

AIGC in Micro-Drama Production: Practices and Prospects

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Abstract. Generative AI is rapidly entering the production of online audiovisual content, continuously driving the development of the audiovisual creation industry. Technological iterations and policy development provide a basis for the popularization of online micro-shorts, generative AI has already been used in online micro-short dramas. Nevertheless, the application of generative AI in online micro-short dramas still faces many challenges. The content produced by AIGC appears mechanical and unrealistic, and the social and commercial value of AI-produced micro-short dramas is uncertain. In addition, the misuse of technology may lead to rights infringement. Therefore, production teams should use AIGC to break through the boundaries of creativity and produce differentiated content. With the participation of various stakeholders, we should jointly promote the development of technology for good and promote the high-quality, healthy development of AIGC online micro-short dramas.

Keywords: AIGC, Micro-Drama, Text-to-Video, Chinese Mythology

1. Introduction

As a new type of productive force, AIGC is quietly transforming traditional audiovisual production methods, driving the industry's production processes toward intelligence and automation. As a content generator, generative AI technology is visibly advancing at a rapid pace, gradually demonstrating the potential to become a versatile creator of film and television content.

As the industry matures toward higher quality and efficiency, key players are proactively integrating AIGC into workflows. The “AI + micro-short drama” production model embodies new momentum emerging from the transformation of the media technology ecosystem. Although AIGC has yet to achieve large-scale commercial application in the micro-short drama sector, the development direction of large models aligns highly with the current needs. Their widespread adoption in the online audiovisual industry holds broad prospects and theoretical foundations. Thus, the “AI + micro-short dramas” competitive arena represents a “blue ocean” market, poised to become a new growth frontier for the future development of the online audiovisual industry.

2. Existing foundations for AIGC-empowered web micro-short dramas

AIGC's entry into the online micro-short drama industry is quietly triggering profound reshaping and innovation within the online audiovisual ecosystem. Based on current trends, the author

observes that AI micro-short dramas, as an emerging hybrid online audiovisual format, have already established a solid developmental foundation on both objective and subjective levels.

2.1. Specific attributes and market demand drive the emergence of new fields

As an emerging form of online audiovisual content, micro-short dramas offer an ideal testing ground for applying cutting-edge AI technologies in film and television production. The industry-wide trend of integrating AIGC to enhance return on investment is gaining momentum. This deep integration of technology and content unleashes creators' drive for technological innovation, propels mutual advancement in both domains, and will profoundly reshape the entire audiovisual industry. According to incomplete statistics from the 2023 Micro-Short Drama Industry Report, UGC content with shorter episode lengths and conventional works around 10 minutes per episode still dominate the runtime landscape of online micro-short dramas. In the long run, the pursuit of efficiency driven by the "short" format will persist. Under pressure to reduce costs and increase efficiency, technological imagination will gradually expand, potentially accelerating the disruptive impact of technological advancements on the film and television industry.

The content and presentation of audiovisual works are limited by the imagination of creators and the technical means. Most micro-shorts narrate stories around real-life scenarios, employing conventional methods like character dialogue and plot development. However, AIGC is trained on a large amount of data, it can create new content and new visuals that go beyond the imagination of humans, such as scenarios that never existed. The fantastical characteristics of AIGC endow the micro-short industry with a broader creative space for online micro-shorts. Compared to traditional manual production, AIGC makes the process more flexible, controllable, and adaptable. In related interviews, the production team behind the Chinese Mythology series of micro-shorts noted that producing these micro-shorts through traditional methods—including filming, editing, and music composition—would cost seven times more than their AI-produced counterparts [1]. Therefore, using AI to produce videos is very cost-effective, producers of currently popular short dramas are beginning to explore how to use AI tools to produce micro-shorts in an end-to-end process.

2.2. Rapid evolution of technical models unlock boundless possibilities for development

On February, 2024, OpenAI released the first text-to-video model Sora. The biggest highlight of Sora is that given users' text prompts, it can generate up to one minute of video matching the text while maintaining high visual quality and continuity of visual progression. Previously, videos generated by the publicly available models of AI video generation can only produce videos of 3-18 seconds long once. The most criticized problem is that the static images produced by AI were not "consistent" – that is, maintaining the consistency of characters, objects, background, even time in different frames. It is very important that the images generated by different frames can be consistent with each other. While the videos produced by previous AI were often like "moving static pictures", Sora can be seen as a leap from generating static pictures to producing videos. It has advantages such as long duration, multiple angles in one video, and partial adherence to physical laws, and it has certain advantages in the understanding of motion and temporal progression.

With the text-to-video technology, AIGC for long-form video generation has reached a pivotal development point. Technological progress not only enables AI-powered micro-short dramas today but also fuels industry optimism about the future. As long as AI technology continues to advance, the evolution of AI-generated micro-short dramas will not cease. Currently, we observe rapid development in large models addressing the comprehensive needs of text-to-video creation, while

leading research institutions continue to increase investments in practical applications. In the near future, if these AIGC technologies can be integrated for combined use, the quality of generated micro-short dramas will undoubtedly be transformed beyond recognition.

2.3. Refined regulatory policies and supportive guidance create a favorable environment

Emerging technologies driven by high-tech advancements are a double-edged sword, and AI is no exception. While actively encouraging AI innovation, governments also prioritize risk prevention and social responsibility management in its applications. Relevant AI laws and regulations have been successively issued both domestically and internationally. A representative example in China is the Interim Measures for the Administration of Generative AI Services, jointly released in July 2023 by the Cyberspace Administration of China, the National Development and Reform Commission, the Ministry of Education, the Ministry of Science and Technology, the Ministry of Industry and Information Technology, the Ministry of Public Security, and the National Radio and Television Administration. These measures emphasize the need to adopt effective steps to encourage innovative development of generative AI while implementing inclusive, prudent, and tiered regulation. Policies and regulations catalyze the integration of technology and industry. At the national level, they have established a sound institutional environment for the integration of AIGC technology and industry. Clear policy guidance and supportive measures provide a favorable policy environment and financial backing for technological innovation. Meanwhile, an increasingly refined legal and regulatory framework helps steer the industry toward healthy development, mitigating potential risks and hidden dangers in technological applications.

3. Challenges in leveraging AIGC to empower web-based micro-short dramas

AI-generated micro-short dramas create a new audiovisual experience. By using AI, they not only add novelty and attract young audiences but also offer clear advantages in achieving efficient and innovative content delivery, enhancing creation and production, and shortening the production cycle. However, the use of AIGC is a double-edged sword. Considering that AIGC is still in an incomplete mature stage, the development of supported micro-short dramas also faces many practical issues.

3.1. Technical challenges: mechanical sensation prevails and authenticity falls short

While AIGC expands narrative possibilities for web micro-shorts by introducing virtual storytelling dimensions, character development remains the foundational element of their narrative structure. Characters form the core and soul of the story, necessitating the portrayal of numerous figures [2]. Visually, characters generated by large models predominantly appear in frontal shots. When they lie on their side, move rapidly, or turn sharply, their facial structures often collapse, creating an eerie and unsettling effect. Due to the immature development of large text-to-video models, current depictions of character movements and facial expressions lack realism. At this awkward stage, AI micro-shorts not only fail to gain trust through human-like faces and voices but also easily trigger the “uncanny valley” effect, evoking unease and reducing trust in AI-generated content.

Furthermore, current AI models lack sufficient training in handling spatial details and simulating physical worlds, and they struggle to interpret and simulate physics and causal relationships in certain scenes. This leads to noticeable flaws in overall scene consistency and character continuity. The following issues appear in existing Chinese mythology episodes: consecutive scenes often adopt completely different artistic styles; characters farther from the center of the frame often appear as

color blocks without clear human contours; and even the same character shown consecutively may exhibit clear inconsistencies in detail. This falls far short of the high visual continuity and immersion. The generative principle of text-to-video models relies on language prompts to produce visuals, which can lead to repeated use of media library assets. When prompts only have subtle semantic differences, highly similar recognition results may cause repeated retrieval of identical visual resources. Such repetition conflicts with the artistic goal to deliver visual diversity and a seamless viewing experience. In terms of voice, the voices of AI-generated characters sound very crude and mechanical, lacking any nuance of expression and tone. They cannot convey the authentic emotions of characters like human voice actors, primarily functioning only to “recite” the script. Voice acting is crucial for building authenticity [3]. AI generated crude voices cannot yet generate that highly expressive with a high degree of closeness to human actors.

As Benjamin noted in *The Work of Art in the Age of Mechanical Reproduction*, “In the age of technical reproducibility of the work of art, the aura of the work of art withers away” [4]. The impact of AIGC on today's audiovisual industry echoes the disruption once brought by printing—artworks have lost their “aura.” Therefore, if AI micro-shorts merely replicate existing stories, they may offer temporary visual impact and technological novelty, yet fail to demonstrate genuine innovative development or creative transformation in AI. The resulting mechanical feel also strips AI micro-shorts of the warmth found in live-action productions. Meanwhile, algorithm-driven AI film and television creation challenges authenticity. Since audiovisual works transmit meaning unidirectionally from screen to audience, establishing a logical sense of reality within the screen is essential for conveying meaning to viewers. He Changcheng defines the authenticity issue posed by film algorithms as “discrepancy from the original form, nature, meaning, or spirit.” He categorizes the concrete manifestations of this problem in China's film algorithms into two types: “the lack of authenticity in film content” and “authenticity concerns in film form” [5]. AI-produced web micro-shorts, driven by big data and algorithms, clearly exhibit these issues. Their lack of authenticity is reflected in content that often contradicts the moral and ethical logic of human society.

3.2. Reflections: the questionable social and commercial values

The micro-short drama industry is highly competitive and resistant to new entrants. Heavy investment in AIGC-based micro-shorts carries significant uncertainty at this stage, as it remains unclear with market recognition or financial returns. This is due to an oversupplied market and the still immature commercial model for AI-generated content. If AI micro-shorts merely retell common stories and lack emotional resonance, how can they capture market share and create economic value? Currently, AI video output primarily monetizes traffic rather than content itself—whose commercial value remains unproven. Relying on audience curiosity for traffic is not a sustainable strategy. Once the novelty subsides, maintaining commercial value will depend on the core competitiveness of AI micro-shorts, which has yet to be systematically demonstrated. On the positive side, the technology accelerates industry growth. On the downside, it is crucial to strike a balance between capital-driven expansion and the natural rhythm of content creation. Failure to do so may result in inconsistent content quality, declining aesthetics, and an overheated market.

AI micro-shorts are also obviously a product with both social and commercial value and that's where the AI shorts that CCTV's online platform is producing currently. Right now, they're more about social value: the main thing contained in what's produced by CCTV's online platform is to promote traditional Chinese culture and establish core values that are good and sound. In the future, if the technology is truly widely accessible at some point down the line, there's bound to be a frenzy of production and the result will be a mixture of quality and garbage. How the players in the

industry will find ways to navigate around that, and whether the commercial nature inherent in web micro-shorts might also mean they undermine their social value, will be a question for the distant future. Furthermore, the scripts written by AI for micro-shorts are mostly derived from big data analysis. It's possible to understand the trends and patterns that are prevalent at the time, yet this analysis is lacking in independent, subjective thought, and is not conducive to innovation.

3.3. Crisis: technology infringes upon existing rules

Generative artificial intelligence facilitates the monetisation of creative ideas, yet simultaneously prompts a re-examination of traditional concepts and standards concerning value orientation, personal privacy, and copyright issues. The social and ethical risks exposed by AI-generated micro-dramas reflect a broader challenge, permeating the entire film and television industry chain. Algorithms are progressively expanding their application domains, venturing into scenarios beyond ethical boundaries or their operational capabilities. Their inherent biases and uncertainties may generate inappropriate content. If the training data lacks proper screening, the final output risks presenting inappropriate content or being influenced by algorithmic bias. Text-to-video requires high-quality pure video datasets alongside corresponding text-video paired training data. Although China possesses extensive Chinese language corpora under development, the quantity of high-quality text meeting large language model requirements remains insufficient.

4. Strategic considerations for AIGC empowering online micro-short dramas

With the advent of the intelligent communication era, numerous human-machine interaction practices demonstrate that harmonious coexistence between humans and machines will become the normalised trend in human society. The integration of AIGC into the creation of online micro-short dramas is a pioneering exploration of this concept within the audiovisual industry. For online micro-shorts, achieving high-quality and efficient AIGC empowerment, while further driving the upgrading of the industry, necessitates collaborative efforts from multiple stakeholders.

4.1. Harnessing AIGC's innovative capabilities to achieve content differentiation

In content creation, we should further explore AIGC's potential for forward-looking insight and imaginative exploration. In the episode *Nuwa Mends the Sky*, the goddess Nuwa transforms into coloured stones to repair the heavens. Faced with real-world environmental crises such as the ozone hole, humanity today is collectively engaged in a similar act of “sky-mending.” As the ozone layer gradually recovers, people glimpse the dawn of hope. Building on the original myth, AI interweaves history with the future, expanding the narrative. This creative approach demonstrates AI's unique value in content innovation: it integrates contemporary elements, thus revitalising traditional stories and achieving content differentiation. Although AIGC content faces authenticity challenges, its highly imaginative and boundary-breaking creative logic offers potential pathways for optimization and inspiration to creators, helping them transcend cognitive limits and broaden creative horizons.

4.2. Establishing effective human-machine collaboration models

Currently, AIGC's creative capabilities remain heavily dependent on large language models. Only when creators articulate their needs through precise language can the output align closely with subjective expectations. In the future, the “AI + micro-short drama” model will resemble how people accomplish tasks through effective communication in daily work. Similarly, robust “human-

machine communication” is urgently needed between human creators and artificial intelligence. Therefore, practitioners in AI-driven creation must prioritize and continuously refine writing and expressive skills, increase interactions with AI systems, and improve the accuracy of translating creative ideas into concrete outputs. Furthermore, AIGC has inherent limitations in audiovisual production. It cannot fully replace human creativity and aesthetic judgment. Thus, as machines advance, humans must continue to express perspectives and create meaning. In the foreseeable future, the entire production process of audiovisual works will require human assistance and guidance. Such involvement will lend warmth to the otherwise cold output of AI, making it more capable of accommodating the diverse needs and value orientations of human society.

4.3. Prioritising user feedback to drive content circulation

Current AI micro-short drama production often exhibits a 'closed-door' approach. Some producers launch with fanfare, only to fade into obscurity after brief online buzz. Crucially, they neglect user feedback during production. As a relatively unfamiliar concept to users, the integration of AIGC into online micro-short drama production should be approached incrementally. Therefore, as AI micro-shorts evolve, producers must closely monitor user feedback, widely incorporate user suggestions, and make adjustments. This approach combines author-driven and user-driven creative methods [6] to enhance the quality of AI micro-shorts and boost user acceptance.

5. Conclusion

For sustained development, numerous issues require resolution in the integration of AIGC and online micro-shorts. At the creative level, how to fully harness AI technology's potential while preserving the uniqueness of human creativity. At the production level, how to enhance visual output efficiency while maintaining the high quality standards of micro-short dramas. At the dissemination level, how to foster audience recognition and acceptance of this new model of AIGC participation in audiovisual production, and so forth. The field of artificial intelligence is advancing rapidly, with generative AI models iterating at an unprecedented pace. As applications expand across domains, generative AI will deliver enhanced visual experiences and more efficient workflows to the audiovisual industry. Supported by continuous data accumulation and algorithmic training, AIGC is set to profoundly empower the audiovisual sector.

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