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The Possibility of Industrializing the Convergence of Artificial Intelligence and Cinematic Video Content — Centered on the Korean AIGC Short Films "One More Pumpkin" and "Doomsday Bubble"

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ABSTRACT

With the rapid development of modern science and technology, artificial intelligence is applied to various fields of the film industry, which has a significant impact on film production and film algorithm aesthetics. The change of artificial intelligence on the movie production process is mainly reflected in the pre-planning, scene design, live shooting and post editing. Artificial intelligence technology can not only optimize the film production process, reduce costs and improve quality, but also provide new creative tools for art workers and promote the film industry to intelligent transformation and upgrading. This paper adopts the case study method and literature review method, focusing on the application case of AIGC technology in film in South Korea, and discusses in depth the use of AIGC in film production, the changes to the film production process, and the social and artistic problems faced. Film production in the AI environment should focus on the subjective position of "human" in film creation, and AI should be used as a tool. This study aims to identify the trends of AI technology, gain insights into its impact on film production, reveal the factors, roots and effects of AI-driven development of the film industry, and explore new trends in the film industry. It explores the application of AIGC cutting-edge technologies and provides a new direction for the intelligent transformation and upgrading of the film industry.

1. Research Background

AI's ability to generate linguistic text, images, video, audio, and other artistic symbolic system modeling is outstanding, and is more like an artistic experiment that triggers a broad and profound aesthetic revolution. From the current state of practice of AI art, AI shows the potential to operate beyond human be-

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ings in terms of massive collage, interactivity, and immersive participation. AI has already entered the realm of artistic creation, being used in industries such as painting, literature, film, performance, and music. Since 2022, with the introduction of a series of models such as DALL-E2, Stable Diffusion, Midjourney, etc., the scope of "form" and the accuracy of "resemblance" that AI can mimic have been greatly improved. In 2024, SORA as a representative of the "literate video" tool came out, making the industry pay attention to the innovative application of AIGC in the field of film and television.

The integration of artificial intelligence and film and television content is not only a courageous exploration of technology, but also a profound change in the film and television production process, and AIGC has dramatically improved the labor efficiency of the film and television industry. The film and television industry was originally a labor-intensive industry, involving the cooperation of different positions such as screenwriter, director, cinematographer, producer, art, music and editing. But now, the director himself can be completed independently through AI tools. Now "Wensheng Tu" and "Wensheng Video" initially realize the whole process of film and television production by one person. This transformative development has caused a violent impact on the living space of the traditional movie industry, and has posed unprecedented challenges to the existing structure of the movie industry. In-depth study of the possibility of industrialization of the integration of artificial intelligence and film video content is of great significance in promoting the innovative development of film art, optimizing the production mode of the film industry and expanding the commercial value of the film market.

First of all, from the perspective of artistic creation, AI technology breaks through the limitations of human artists in terms of thinking, perception and skills, creates unique forms and styles of artistic expression, and enriches the connotation and extension of movie art. The modular algorithm of deep learning improves the operability of AI technology, and data learning and extraction strengthens the accuracy of the content of film creation, allowing film creators to obtain more convenient and intuitive expected results. For example, in script creation, AI can use natural language processing technology to generate logical plot outlines and character dialogues based on massive script data and advanced natural language processing algorithms, providing inspiration and materials for screenwriters; in visual effects production, AI creates unimaginable visual images through deep learning and image processing technology, expanding the visual expressiveness of the movie, and bringing the audience a A brand new movie-going experience for the audience.

Secondly, from the perspective of industrial development, the application of AI technology can effectively optimize the production process and resource allocation in the film industry, and improve the production efficiency and economic benefits of the industry. In the film production process, AI can automate many tedious and time-consuming tasks, such as scene layout, lighting adjustment, special effects rendering, etc. In visual effects production, AI optimizes the special effects rendering process through machine learning algorithms to create realistic and creative visual images, which broadens the boundaries of film creation and brings new forms of expression and narrative. Emerging data intelligence technologies such as digitization, virtual image, XR and other new technologies are widely used in scene generation, image processing, editing and other aspects of film and TV drama creation, which not only effectively reduces the cost of creation, shortens the creation cycle, but also significantly improves the quality of the work.

Finally, through the in-depth analysis of film big data, AI can accurately predict market trends and audience preferences, provide scientific decision-making basis for the planning, production, distribution and other aspects of the film project, and improve the success rate and return on investment of the film project. In addition, AI can also promote the synergistic development of the film industry and other related industries, such as integration with the game industry, animation industry, cultural tourism industry, etc., expanding the industrial chain of the film industry, creating more business value and employment opportunities, and promoting the prosperity of the entire cultural industry.

2. Literature Review and Research Methodology

In the present time, the integration of movie creation and artificial intelligence has become an emerging field of attention in both academia and industry. Numerous domestic and international scholars have conducted extensive research around this topic, laying a rich theoretical foundation and practical reference for subsequent exploration. Early studies such as Artificial Intelligence and Filmed Entertainment

(2019) reveal the wide range of applications of AI in the arts and entertainment industry, such as in scene creation, visual effects, and music composition, and emphasize the positive role of AI in improving the efficiency and creativity of filmmaking. Narrative Generation in Filmmaking (2020) explores the application of AI in the creation of film plots and dialogues, offering new possibilities for film narratives. In the field of visual effects, Artificial Intelligence in Visual Effects (2018) describes how AI operates in the production of special effects, with image processing techniques based on machine learning, changing the way visual effects are created. Meanwhile, books such as High-Resolution Imaging:Detectors and Applications explore the application of high-resolution imaging technology in cinematography and post-production, providing more means for the presentation of movie visual effects. In terms of music composition, Movie Music Created by Artificial Intelligence (2021) explores AI's ability to express emotion in music and movie experiences, with far-reaching implications for audience experience.

However, with the widespread use of AI in filmmaking, ethical issues are coming to the fore. The Ethical Impact of Artificial Intelligence on Filmmaking (2022) provides an in-depth discussion of the ethical issues that may be raised by AI in the process of film production, posing an ethical challenge for the application of AI in the field of cinema. Carlson (2017) points out that the ethical issues that may be raised by AI in the process of filmmaking, such as algorithmic bias, privacy protection, and creative responsibility, pose an ethical challenge for the application of AI in the field of film posing ethical challenges. Fang, Che, & Mao (2024) further explored the ethical implications of AIGC technology, emphasizing the impact on human subjectivity and cultural diversity in the creative process. These studies provide important theoretical underpinnings for this paper, enabling this study to position itself within a broader academic discourse.

This study aims to explore the following key issues. First, AI carries out movie creation through specific logic, such as generating content based on given scene words, outlines, and set dimensional styles. How to deeply understand the value orientation behind this logic and the impact of the logic on movie narratives, thematic expressions, etc. is crucial for grasping the mechanism of AI's role in movie creation. Secondly, how to construct a set of judging standards applicable to AI movie artworks to promote a positive shift in movie narrative paradigm. What kind of reference object is chosen to objectively and comprehensively assess the artistic standard of AI movies is an important issue that needs to be solved urgently. Finally, when AI algorithms deeply intervene in the process of movie creation, whether the subjectivity of human beings is changed is not only related to the essence of movie creation, but also involves the deep-level development of movie theory. Excessive reliance on AI creation may lead to serious homogenization of film works, lack of individuality and depth, and weaken the subjectivity of human creation. Specifically, this study will explore how AI plays a key role in key aspects such as script creation, filming, post-production, etc., and how to improve production efficiency and accuracy through automated scene creation, intelligent editing, color grading, and special effects generation. At the same time, this paper will also focus on the application of AI in the prediction of film market performance, audience feedback analysis, etc., and explore how it can improve the profitability and market competitiveness of film works.

In terms of methodology, this study adopts a combination of case study method, literature review method and comparative study method. First, the theoretical framework and background knowledge are constructed through a comprehensive literature review. Literature sources cover the National Knowledge Infrastructure (CNKI), Google Scholar, the Research Information Service System for Korean Scholarship (RISS), and other authoritative information platforms. Extensively collected and organized domestic and international literature related to the integration of artificial intelligence and film art. Literature resources such as books, newspapers, magazines, theses, and dissertations related to the topics of artificial intelligence, film creation, film market management, and film consumption experience, as well as theoretical works related to film, were searched to provide comprehensive information support for the dissertation writing. In the process of literature collection, the interdisciplinary perspective is emphasized, and research results from different fields such as sociology, psychology, management, law, information technology and so on are referred to and absorbed in order to enrich the theoretical connotation and perspective of the study. On the basis of traditional literature analysis, the content analysis method is used to conduct detailed content classification and objective quantitative analysis of the literature, so as to grasp

the overall situation, development trend and research hotspots of the research on the integration of AI and movie and video content at the macro level. At the same time, from the micro level, the detailed information on the application of AI in various aspects of film creation, case studies, as well as the views and insights of different scholars are explored, so as to lay a solid theoretical foundation and rich reference materials for the subsequent case studies and comparative research.

The case study method focuses on examples of the creation of Korean AIGC short films to provide concrete and intuitive arguments to support the research. The two AIGC short films “One More Pumpkin” and “Doomsday Bubble” directed by Kwon Seul in South Korea focus on analyzing from multiple dimensions, including key aspects of film creation such as scriptwriting, scene design, visual effect production, music composition, editing, etc., exploring the specific application techniques, methods and effects of AI in each aspect, and analyzing how it can change the process and mode of traditional film creation to improve the creative efficiency and quality of works. Analyze how it changes the process and mode of traditional movie creation, and improves the efficiency and quality of creation. At the same time, we pay attention to the market performance and audience feedback of the cases, and analyze the possibility of industrialization of the integration of AI and movie video content. In selecting these two works as the research cases for this study, the following criteria were followed. First, these two AI short film works are representative and can fully demonstrate the application of AIGC technology in movie creation. Second, these two works have made some impact in the industry or academia, not only pioneering the commercialization of AI short films in Korea, but also gaining acclaim in the United States and Dubai, and serving as a prelude to lay a solid foundation for the development of subsequent film and television projects. Therefore, these two works are typical and representative, and it is necessary to explore and analyze them in depth.

In terms of the analytical framework of film studies, this paper will analyze the two short films from three dimensions: narrative innovation, technical implementation and audience acceptance. In terms of narrative innovation, it focuses on how AI changes the process and mode of traditional movie narratives, and the impact of this change on the work's thematic expression, plot construction and other aspects. In terms of technical implementation, the specific application techniques, methods and effects of AI in each key link are explored in detail, including scriptwriting, scene design, visual effects production, music composition, editing, and so on. In terms of audience acceptance, the acceptance and potential market value of AIGC technology in the film industry is explored by analyzing audience feedback and market performance.

Through a comprehensive literature review and in-depth case studies, this study finds that the application of AIGC technology in film creation has significant advantages and potential. However, it also faces challenges in terms of ethics and the effectiveness of technology application. In the future, with the continuous progress of technology and the increasing improvement of theory, AIGC technology is expected to play a more important role in the movie industry and promote the innovation and development of movie art. At the same time, it is also necessary to strengthen interdisciplinary research, combining the knowledge of culture, art, technology and other fields, to further expand the research field, and contribute more wisdom and strength to the prosperity of the film industry.

3. Theoretical Basis of the Study

Since its birth, the movie has been inseparably linked with technology. Every innovation in its artistic form and expression has been driven and influenced by technological progress. From the Italian Neorealism and the French New Wave in the late 1940s, to the American Cinema Directo and the French Cinema Vérité, they have all profoundly captured the reality of society through unique technical means and narrative strategies, thus greatly expanding the artistic boundaries of cinema. These film movements have not only greatly enriched the narrative techniques of film, but also transformed film from a simple entertainment medium into a cultural phenomenon with profound social significance and artistic value.

Essentially, AI is science and technology, and the correct application of science and technology is one of the core driving forces of artistic innovation. For video art creators, AI is an innovative tool that can broaden creative horizons, lower the threshold of creation, enable wider sharing of artistic creation privileges, and create the possibility of “everyone becoming an artist”. From the perspective of aesthetics, the intervention of generative AI technology in video art creation implies the collision of two different genera-

tive systems. The characteristics of these two systems make the fusion of the two kinds of “generation” possible.

Baudrillard's concept of simulation and Goodman's theory of artistic symbols are introduced here to deepen the understanding of the relationship between artificial intelligence and film narrative. Baudrillard's concept of simulacrum states that in postmodern society, the line between the simulacrum and the real is increasingly blurred, and that digital media are in the stage of simulacrum, not as a sign of truth, but as a technology that makes truth fade away. This view is particularly important in the context of the digitization of cinema, which, although it can reproduce reality more realistically with the help of digital technology, also faces the risk of falling into the mimesis vortex. For example, some movies that rely on a large number of digital special effects may create realistic visual effects, but in the process of pursuing mimesis, they may weaken the expression of real emotions and meanings.

Goodman's theory of artistic symbols emphasizes that a work of art is a unique symbol system whose meaning is not given naturally but through cultural and social conventions. In the context of AI's involvement in movie creation, various elements in the movie, whether characters, plot or images, can be considered as symbols. According to Goodman, artistic symbols are characterized by opacity, polysemy and syntactic and semantic density. Taking the movie content generated by AIGC as an example, the generation of symbols is different from traditional movie creation, which may trigger new challenges to the interpretation of the meaning of movie symbols. For example, the meaning behind the characters generated by AIGC based on the algorithm may not be as easy to understand as that of the traditional characters, and the audience needs to interpret the information conveyed by these symbols in a new context.

The digitization of film is an important milestone in the development of film technology, which makes the process of film creation more integrated and efficient. Digital technology has not only changed the filming, editing, special effects production and other aspects of the film, but also presented a new visual characteristics and forms of expression for the film. According to Bazan, the essence of movies lies in revealing the truth of reality, and the development of digital technology enables movies to reproduce reality in a more realistic and delicate way. On the other hand, Baudrillard points out that digital media is in the stage of mimesis, which is not used as a sign of truth, but as a technology that makes truth disappear. In this context, the development of film art needs to find a balance between technology and art, making full use of the advantages of digital technology while maintaining the artistic essence and aesthetic value of film.

Looking at the history of art development from a technical perspective, art reproduction has gone through four stages: artificial cloning, mechanical cloning, electronic cloning and digital cloning. In this process, all stages of art in addition to copying, there is the possibility of mechanical copying, and with modern development, this process is accelerated. As far as the current level of AI technology is concerned, its application in cinema has gone far beyond the scope of mechanical reproduction and mechanical assistance, giving the machine virtual subjectivity, a change that triggers thinking about the impact of human identity and also contributes to the evolution of the relationship between humans and machines. In AI image production, human imagination, life experience and logical thinking are indispensable, such as planning, scripting and directing led by humans, while editing, special effects, dubbing and other phases can be accomplished with the help of AI, a complementary model that will help AI to play a greater role in the technical level.

It is worth noting that human imagination, life experience and logical thinking are still indispensable in AI image production. For example, in key aspects such as planning, scripting and directing, human participation is still needed; while in editing, special effects, dubbing and other phases, the efficient processing capabilities of artificial intelligence can be utilized. This complementary model not only helps AI play a greater role in the technical level, but also maintains the unique charm and aesthetic value of movie art.

In addition, the big model has a powerful symbolic system modeling intelligence, and there is an interactive relationship with human beings. Chen Xiaoping describes the basic characteristics of natural language macromodels with the “instantiation model”, which is different from the conceptualized “generalization model”, and emphasizes the specificity and individuality of the linguistic elements in the movement of symbol combination. Kant's instantiation focuses on the specificity of natural elements in the combination of beauty and the “individuality of man” in the free combination of society. Natural, social and intelligent movements follow “universal laws”, and

intelligent movements are the interaction of the combined movements of mind, neuron and language elements. Therefore, the instantiation of linguistic elements and their aesthetic and social significance in the combined movement of large model symbols can be examined from the interaction of all kinds of movements, especially the interaction with the combined movement of natural objects and the combined movement of social individuals. This suggests that the strong demand for morphological similarity in the current AIGC field stems from historical contingency and cognitive bias guided by utilitarian purposes. Therefore, the instantiativity of the linguistic elements in the large-model symbolic combinatorial movement and its aesthetic and social significance can be examined from the interactions of the movements, especially with the natural object-element combinatorial movement and the social-individual combinatorial movement.

Under the profound influence of artificial intelligence, the production process and industrial structure of the movie industry are undergoing unprecedented changes. The traditional film production mode has been completely broken, and AI technology has made film creation more efficient, flexible and personalized. At the same time, AI has also given rise to new occupations and talent needs, such as AI trainers and AI creative engineers. These changes not only bring new development opportunities for the movie industry, but also pose a serious challenge to the existing industry model. In this context, it is necessary to deeply explore the possibility of industrializing the integration of AI and film video content, with a view to finding the best balance between technology and art, thus promoting the sustainable development and prosperity of film art.

4. Characteristics of Korean AIGC Film Shorts and Industrialization

The Korean film industry has made remarkable breakthroughs in the field of AIGC (Artificial Intelligence Generated Content).2023 Kwon Seul's AIGC short film OneMorePumpkin won the “Grand Prize” and “Audience Award” at the first Dubai International Artificial Intelligence Film Festival (AIFF). Audience Award” at the first Dubai International Artificial Intelligence Film Festival (AIFF), becoming the center of global attention. This is a landmark work. It raised the international profile of AIGC's film and video productions and opened up the possibility of new markets for the Korean AIGC film industry.

It is a Korean short film in the fantasy-horror genre about the mysterious story of a 200+ year old couple, which skillfully blends Korean traditional elements with western Halloween elements, and has sparked strong interest and extensive discussion among viewers with its fantastic visual effects and unique narrative style. The film is only 3 minutes long, but achieves a major breakthrough in the production method, completely abandoning the traditional audio-visual live-action filming and CG correction, and using only generative AI to complete the production and post-production. Compared to traditional live action filming and CG correction, generative AI technology is able to produce high-quality visual effects more efficiently.

Director Kwon Seul's studio, Studio Free Willusion, not only owns its own patented technology, but has also established a partnership with Mila, the world's largest deep-learning research institute, which is dedicated to researching the technology of synchronized audio generation in the production of AI videos, and providing AI video production services for the AI industry. In collaboration with Mila, the world's largest deep learning institute, the studio is working on the technology to synchronize audio generation during the production of AI videos, providing strong support for the continuous development of AIGC's film creation technology. One More Pumpkin” fully utilizes the advantages of AIGC technology. Generative AI technology was heavily utilized from scriptwriting and scene design in the early stages, to filming and special effects production in the middle stages, to editing and music composition in the later stages. In terms of script creation, AIGC technology analyzes and learns from a large amount of script data through natural language processing and machine learning algorithms, and is able to accurately capture the structure of different types of scripts, the laws of plot development, and the patterns of character relationships. One More Pumpkin utilizes AI technology for script creation, character setting and scene planning, generating diverse character images and scene layouts through algorithms, shortening the script creation cycle.

Scene design is a key link in the creation of a movie, and AIGC technology provides directors with more intuitive creative references through scene design and preliminary visual effects production. Through computer vision and image processing tech-

nology, AI can quickly generate realistic scene images according to the script description and the director's creative intent. For example, in One More Pumpkin, AIGC generated a village scene with a strong Korean flavor based on the description of the traditional Korean village in the script, combined with a large amount of related image data, including details such as simple houses, stone roads, courtyards, and so on, to create a strong cultural atmosphere for the film.

During the shooting process, AI assisted in completing tasks such as scene arrangement and lighting adjustment. The special effects production link uses deep learning algorithms to quickly generate realistic visual effects, such as dynamic changes of pumpkins, mysterious light and shadow effects, etc., which creates a dreamy atmosphere for the film; in addition, AI can preview and adjust the special effects in real time, so that the director can see the final effect in time to optimize the shooting plan.

In the editing stage, AIGC technology can intelligently screen materials and optimize the editing rhythm according to the editing style and screen language, making the film's narrative more fluent. In One More Pumpkin, AIGC analyzed the film's narrative structure, emotional changes, suspenseful atmosphere and rhythmic requirements, and selected some tense and fast shots for editing, creating a sense of urgency and enhancing the film's viewability.

In terms of visual effect production, AIGC technology is able to perform intelligent color adjustment, noise reduction, image repair and other operations on the film. According to the overall style and color requirements of the film, it automatically adjusts the color tone, brightness, contrast and other parameters of the screen to make the screen color richer and more coordinated; at the same time, AI is also capable of identifying and removing the noise in the screen, repairing the damaged image, and improving the clarity of the film and the visual effect. For example, for the pumpkin dynamic change special effect in the film, AIGC, based on the existing dynamic change data and image processing technology, quickly generates the whole process of the pumpkin from complete to broken and then to reassembled, so as to make the special effect screen more fluent and realistic; at the same time, it is also able to intelligently optimize the special effect screen, adjusting the effect of color, light and shadow, so as to make it match with the overall visual style of the film.

The application of AIGC technology in the field of music composition is also remarkable. by learning a large number of musical works and composition rules, the AI composition system is able to create background music that fits the theme of the movie according to its emotional direction, style characteristics and scene atmosphere, thus enhancing the infectious force of the movie. the AIGC technology is also able to assist in the production of sound effects. According to the scenes, actions and dialogues in the film, it intelligently generates corresponding sound effects, such as environmental sound, action sound effects, etc., and intelligently mixes and optimizes the sound effects, so that the sound effects are perfectly integrated with other sound elements such as music and dialogues, and the overall quality of the film's sound effects is improved. AI technology is also used in dubbing to synchronize facial expressions and lip-synchronization, making the character's performance in the short film more natural and realistic.

In addition, another work of director Kwon Seul, “Doomsday Bubble”, is also worth paying attention to. The movie goes further in the application of AIGC technology, with a duration of 5 minutes and 30 seconds, which was created by 5 people over a period of 2 weeks, and incorporates more than 10 kinds of the latest AI technology. All the music in the film was created and sung by AI, and the sound quality and singing level reached professional level, fully demonstrating the great potential of AI in the field of music creation.

It can be seen that AIGC technology has brought a brand new industry model to the movie industry. First, it lowers the cost and threshold of movie production. Traditional movie production requires a large amount of capital investment to pay for actors, venues, equipment, special effects production and other costs. And AIGC technology can significantly reduce these costs. For example, the production cost of One More Pumpkin was almost zero because it primarily used free AI open-source technology and did not involve traditional costs such as live-action filming and location rental. This has given more independent creators and small production companies the opportunity to enter the movie industry, promoting the diversification of the industry.

Second, AIGC technology promotes the integration of the movie industry with other related industries. For example, it can cross-border cooperation with the game industry, animation industry, virtual reality industry and so on, creating a new entertainment expe-

rience and business model. Scenes, characters and stories in movies can be transformed into games, animation or virtual reality content, realizing multi-platform linkage and realization. At the same time, the creativity and technology in these industries can in turn provide new inspiration and support for movie creation and promote the innovative development of the movie industry.

Finally, AIGC technology has also given rise to new occupations and talent needs. In the movie industry, in addition to traditional professions such as director, screenwriter, actor, cinematographer, etc., emerging professions such as AI trainer, AI creative engineer, AI visual designer, etc. have emerged. These talents need to have interdisciplinary knowledge and skills, and understand both film art creation and AI technology, and be able to organically combine the two to promote the digital transformation and intelligent upgrading of the film industry.

5. Reach a Verdict

The study found that artificial intelligence technology has had a positive impact on movie production in many ways. First, AI technology has significantly improved the efficiency and quality of movie production. In the field of visual effects, AI-based visual effects technology has dramatically improved the efficiency of visual effects work by automating the process and reducing the need for manual labor, enabling filmmakers to achieve complex visual effects more quickly. In the production process of the two short films One More Pumpkin and Doomsday Bubble, the application of AI technology in the special effects production process has made the special effects images more realistic and smooth, and the production cycle has been significantly shortened, almost realizing zero-cost production. In addition, the auxiliary role of AI in scriptwriting, editing, music composition and other aspects also provides new ideas and methods for traditional movie production, making the movie works more accurate and rich in narrative structure, rhythm grasp, emotional expression and other aspects.

Secondly, AI technology expands the expression form and artistic space of movie creation. It is able to break through the limitations of traditional movie production and create visual effects and narratives that are difficult to be realized by traditional film and television production methods. For example, the virtual scenes, special effects elements and character images generated by AI create a unique visual style and atmosphere for the movie, enriching the artistic expression of the movie. At the same time, AI is also able to create music and sound effects that fit the theme according to the emotional direction and stylistic characteristics of the movie, which enhances the infectious force of the movie and the audience's sense of immersion. These innovative forms of expression and artistic techniques not only provide a broader imagination for film creation, but also inject new vitality into the development of film art.

Artificial intelligence visual effects technology in movie production shows significant advantages, greatly improving the efficiency of visual effects work. Through the automation process, it reduces the dependence on manual labor and optimizes the workflow, so that the film production can be effectively controlled in terms of time and labor costs. At the same time, the technology empowers filmmakers to break through traditional limitations, effectively realizing the creation of complex or fantastical scenes, bringing brand-new possibilities for film visual effects, greatly stimulating the creativity of filmmakers, and pushing the film industry toward a new stage of development.

Despite the increasing involvement of AI in movie production and the continuous technological advancement, movies, as a highly creative and artistic activity, cannot be completely replaced by AI. Artificial intelligence should be regarded as an auxiliary tool in movie creation, which provides new means and possibilities for movie creation, but the core artistic expression, emotional transmission and insight into life of movies still require the participation of human creators.

The academic contribution of this study is to systematically explore the application of AI technology in film production and its impact on the film industry, providing new perspectives and theoretical support for the study of intelligent images. Through in-depth analysis of the case study of the creation of AIGC short films in Korea, it provides empirical evidence for understanding the integration of artificial intelligence and film art. In addition, this study explores the ethical issues of AI technology in filmmaking, emphasizes the protection of human subjectivity and cultural diversity in the process of technology application, and provides theoretical references for research in related fields. In terms of practical application, the technology should follow ethical principles to avoid problems such as algorithmic bias and privacy invasion, and to

ensure the fairness and transparency of movie production.

In summary, artificial intelligence technology is leading the visual communication of the movie industry into a new era, providing a powerful impetus and broad space for the innovative development of the movie industry. In the future, with the continuous progress and improvement of AI technology, its application in film production will be more extensive and in-depth, and the film industry will usher in a more diversified, personalized and intelligent development trend.

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