligence, Therefore, art creators must be able to learn more innovative operation methods, Dare to use intelligence for artistic creation. If you just stand still and stop learning, you will gradually be eliminated and in a backward trend. Art creators are required to innovate ideas, so that artificial intelligence can be more applied in the current visual art operation, which is in line with the current background of the times. Artificial intelligence has created a new form of art and enriched the content of artistic creation. At the same time, it has also improved the technology of traditional visual art, enriched artistic forms and creative tools, and enhanced creativity and imagination [4].

4.2. The Influence of Artificial Intelligence on Visual Art Creation

The application of artificial intelligence in artistic creation replaces human labor, solves a lot of time-consuming and laborious manual labor, saves the energy, time and physical strength of art creators, enables art creators to concentrate more on creation, and improves the level and efficiency of overall works. It can bring high-quality works better, but at present, artificial intelligence can't create art by itself, but is only an auxiliary tool.

When artificial intelligence is applied to the present visual art creation, The impact on the traditional visual art creation will have an impact on the previous creative focus. In the past visual art expression, the traditional tool of pigment pen and paper was usually used to achieve it, but when artificial intelligence was vigorously developed, the overall creative form was completed by computers. When artificial intelligence is applied to visual art creation, creators need to focus more on data collation and understand the direction of technology development. Moreover, it is necessary to train artificial intelligence methods with artistic creation ability to help visual art creation, and constantly optimize machine algorithms to obtain more levels and deep creative ability.

The application of artificial intelligence is conducive to obtaining more accurate information, improving the operation efficiency of visual art, using intelligent visual art creation, achieving more accurate design decisions, and carrying out operation activities according to the requirements of scenes. At present, the use of artificial intelligence brings opportunities for more art creators, which can better show their own ideas and styles and show their own ideas [5].

5. The Prospect of Artificial Intelligence in Visual Art Creation for the Future

The application of artificial intelligence brings pressure to more traditional art creators, which requires art creators to learn more advanced operation methods, constantly adapt to the changes of the times, and use artificial intelligence technology to improve work efficiency. In the field of art design, artificial intelligence will be more and more in-depth, and its application scope will be more and more extensive. Therefore, art designers must break through the original thinking mode, organically combine personal works with artificial intelligence technology, and provide new ideas for traditional art design.

6. Conclusion

To sum up, we know that the visual art creation in the context of artificial intelligence is still in its infancy, and there is still huge space potential to be tapped. Many art creators don't know

enough about the form of artificial intelligence. With the continuous progress of science and technology, the application of artificial intelligence in the world will be more and more, and its apparent role and value are of great significance to visual art creation. Therefore, it is necessary for pre-sale creators to constantly learn this novel technical means and improve their own operation direction and ideas. It is hoped that visual art creators in the future can skillfully use artificial intelligence technology, use its rich data forms to improve their works, and create more unique and imaginative works, so as to reduce their work pressure, save time and fully demonstrate their personal abilities.

Conflict of Interest

Both authors make equal contributions to the article.

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