Exploration of Challenges and Development Paths for Announcers and Hosts in the AI Voice Era (Postprint)

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Abstract

The rapid development and continuous transformation of science and technology have led to the continuous emergence of various advanced technologies and products that find application in daily life. As a prominent field of current interest, artificial intelligence technology has already been applied in the media sector. AI voice has brought tremendous challenges to the traditional broadcasting and hosting industry, and broadcasters and hosts should explore new development paths to secure their professional positions. Based on this, this paper examines AI voice, analyzes its advantages and disadvantages as well as the challenges and advantages of the broadcasting and hosting industry, investigates the application of AI voice in the broadcasting and hosting industry, and explores development paths for broadcasters and hosts in the intelligent era.

Full Text

Abstract

Rapid technological development and continuous innovation have led to the emergence of advanced technologies and products that are increasingly integrated into daily life. Artificial intelligence technology, as a prominent field today, has found applications in the media sector. AI voice technology poses significant challenges to traditional broadcasting and hosting, compelling broadcasters and hosts to explore new development paths to maintain their professional standing. This paper examines AI voice technology, analyzing its strengths and weaknesses alongside the challenges and advantages facing the broadcasting industry. It investigates the application of AI voice in broadcasting and hosting, and explores development pathways for broadcasters and hosts in the intelligent era.

Keywords: artificial intelligence voice; broadcaster; host; challenges; development paths

1. Advantages and Disadvantages of AI Voice Technology

1.1 Disadvantages

The application of AI voice technology in broadcasting, due to its inherent limitations, presents several shortcomings. First, while AI broadcasting broadens the reach between virtual hosts and audiences, it lacks emotional depth and social engagement compared to traditional broadcasting. This deficiency affects audience emotional experience and limits its capacity to transmit cultural values and positive energy. Second, professional broadcasters typically possess foundational knowledge in artistic theory, enabling them to appreciate artworks and achieve empathy—capabilities that AI voice technology cannot replicate. Consequently, AI voice struggles to connect emotionally with listeners or viewers, failing to evoke genuine resonance.

1.2 Advantages

Despite limitations, AI voice technology demonstrates distinct advantages in broadcasting. The deep integration of AI with 5G technology has transformed traditional media production chains, creating new opportunities. With high speed and clarity, 5G breaks down barriers between audiences and television, making mobile media ubiquitous and reshaping spatial-temporal concepts while delivering enhanced visual experiences. AI multimedia technology enables virtual reality broadcasting effects without discordance, achieving news visualization and ushering media into the scenarized era. Recent 5G developments facilitate comprehensive, real-time scene viewing, allowing audiences to experience live situations immersively through mobile VR—far more authentic than traditional media forms.

Furthermore, AI voice broadcasting offers diversity, timeliness, and accuracy. Traditional broadcasters, constrained by personal capabilities and learning capacity, struggle to master multiple languages precisely. In contrast, virtual hosts leverage network advantages for multilingual broadcasting. For instance, iFLYTEK' s virtual host Xiaoqing can seamlessly switch between Chinese, Japanese, English, and Korean with accurate pronunciation through speech recognition and synthesis technologies while maintaining professional competence. Additionally, AI writing robots can complete news reports within minutes, saving editorial time and ensuring accurate content delivery, thereby enhancing broadcasting efficiency.

2. Strengths and Weaknesses of Human Broadcasters and Hosts

2.1 Weaknesses

Traditional broadcasters exhibit several deficiencies. First, they lack stylistic diversity. While AI anchors can mimic various broadcasting styles, human hosts typically maintain relatively fixed personal styles that, once established, are difficult to change, limiting diversity. Second, professional competence requirements are stringent, particularly in news broadcasting where zero errors are demanded. However, many professional broadcasters demonstrate subpar competence, exhibiting various issues when facing cameras. Moreover, prolonged work leads to performance degradation due to personal emotions and fatigue, affecting program quality and ratings. In contrast, AI operates without fatigue or emotional interference, achieving near-zero errors. Third, broadcasters must integrate reporting, editing, and presenting, but individual performance varies, making efficiency inconsistent. AI anchors can efficiently complete broadcasting tasks through information technology.

2.2 Strengths

Despite AI' s advantages, human broadcasters possess incomparable strengths that ensure industry development and deliver superior emotional experiences. First, humans hold emotional advantages. Current AI anchors merely imitate human broadcasting styles, typically reading word-by-word without deep content analysis. Human broadcasters can process emotional nuances during delivery, ensuring audience reception and evoking resonance. Second, human broadcasters possess strong journalistic literacy. Television news broadcasting requires enhancing audience communication and interaction. Creating psychological wholeness, visual imagery, and camera sense—integrating language, posture, and inner feeling—requires years of learning and practice, capabilities that AI cannot demonstrate. Third, unlike AI, human hosts must exercise excellent scene control and impromptu commentary skills, which are developed through long-term accumulation and emotional engagement—tasks that AI cannot accomplish.

3. AI Technology Applications in Broadcasting and Hosting

AI technology now permeates nearly all aspects of broadcasting, creating novel application forms.

3.1 Voice Mode

AI demonstrates speech recognition and simulation capabilities in broadcasting. Leveraging machine learning and big data, it accurately recognizes certain populations' speech, significantly improving accuracy and efficiency. Users can

access news anytime via mobile devices. Voice synthesis technology can also resurrect classic voices. For example, on January 22, 2020, China Central Television' s documentary channel broadcast a segment of *Innovative China* using AI simulation to reproduce the original voice actor' s voice.

3.2 Virtual Hosts

AI voice enables the creation of virtual dynamic characters through voice parsing, precise lip-sync driving, gesture posture driving, multi-style modeling, and emotional feedback, directly replacing human anchors. Editors input text to rapidly generate synchronized lip movements, diverse styles, and multiple language types. For instance, on February 16, 2020, Guangxi Television' s AI anchor "Xiaoqing" delivered special reports on *Battle Against Epidemic* via official WeChat and Weibo platforms, fluently presenting latest pandemic updates, interpreting prevention policies, and disseminating scientific knowledge. This achieved real-time virtual hosting with diverse styles and languages, enriching program formats while enhancing virtual anchors' activity and value, marking a new development stage for AI voice.

3.3 New Broadcasting Models

With new media and AI technologies, broadcasting has rapidly evolved from indoor to outdoor settings, with live streaming becoming common, especially in challenging environments like war zones. Integrating AI with mobile live streaming enables "live + short video" quick news broadcasting while enhancing program vividness and interest. AI-powered live broadcasting improves operational convenience and facilitates personalized presentation, increasing user interaction and pioneering new approaches to news dissemination, thereby creating a new mobile live streaming landscape.

4. Development Paths for Broadcasters and Hosts in the AI Voice Era

Broadcasting and hosting demand high professional competence with exclusive skills that demonstrate unique professional value. However, AI voice has replaced some broadcasting tasks, posing significant challenges. To maintain their role and effectiveness, broadcasters must cultivate their personal qualities and charisma to fully demonstrate professional value.

4.1 Strengthen Personalized Expression Skills

AI voice technology cannot express complex emotions through simple language variations. Broadcasters must transition from scripted vocal delivery to personalized expression. They should enhance emotional expression and control, infusing content with humanistic care. By incorporating more emotion into programs, they can develop personalized, differentiated styles and establish unique brand identities, improving audience recognition and acceptance.

4.2 Enhance Professional Competence

Broadcasters with singular skills will be rapidly replaced by AI. Only diversified professional knowledge and capabilities ensure better development. With increasing exposure on new media platforms, broadcasters' work may achieve short-term benefits but often lacks intrinsic value. Therefore, they must elevate professional competence: develop professional sensitivity to provide in-depth commentary, objectively evaluate news events with critical analytical spirit, and correctly guide audiences. Simultaneously, they should cultivate cross-disciplinary hybrid capabilities, establishing professional barriers through deep communication with industry peers to maximize professional effectiveness.

4.3 Strengthen Thinking Capacity

Adaptability constitutes a fundamental skill, particularly when interacting with audiences or handling emergencies, ensuring program quality. Additionally, broadcasters must continuously enhance independent thinking capabilities in today' s diversified media environment. Generally, warm, thoughtful, and interesting human hosts better satisfy audience needs than AI. The soul of news programs lies in ideas, and broadcasters' ideological and theoretical literacy embodies their professional competence. To ensure program substance, they must integrate themselves into programs, resonate with content ideologically, and demonstrate unique charm and value to enhance dissemination effectiveness. Warmth is crucial for audience engagement, requiring humanistic care and warm language rather than excessive rationality. Humor also plays a vital role in news broadcasting, helping audiences accept content in pleasant atmospheres through interactive engagement.

4.4 Innovate Style

Philosophically, humans instinctively negate existing conditions to innovate, driving societal and professional development. The broadcasting industry should recognize AI voice' s application value while actively embracing it. To maintain professional standing and mitigate AI' s impact, broadcasters must understand respective weaknesses and strengths, study AI applications, and explore new development paths by leveraging human advantages against AI limitations.

Traditional news programs emphasize timeliness, requiring rigorous, standard, clear pronunciation as fixed expression modes. However, news positioning and audience needs vary across eras. Uniform broadcasting methods fail to meet audience demands and guarantee effectiveness. Therefore, in new environments, traditional broadcasters should innovate hosting styles by integrating personal understanding of news content, aligning information with audience needs, and employing popular expression forms to enhance acceptance and audience stickiness. They should also promptly master audience-preferred language styles through analysis and adjustment to improve broadcasting effectiveness.

4.5 Enhance Credibility

Credibility represents intangible assets in journalism, formed through long-term development and accumulation, embodying authority, reputation, and public influence. Without credibility, media loses vitality. Broadcasters must: first, prohibit false information; second, avoid contradictory reports that violate logical consistency.

4.6 Conduct Comprehensive Multi-Dimensional Training

Organizations should regularly train broadcasters in fundamental language skills, focusing on enhancing language 感染力 (infectiousness) and communication effectiveness. They should also conduct comprehensive interdisciplinary education to improve knowledge across different fields. Additionally, training should develop political sensitivity, enabling broadcasters to grasp current affairs, maintain proper political stance, guide public opinion, and disseminate positive energy. Finally, attention must be paid to comprehensive literacy and emergency response capabilities, ensuring calm handling of unexpected events to guarantee program quality.

4.7 Utilize New Media Platforms

In traditional work models, broadcasters must adapt to new media era changes by leveraging new media platforms. While maintaining professional competence, they should adjust hosting approaches according to audience needs and program positioning to enhance appeal. Various online platforms and app columns can serve as broadcasting carriers. Broadcasters should utilize these self-media platforms to bridge gaps with audiences, grasp public needs, transform rigid thinking, and enhance personal program effectiveness through emerging technologies.

4.8 Adhere to Professional Ethics

News broadcasters and hosts guide social public opinion and serve as vital channels for disseminating party policies to the masses. Therefore, they must strengthen self-awareness of their work, consistently uphold journalistic bottom lines, properly manage information expression, maintain original principles, preserve social responsibility and political literacy, and deliver the most objective and impartial information to the public.

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Note: Figure translations are in progress. See original paper for figures.