AIGC Enables Digital Transformation of Fashion Exhibitions

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Abstract: 2023 is known as the "Year of AIGC" (Artificial Intelligence Generated Content), and the concepts of artificial intelligence and AI big models are rapidly igniting the market. As a digital technology, AIGC brings profound changes and innovative power to social services, design innovation, humanities development, media renewal, and business models. "Digital transformation" has gradually become an essential issue of the times. At the same time, AIGC is also changing the digital transformation process of fashion exhibitions. Therefore, this paper hopes to explore the application and empowerment of AIGC technology in the digital transformation of fashion exhibitions, to provide new research perspectives and methods for related disciplines from the perspective of design, to enhance the quality and efficiency of fashion exhibitions in digital transformation, and at the same time, try to think about the solutions and the path of future development.

Keywords: AIGC; Fashion Exhibition Digitization; Exhibition Design

1. Research Background

With the rapid development of information technology and the rise of the global digital wave, the digital application of generative AI technology has become the future direction of development in various industries. AIGC refers to the use of Artificial Intelligence technology to generate content. Under the technical context jointly constructed by elemental data, generative algorithms, and multimodal models, AIGC has gained the same underlying logic, overlapping essential capabilities, and unified value purpose as digital cultural production, thus laying the foundation for the coupling of the two.

How to innovate the exhibition based on the AIGC exhibition, optimize the content generation, dissemination path, and innovative exhibition construction mode, organizational structure, operation process, and even supply chain, etc., have all become the urgent problem of the fashion exhibition in the context of digital transformation.

1. 1Policy Background

The Chinese government also pays extra attention to the developmental advantages of AI, treating the AI industry as the core of the national strategy, demonstrating an active, supportive stance in terms of linguistic macro modeling, and formulating norms in terms of information security and AIGC management, for example, in April 2023, China's Ministry of Internet Information Technology (MIIT) issued a "Notice on the Public Solicitation of Comments on the Measures on the Management of Generative Artificial Intelligence Services (Exposure Draft)" for the first time. It issued a normative policy for the generative AI industry, including algorithms, models, generated text, images, sound, video, and code. The notice provides policy support and technical guarantees for the development of AIGC. Also, it requires AIGC to comply with legal requirements regarding data sources, algorithm design, and content labeling. Therefore. The overall policy environment shows favorable support for AIGC empowerment and application. The positive social policy context will further assist the digital transformation of fashion exhibitions.

1.2 Industry Background

In 2023, to further promote the development of the AI industry in the Optics Valley and explore the deep integration of modern technology and art aesthetics, the "China Optics Valley" AI AI Art Exhibition will be held in the form of a tour of the AI industry in the Optics Valley, It is an exploration and reconstruction of the relationship between human beings, AI, and art to awaken the public to think about the future of art forms. The development of science and technology will enable human beings to explore unrecognized images and scenarios, China is increasingly using AIGC, especially in the cultural industry, and fashion exhibition is the best case. However, AIGC's empowerment is mainly concentrated in first-tier cities . Therefore, in the future, AIGC will continue to make efforts and expand downward to broaden the

breadth of development and depth of influence.

2. Definition of Related Concepts

2.1 AIGC

AIGC is an emerging technology in recent years, mainly through artificial intelligence and machine learning algorithms to generate various types of digital content, such as images, video, audio, text, and 3D models. AIGC can be applied to text, images, music, video, 3D modeling, architecture, and so on. It can be used in the office, AIGC in text, photo, music, video, 3D modeling, architecture, etc., and office, media, art, and other scenarios as an assistant or even creator. Currently, AIGC is developing fast in the field of text and code, and now can write long texts and develop essential software, which can assist white-collar workers and technicians in completing some of their work; in the field of art and design, AIGC is still in the primary stage of exploration, and there is still much room for improvement in its creative ability. it can help the industry reduce costs and increase efficiency, with huge market potential.

2.2 Digital Transformation

In the context of fashion exhibitions, digital transformation is not only about updating technology but also about innovating and changing the whole chain of fashion exhibitions, which includes exhibit design, exhibition planning, and visitor experience, covering physical, virtual, and emotional dimensions. Especially with the development of technology, the expectations of visitors to exhibitions are growing, and they want to interact more with fashion brands and fashion trends through fashion exhibitions, therefore, fashion exhibitions need to be transformed from a purely spatial experience to a more interactive experience. Exhibitions must shift from strictly spatial expertise to providing a comprehensive multi-sensory exhibition experience. Leveraging AIGC-enabled digital tools to offer a personalized exhibition experience includes adopting AI analytics tools and technological developments such as AI design, AI content marketing, AI interactions, and more. At the same time, digital fashion exhibitions can make use of big data, IoT, and data science to understand the exhibition audience better, respond to the audience's demand for exhibition content and market trends, and adjust curatorial strategies and display design in a targeted manner, to quickly adapt to technological change.

3. Exploring the development dilemma of fashion exhibition

3.1 Technical challenges brought by digital transformation

With the rapid development of digital technology, the traditional fashion exhibition mode is facing the pressure of transformation. How to effectively integrate emerging technologies (e.g., virtual reality, augmented reality, artificial intelligence) to enhance the exhibition experience is the goal of the current fashion exhibition to solve the critical problem. However, as digital technology varies from city to city, AIGC technology may also bring technical challenges, including data privacy and security issues. Large-scale digital transformation involves the processing and storing of a large amount of sensitive data, increasing the risk of data leakage and cyber attacks. The technical infrastructure required for fashion exhibitions must also be considered: updating and maintaining legacy technical infrastructure to adapt to the new digital environment may require significant resources and funding. the construction of AIGC-enabled fashion exhibitions involves extensive cloud computing and big data management: the ability to process and analyze large-scale data becomes critical, requiring effective cloud computing and big data management solutions. Including AIGC may also bring socio-ethical issues, such as user information leakage, digital divide, etc., and the need to comply with evolving data privacy regulations and requirements, which may require system adjustments and updates. Responding effectively to these challenges requires the fashion industry to have comprehensive planning, innovative ways of thinking, and flexible response strategies.

3.2 New Exhibition Needs of Generation Z Audiences

With the popularity of the Internet and social media, people are more inclined to obtain fashion information through digital platforms,

which has led to a decline in audience participation in physical fashion exhibitions and a decline in audience participation in traditional exhibitions year by year to attract young audiences, especially Generation Z. (Generation Z was first popularised in Europe and the US to describe those born between 1995 and 2009) Generation Z has always been regarded as the main force of future consumers who are fully committed to the Bureau of Planning, who pursue new trends and are bold enough to try them out, and who are influential and appealing to digital ecosystems, trendy cultures, consumer trends, and other aspects. The Gen Z group has presented new consumption trends in diversified and inclusive social and business environments. Therefore, one of the dilemmas faced by fashion exhibitions nowadays is that they need to rethink the contents, forms, and interaction modes of fashion exhibitions of the Generation Z group, as well as how to complete the innovation mode. As the millennial generation's needs change rapidly, and the consumer market changes quickly, fashion exhibitions must achieve efficient "iteration". "Iteration" provides flexible market feedback and innovation.

3.3 Serious homogenization of fashion exhibitions

In the fast-changing world of fashion, fashion exhibitions need to be innovative and up-to-date to attract the attention of audiences and the media. However, a lack of innovation can make exhibition content and formats stale and repetitive. With fashion brand art curation becoming a trend, many brand exhibitions have the problem of being as homogenized as assembly line work and needing more innovation. It isn't easy to arouse the audience's interest and form emotional communication with them. Homogenized fashion exhibitions make the development of the whole industry a mere formality and cannot effectively convey the exhibition concept.

4. Research on the development path of fashion exhibition empowered by AIGC

At present, in the research of digital design of fashion exhibitions, domestic and foreign countries mainly focus on several key aspects, covering different levels and aspects of fashion exhibition, from planning, design, consumption, and audience experience; these research directions are all vital parts of the digital transformation process of fashion exhibition, they together constitute multiple dimensions of a fashion exhibition. To achieve a more comprehensive, efficient, and sustainable digital transformation of fashion exhibitions

4.1 Enabling intelligent curation and design for open-source co-creation

AIGC-enabled curators and designers can use artificial intelligence to analyze the history, design styles, and latest trends of exhibiting brands to curate exhibition content more intelligently. Virtual Reality (VR) and Augmented Reality (AR) technologies provide an immersive experience for visitors to interact with the pieces in the fashion exhibition. In terms of intelligent technology-enabled design, curators can use ChatGPT for the exhibition's background, keywords of the exhibition, and artists of the exhibition as instructions, which can output many textual introductions about the exhibition. After obtaining the introduction, it is possible to add a description of the venue as well as the spatial atmosphere by inputting the command keywords into Midjourney, which will be able to output the corresponding images through artificial intelligence, taking only about one minute, including the use of TensorFlow and PyTorch, open-source deep learning frameworks, which can be used for training drawings, and Scikit-Learn AIGC can help curators of fashion exhibitions save a lot of time in the future. Along with that, the threshold of exhibition design is becoming less and less difficult with the support of AIGC. AIGC will also encourage part of the exhibition audience to participate in the co-creation of the whole exhibition, which will on the one hand provide more inspirational information for fashion exhibitions, and at the same time promote the open-source co-creation of the fashion exhibition atmosphere.

4.2 Digital exhibition space, digital twin to promote the combination of reality and reality

At present, AIGC mainly includes three core capabilities: migrating real-world content to the digital world (twinning capacity), establishing content interoperability between the digital world and the real world, and assisting in the generation of real-world content (editing capability), and ultimately evolving from digital imitation to comparable to the natural creative ability of human beings (creation capability). In the process of digital transformation of fashion exhibitions, digital twin technology can be introduced. (Digital twin is the use of models and data simulation to restore the dynamic characteristics of the whole life cycle of things in the physical world and two-way evaluation.

The digital twin is a higher-order expression of digitization aimed at reducing costs and increasing efficiency and is a necessary technology for realizing the meta-universe) [9] This is AIGC's next breakthrough, which will help online exhibitions move from purely virtual to a combination of reality and reality: from a technological perspective, there are more mature applications of data collection, modeling, rendering, simulation, analysis and prediction required for digital twins; from the standpoint of production relations, digital twins focus on empowering the real world, intending to reduce costs and increase efficiencies, and circumventing social values, laws and ethics, and privacy and security questions and concerns about the concept of meta-universe.

4.3 Data-driven personalized experience with visitor-centricity

AIGC technology uses machine learning algorithms to provide personalized exhibition recommendations and shopping suggestions by collecting visitor data, including interests and shopping history. For example, Tableau, Power BIPandas, Matplotlib, etc., to achieve data analysis and visualization analysis, combined with intelligent guiding systems and content management systems, such as WordPress and Drupal, to customize exhibition routes for exhibition visitors and enhance the visiting experience, and at the same time, use the social media data analysis to understand the fashion exhibition's social influence and participation, and then adjust the exhibition strategy. Integrating interactive social media elements into the exhibition and encouraging visitors to share their experiences increases the communication and engagement of the display, which is a paradigm shift from exhibit-centric to visitor-centric. Throughout the fashion exhibition chain, the above technologies and approaches help enhance the visitor experience, strengthen the exhibition's impact, and drive the fashion industry in a smarter, digital, and sustainable direction.

Summing Up

In conclusion, AIGC has changed the game of fashion exhibitions by making them more attractive, intelligent, and innovative. The fusion of digital and fashion has changed every aspect of fashion exhibitions. From exhibits, exhibition planning, and audience interaction reflecting digital elements, the exhibition industry is also experiencing unprecedented transformation and challenges. At the same time, with the digital economy boosting the leapfrog development of the cultural sector, digital exhibition has become the new normal. Based on the above, it can be seen that under the comprehensive influence of macro-environment and digital technology, the form of fashion exhibition has begun to reconstruct, and in this process, how to reconstruct the relationship between people, goods, and field around "people" has become the core issue of fashion exhibition design. The future of this field is full of endless possibilities, and we look forward to more exciting exhibitions and innovations.

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