Application of Artificial Intelligence in the Production and Distribution of Interview Programs on Bilibili

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Abstract

This paper explores the extensive application of artificial intelligence (AI) technology in the context of media convergence, highlighting its role as a core driver of new media development. Specifically, in the production and dissemination of video content, AI has demonstrated its profound impact and transformative potential. Bilibili, a prominent video-sharing and community interaction platform, has developed a unique media ecosystem characterized by content innovation and high interactivity. With the rapid advancement of algorithmic technology and data processing capabilities, AI plays a crucial role in the production and dissemination of interview programs on Bilibili. This phenomenon provides an ideal research platform for studying how AI functions within the process of media convergence.

Keywords: Artificial Intelligence (AI), Media Convergence, New Media Development,Interview Programs,Video Content Production, Dissemination of Video Content

1. Artificial Intelligence and Interview Program Production

1.1 Automated Content Generation

One core application of AI in the production of interview programs is assisting in content creation, including automatically writing interview scripts and generating video subtitles. By leveraging Natural Language Processing (NLP) technology, AI can generate a series of targeted questions and corresponding answer drafts based on the interview's theme and preset keywords. These automatically generated texts are continuously optimized through the analysis of large amounts of interview data, increasingly aligning with the language style and depth of human interviewers.

Additionally, AI can generate and correct video subtitles in real time, a feature

particularly crucial for enhancing the viewing experience of non-native speakers. Bilibili is gradually promoting AI-based interview assistants that can automatically generate interview questions and potential answers, significantly simplifying the preparatory work for interviews. For instance, during an interview with a company's CEO, the production team used an AI interview assistant to generate a series of in-depth and forward-looking questions by combining the CEO's past public statements and the company's press releases. This not only reduced the time the production team spent on content preparation but also ensured the professionalism and depth of the interview content. Compared to traditional manually written interview scripts, AI-assisted content generation is not only more efficient but also ensures comprehensiveness and diversity through data analysis, better engaging and retaining audience interest. AI has optimized the interview production process and improved program quality through precise and efficient content creation.

1.2 Video Editing and Post-Production

In the context of media convergence, AI technology has revolutionized video editing and post-production for interview programs on Bilibili. AI algorithms can analyze video content to identify and extract key frames and highlights, automating the editing process. This not only speeds up editing but also ensures content coherence and appeal. Additionally, AI enhances visual quality through automatic color correction, adjusting temperature, saturation, and contrast to meet viewer preferences. In audio processing, AI effectively identifies and reduces background noise, optimizing audio clarity and overall sound quality. AI's application lowers technical barriers, allowing even non-professional editors to produce high-quality videos, and streamlines the production process, reducing the time from concept to release. This strengthens Bilibili’s competitive edge by improving content update speed and quality control.

1.3 Virtual Hosts and Interview Guests

On the Bilibili video platform, AI technology has enabled virtual characters to participate in talk shows with remarkable realism and interactivity. These virtual hosts and guests, powered by advanced algorithms, can engage in real-time conversations, provide coherent verbal responses, and adapt to various scenarios and topics. Utilizing deep learning and natural language processing, these virtual figures not only visually resemble real people but also demonstrate natural and fluid communication.

"Xiao Lan" is a newly launched AI-generated virtual host on Bilibili, leading a series of interviews on technology topics. Created entirely by AI, Xiao Lan’s appearance, voice, and personality are driven by machine learning models. In the show, Xiao Lan interacts

naturally with guests and provides real-time data and visual aids based on the conversation, greatly enriching the content and viewing experience.

Virtual hosts like Xiao Lan offer several advantages over traditional human hosts. Firstly, they provide greater content flexibility and innovation, as their behavior and responses can be highly customized and optimized for the program's needs. Secondly, virtual hosts can be replicated infinitely without constraints of time or physical conditions, significantly reducing production costs and enhancing efficiency. Additionally, virtual hosts utilize AI for real-time data analysis and processing, offering richer and more precise information, which is difficult for traditional hosts to achieve.

Through this approach, Bilibili has successfully tested AI applications in new media interview programs with "Xiao Lan," providing new insights and possibilities for future media production and presentation. This demonstrates the powerful capabilities and broad prospects of artificial intelligence in the context of media convergence.

2. Artificial Intelligence and Interview Program Dissemination

2.1 Target Audience Analysis and Content Personalization

In the context of media convergence, the application of artificial intelligence (AI) technology on new media platforms such as Bilibili has become increasingly sophisticated, particularly in the areas of target audience analysis and content personalization. The use of AI has not only transformed the way content is produced but, more importantly, has optimized content distribution strategies to better meet user-specific needs. By leveraging AI for audience data analysis, platforms can gain in-depth insights into users' viewing habits, preferences, and interaction behaviors. AI algorithms collect and process data on users' browsing history, video watch time, likes, and comments to construct detailed user profiles. Data shows that using AI for such analysis and personalized recommendations can increase users' average viewing time by over 20%, while also enhancing overall user satisfaction and platform stickiness.

2.2 Social Media and Multi-Platform Distribution

AI technology plays a crucial role in content distribution strategies by supporting cross-platform publishing and optimization through automated tools. This intelligent content management system can analyze user interaction data from various social media platforms in real-time, including metrics such as watch time, likes, and comments. Based on this analysis, the system optimizes publishing times and content formats to

maximize audience engagement. For example, AI systems can identify the optimal posting times and automatically adjust video length and style to fit the characteristics of different platforms, thereby enhancing content reach and impact.

The AI-powered social media coordinator is designed to manage and optimize the multi-platform distribution of interview programs, specifically those related to artificial intelligence, across various social media platforms such as Weibo, WeChat, and Douyin. This AI coordinator customizes content formats and publishing strategies for each platform by analyzing user behavior and feedback data. For instance, on Weibo, the system generates shorter video clips with relevant hashtags to spark discussions, while on Douyin, it enhances video visual effects and adds popular music to attract younger audiences. Compared to traditional manual content distribution, the AI-driven strategy significantly improves operational efficiency and strategic accuracy. This technology ensures that content reaches the widest audience at the optimal time and in the most suitable format, greatly enhancing user interaction and engagement. Additionally, the AI system continuously learns and refines its promotional strategies, automatically adjusting based on user feedback and interaction data to ensure sustained effectiveness and adaptability of content promotion.

The production team utilizes an AI system based on Natural Language Processing (NLP) to analyze audience emotions and preferences in interview programs. In this case, the AI system was applied to a live interview program about technological innovation. By analyzing the language and expressions used in live comments, NLP technology can capture real-time shifts in audience sentiment and areas of interest. Based on this analysis, the AI system automatically adjusts the direction of the interview questions, guiding the host to delve deeper into topics that show high audience engagement. Compared to traditional audience feedback analysis, this approach allows for more responsive and targeted content adjustments.

The advantage of AI-based NLP technology lies in its real-time responsiveness and accuracy. Traditional methods rely on post-event surveys or basic comment analysis, which often cannot provide immediate feedback to the production team. In contrast, AI technology allows for real-time adjustments in program production based on audience feedback.

2.3 Impact Tracking and Optimization

AI not only measures a program's impact but also optimizes content and distribution strategies to maximize audience growth, brand influence, and advertising effectiveness. AI technology employs advanced data analysis and pattern recognition to help

production teams assess and enhance the influence of interview programs. AI systems can track various metrics in real time, including audience numbers, watch time, engagement rates, and social media shares and comments, providing a comprehensive evaluation of a program's reach. Furthermore, AI can generate specific optimization recommendations based on this data, such as adjusting content release times, formats, or promotional strategies to suit different platforms and audience preferences. For instance, AI analysis might reveal that releasing interviews on certain topics during weekends attracts more viewers or that specific program formats drive higher engagement and sharing.

The production team utilizes machine learning models to forecast the broadcast potential and audience reception of different interview programs. These models analyze historical data, including audience viewing behaviors, interaction feedback, and related social media activities, to predict which interview topics or formats might be popular at specific times or among particular audience groups. By leveraging this technology, the production team can more precisely schedule program release times and target promotional activities to maximize audience engagement and market impact. Compared to traditional manual analysis and decision-making processes, AI technology offers significant advantages in terms of efficiency and accuracy. Traditional methods rely on experience and broad market research data, while AI systems process large volumes of real-time data to provide data-driven predictions and strategic adjustments. This high level of automation and intelligence not only improves decision-making quality but also greatly enhances operational efficiency, making content strategies more adaptable and responsive to market changes.

3. Conclusion

Exploring how artificial intelligence specifically impacts the production and dissemination of interview programs not only deepens our understanding of the range and effectiveness of AI technologies but also advances the integration of technology and content creativity in new media practices. By precisely analyzing audience data and viewing behaviors, AI provides valuable data support for the production of interview programs, including aspects such as content customization, interactive design, and visual presentation. Additionally, the application of AI in automatic content generation, video editing, audio adjustment, and special effects has significantly increased production efficiency while fostering the exploration of innovative formats, such as virtual hosts and AI interactive characters.

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