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A Brief Discussion on the Impact of Artificial Intelligence on Film and Television Production in the Age of Smart Media

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Abstract: The development of the new media era has provided significant opportunities for various industries in their development. Many enterprises have begun to utilize artificial intelligence to address the drawbacks in traditional work, thereby improving work quality and efficiency. In terms of current film and television production, many film and television production companies have increased their application of artificial intelligence to meet the development needs in the era of smart media. This article briefly outlines the impact of artificial intelligence on film and television production in the era of smart media, analyzes the key points of practical application of artificial intelligence in film and television production, and hope to lay a solid theoretical foundation for promoting the sustainable development of film and television production and dissemination.

Keywords: Smart Media; Artificial Intelligence; Film and Television Production

Nowadays, the popularity of mobile devices is continuously increasing, the ways for people to learn about and watch film and television works are gradually multiplying. They can not only use traditional devices such as televisions and set-top boxes as carriers but also utilize multimedia platforms to watch films and television series that interest them, in order to meet diverse demands. Based on this, film and television producers should reasonably respond to the impact of artificial intelligence on film and television production in the era of smart media. They should combine the development trends of the film and television industry in the new era and the transformation of people's needs to change their methods of film and television production. They should make full use of artificial intelligence to improve the quality and efficiency of film and television production and solve the problems faced by the current film and television industry.

1. The Impact of Artificial Intelligence on Film and Television Production in the Era of Smart Media

1.1 Fostering the Emergence of New Service Enterprises

Traditional film and television production requires a multitude of resource categories, but the technological demands are lower compared to those in the context of artificial intelligence. When artificial intelligence is utilized as a key tool in the era of smart media for film and television production, it necessitates the use of powerful hardware equipment and a vast amount of data that has been filtered and noise-reduced to serve as the foundational technical support. Additionally, programmers must fully demonstrate their programming proficiency, indicating that a wide array of resources is required.If a film and television production company has the capability to utilize artificial intelligence for film and television production, it indicates that they possess the aforementioned technological resources. Creators only need to pay certain equipment purchase fees, rental fees, and technology usage fees to achieve cloud-based production. Production staff and directors only need a computer to complete the film and television production process. Under this model, the types of service enterprises driven by film and television production will continue to evolve, mainly including enterprises focused on virtual scene modeling, character modeling, background music creation, and model leasing. These enterprises can provide a variety of services to support the development of the modern market economy.

1.2 Optimizing Production

Although the form of film and television production in our country has tended towards maturity, compared with some developed countries, there are still significant technical limitations that prevent the production outcomes from meeting expectations. Artificial intelligence in the era of smart media can fundamentally optimize the film and television production process, allowing script writing, character development, scene construction, and special effects production to be presented in a more three-dimensional form. Screenwriters can use natural language

processing and machine learning technologies to automatically generate story plots, gaining more ideas and inspiration, and further optimize the content and presentation of the story based on existing scripts. This not only improves the efficiency of creation but also injects new vitality into film and television production.In the process of character development, directors and producers may utilize artificial intelligence to generate character expressions and movements. By applying deep learning and computer vision technologies, they can simulate human facial expressions and body language, enabling virtual characters to deliver authentic performances and enhancing the three-dimensionality of film and television presentations. When constructing film and television scenes, artificial intelligence can be used to generate a variety of scene elements, especially the ability to adjust scenes in real-time to present high-quality scene effects in a short period. During the production of special effects, computer graphics technology within artificial intelligence can be used to automatically generate special effect elements that match the tone of the film and television work, integrating elements like water and fire with the scenes to create more realistic special effects, thereby providing viewers with a more immersive viewing experience.

1.3 Achieving Digitalization of Production Technology

Artificial intelligence itself is one form of digital technology. In the development of the smart media era, film and television production companies can fully leverage artificial intelligence to achieve the digitalization of production techniques, enhancing the flexibility of film and television production formats. Some editors, when editing works that have been filmed, often miss details and may repeat content, resulting in a final film or television product of poor quality.

With the support of artificial intelligence, the post-production restoration and special effects creation of film and television works can be carried out automatically, enhancing the viewing experience. Film and television producers could also apply artificial intelligence technology to audio production and special effects creation, with the primary goal of improving the visual effects of the film. By leveraging computer graphics technology to construct more realistic scenes and integrating a variety of special effect elements to dynamically adjust and refine the film and television images, the digitalization of film and television production can be improved.

2. Application of Artificial Intelligence in Film and Television Production

2.1 Film and Television Video Processing

In recent years, as the film and television industry has developed, films with well-crafted special effects have gradually come into view and received widespread attention and praise. Utilizing artificial intelligence technology in film and television production allows for scientific processing of films that are not yet fully completed, with the primary goal of presenting better visual effects and enhancing the effective use of various materials. Due to limitations such as schedules and budgets, many teams are unable to shoot at real locations. This is where artificial intelligence can generate special effects and create realistic scenes according to the film's needs, making the film more captivating. Taking the movie "Avatar" as an example, this well-known science fiction film made extensive use of artificial intelligence to present unique visual effects. From the effects shown in the film, the producers used artificial intelligence technology to create the vegetation, animals, and environmental effects in the movie. Especially in the design of different creatures, they utilized this technology to present unique light and shadow effects, achieving a significant breakthrough in the generation of special effects through artificial intelligence, which provided a more realistic experience for viewers during the movie. It can be seen that the use of artificial intelligence in film and television production can provide much ore technical support, turning people's fantasies into reality and presenting a diverse range of images and scenes authentically.

2.2 Film and Television Audio Processing

Audio processing in film and television production allows viewers to become more deeply immersed in the film's context, experience the emotions conveyed by the film, and be moved by them. Applying artificial intelligence to film and television production in the era of smart media can improve the quality of audio processing. With algorithmic automatic recognition technology provide basic support, voice synthesis technology can also be used to simulate natural language, enabling fictional characters to exhibit vivid vocal characteristics.

At present, many films feature scenes such as combat and explosions. Producers can leverage artificial intelligence technology to process these audio effects, enhancing the emotional impact of the sound and enriching the audio layers of the film. The well-known Chinese film "Wolf Warrior 2" utilized artificial intelligence technology to generate special effects sounds such as explosions and gunfire. The sound team used intelligent algorithms to create awe-inspiring combat sounds, adding color to the action scenes in the film and even making viewers feel as if they were part of the action, significantly adding the audience's viewing experience.

2.3 Content Creation and Recommendation

Content creation is the core of film and television production. A high-quality film needs to gain people's recognition through excellent content. If the content creation of a film is not up to par, it can dissatisfied the audience, resulting in a lower overall quality of film and television production. When using artificial intelligence in film and television production, it is important to focus on its application in content crea-

tion and recommendation. By leveraging artificial intelligence technology to predict audience preferences and generating customized content based on historical data, films can meet the viewing needs of the majority and promote creative expression in subsequent developments. When using artificial intelligence for content creation and recommendation, it is possible to automatically generate text and scenes based on the core content of film and television works, as well as search for related videos to construct a software system with advanced deep learning algorithms. Producers involved in the project can refine the automatically generated content and even allow viewers to participate in the film and television production process, meeting the diverse needs of users and creating content that suits the audience's tastes. In the future, artificial intelligence technology can also be used to automatically recommend film and television content, breaking through the bottlenecks in the development of film and television production and presenting more personalized films.

3. Conclusion

In summary, utilizing artificial intelligence technology in film and television production can give rise to new service industries, optimize various production processes, and achieve the digitalization of production techniques. As the era of smart media continues to evolve, film and television producers should grasp the key applications of artificial intelligence, increase the application of artificial intelligence technology in line with the development needs and trends of the film and television industry, construct new film and television scenes, and provide reliable technical support for opening a new chapter in the film and television industry.

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