

# Application research of AIGC in marketing field

Fengxian Yang<sup>1,a,\*</sup>

<sup>1</sup>Guangzhou College of Commerce, Guangzhou, Guangdong, China

<sup>a</sup>804889427@qq.com

\*Corresponding author

**Abstract:** The content generated by artificial intelligence is an important sign that the era of artificial intelligence 1.0 has entered the era of 2.0. The application of AIGC covers media, finance, e-commerce, film and television, medical and other industries, and the wide range of application fields also reflects the powerful role of AIGC. Marketing as a high demand for data analysis and innovation activities, AIGC brings a lot of convenience to it. Therefore, this paper mainly discusses the application of AIGC in the field of marketing, briefly summarizes the studies of other scholars on this issue, analyzes the common and specific activities of the application of AIGC in the field of marketing combined with marketing practice, points out the existing problems of copyright infringement, content quality, cost risk and so on in the application and marketing of AIGC, and puts forward corresponding solutions.

**Keywords:** Artificial Intelligence; AIGC; Content marketing; Optimization strategies

## 1. Introduction

### 1.1. Research background

With the development of Internet environment and technology, in order to adapt to different social backgrounds and user needs, a variety of content creation methods have emerged and experienced the evolution process from PGC, UGC to AIGC. Artificial Intelligence-generated Content (AIGC) is the process of using artificial intelligence technology to automatically create or edit content that includes text, images, music, video, or other forms of media.

The year 2023 is a year of rapid development of AIGC from concept to landing. AIGC is subverting the production mode, communication form and consumption mode of video, live broadcast, graphic and other content. In the hot AIGC track, models, applications, virtual human videos and live broadcasts have emerged successively, becoming a key force to empower thousands of industries and lead industrial change. In the future consumer market, emerging technologies such as AIGC and virtual human are becoming the key factors for enterprise competition. AIGC technology and virtual human video and live broadcast are greatly improving the efficiency of enterprise content production and creating great value in the field of brand marketing.

Marketing scenario is the fastest penetration of AIGC, but also the most mature application of the scene. AIGC has greatly strengthened its digital marketing capabilities mainly in the content production and strategy generation of marketing actions. For example, the core value of the market cognition stage is creative reference, enabling links include: advertising strategy, brand communication, market analysis, CEM, SEO, DSP, SSP, through the generation of advertising creativity and delivery optimization reference, including advertising design, advertising content, delivery channel strategy and delivery analysis, so as to improve advertising effectiveness and delivery efficiency.

AIGC provides marketing with more accurate, intelligent and fast content production means, which helps enterprises to achieve cost reduction and efficiency increase, improve marketing quality and conversion rate, optimize decision-making suggestions and other aspects of progress.

### 1.2. Literature review

Research on marketing applications: The concept of artificial intelligence was proposed by John McCarthy at a Dartmouth academic conference in 1956<sup>[1]</sup>. Overgoor et al. define AI marketing as AI agents recommending or taking marketing actions based on the information they have in order to achieve the best marketing effect. The definition explains the meaning of AI marketing in terms of its

processes and results<sup>[2]</sup>. TH Davenport et al. point out that in the future, AI may affect marketing strategies, including business models, sales processes and customer service options, and customer behavior, and even, AI will change all stages of the sales process, the authors point out that a multidimensional framework is proposed to understand the impact of AI. It includes levels of intelligence, types of tasks, and whether AI is embedded in robots, and suggests that AI will be more effective if it enhances (rather than replaces) human managers<sup>[3]</sup>.

Zhu et al. concluded that artificial intelligence has the following practical applications in marketing through the collation of literature: Artificial intelligence marketing can realize three-dimensional insight of users and tap user value; It can extract useful value from massive content, and can also intelligently create content; It can monitor, evaluate and feedback the data in time, and change the "post-test" method of traditional marketing activities<sup>[4]</sup>.

Consumers' attitudes and reactions to artificial intelligence marketing have positive acceptance or resistance. For example, in the recommendation of artificial intelligence, Wang et al found that the impact of artificial intelligence on customer experience mainly includes, such as providing customized and personalized services, achieve scene experience, fit emotional needs and so on. The application of artificial intelligence technology in the retail field can effectively promote consumer interaction and pleasure in scene marketing, improve customer shopping satisfaction and customer loyalty, enhance consumer desire and expand consumption<sup>[5]</sup>. However, He's research found that users may think that enterprises are trying to persuade and manipulate their choices, and perceive that the freedom and autonomy of decision-making are violated, resulting in resistance<sup>[6]</sup>. Zhang et al. found through research that the marketing application of artificial intelligence technology in the retail industry is not ideal, and the reason can be traced back to the integration of retail marketing and artificial intelligence. Therefore, it is proposed to build an upstream and downstream retail marketing intelligent system, based on big data, deep learning (depth of machine learning) and natural language processing technology, organic integration of marketing and artificial intelligence, with a new system to reflect the innovation of retail marketing<sup>[7]</sup>.

Research on marketing application of AIGC: With the advance of Internet technology from Web1.0 to Web2.0 and towards Web3.0, the content production mode has also experienced from professional content production (referred to as "PGC") to user participation and independent content production (referred to as "UGC"). Finally, artificial intelligence replaces human content production. AIGC's paradigm revolution in content production further reduces information friction and marginal cost in cross-border transactions. At the same time, AIGC encourages cross-border e-commerce enterprises to innovate through scenario empowerment and application empowerment, promotes the upgrading of enterprise value chain functions, drives enterprise process reengineering, and improves enterprise operation efficiency and comprehensive competitiveness<sup>[8]</sup>. Lei et al. deeply analyzed the impact of artificial intelligence-generated content (AIGC) technology on consumers' consumption behavior and their willingness to continue to use, and concluded that performance expectation, community influence and individual innovation have a positive impact on the willingness to continue to use AIGC<sup>[9]</sup>.

Wang et al. believe that AIGC has brought cost reduction and efficiency increase for agricultural content marketing, expanded content influence, and enhanced consumer decision-making power<sup>[10]</sup>. Han et al. believe that AIGC technology and enterprise digital marketing complement each other, and AIGC technology will inject strong impetus into marketing digital intelligence, which will not only change the ecological pattern of digital marketing content production and communication, but also have a profound impact on marketing strategy and execution efficiency with the continuous deepening of digital transformation. It is pointed out that AIGC can promote marketing efficiency in marketing, but it also faces privacy security risks and other problems<sup>[11]</sup>.

## **2. Application analysis of AIGC in the field of marketing**

### ***2.1. AIGC enables marketing content creativity and innovation***

In marketing practice and application, content, as an important carrier to convey business information, plays a huge role in attracting consumers, transmitting marketing information to increase traffic and transformation, and improving product and enterprise visibility. Good marketing content can quickly catch consumers' eyes, or leave consumers with good product impression and memory.

However, in the specific creation of marketing content, such as text, image, audio and other content creation practice, often appear inspiration exhaustion, content repetition, content lack of analysis and

reflection of relevant data. AIGC relies on massive data and algorithmic models to apply intelligent communication and sentiment analysis to marketing. In terms of marketing text, AIGC develops more accurate text content through different users and scenarios; Image, audio and video production realize intelligent generation and editing, and constantly improve the practicability and commerciality of content. It is worth mentioning that AI has applied digital virtual people to marketing practice, and TTS and other technologies have improved the interaction ability of digital people, and more diversified application scenarios. The application scenarios of digital virtual people include commodity explanation, product live broadcast, intelligent customer service, and so on. At present, many merchants use digital virtual people in the live broadcast, so that consumers can also get the product explanation during the rest of the real anchors.

## ***2.2. AIGC assists data analysis and decision making***

The marketing process involves manufacturers, middlemen and customers. In the communication and exchange of information, a large amount of marketing data will be generated, such as consumers' purchase amount of goods, re-purchase rate, consumers' evaluation and feedback on goods and merchants, etc. However, a large amount of marketing data also contains duplicate data or meaningless data. To sift through huge pools of data to sort out the core content that will be useful for future marketing campaigns and decisions, tools such as computers are needed. The emergence of AIGC can help enterprises to organize, screen and analyze data, so as to assist enterprises to make relevant decisions.

In the scenario of AIGC assisting data analysis and decision making, AIGC technology can improve the ability of cross-channel data collection and pre-processing, stability and optimization management, and carry out efficient and accurate data labeling classification, data analysis and insight. In this way, merchants or brand owners can be better optimized in marketing data processing, data content and quality screening, customer data and marketing effect analysis, and marketing strategy refinement, so as to increase the efficiency of data processing and make full use of data value.

## ***2.3. AIGC improves the effectiveness of advertising***

Marketing advertising plays a crucial role in marketing. Extensive exposure can make more consumers understand and know the products and services of an enterprise, and establish brand recognition. Advertising can convey information such as product features, functions and advantages to consumers, thus stimulating consumers' purchase desire. Advertising can also strengthen the communication between enterprises and consumers, and establish a good customer relationship. However, advertising inevitably faces problems such as lack of personalized customization, lack of interaction and participation, lack of long-term strategic planning, lack of innovation and differentiation, information overload and loss, advertising size limitation, and difficult evaluation of advertising effects.

In advertising, information processing and preprocessing, information building database and other links are very important. The value of AIGC in customer data accumulation, customer and market analysis, traffic precision positioning, media traffic centralized procurement, etc., can help merchants achieve brand exposure improvement through advertising, advertising delivery and traffic management, advertising media selection, consumer delivery precision, advertising efficiency improvement and other goals, making advertising more intelligent and integrated.

## ***2.4. AIGC optimizes marketing channel operation and transformation***

The distribution channel is the whole channel through which the product or service flows from the manufacturer to the consumer (user) through various intermediaries. Through distribution channels, merchants can better achieve the management of their distributors, formulate corresponding systems, create various kinds of training, and ensure that distribution personnel can master the company's strategy and system, so as to maximize the sale of products. At the same time, the distribution channel combined with the implementation of incentive management system to attract more distributors to participate in the operation, can stimulate the enthusiasm of distribution personnel and increase product sales. When AIGC optimizes channels, service providers can obtain information and data from multiple channels in real time, and implement interactive output and information rotation in combination with models to realize information acceptance and information processing, so as to optimize marketing channels, improve the digitization degree of sales channels for merchants, enrich product marketing

channels, and improve the efficiency of activities and communication, customer communication and operation.

### ***2.5. AIGC strengthens customer relationship and process management***

In modern enterprise marketing, in order to improve the core competitiveness, enterprises use the corresponding information technology and Internet technology to coordinate the interaction between enterprises and customers in sales, marketing and service, so as to improve their management methods, provide customers with innovative personalized customer interaction and service, so as to attract new customers, retain old customers and convert existing customers into loyal customers, and increase the market. This is an important part of enterprise market maintenance and customer relationship management.

However, in the practice of enterprise customer relationship management, some companies face challenges in the implementation of customer classification, including unclear registration and lack of hierarchical management, which makes enterprises lack of market insight and shallow understanding of customer needs, and cannot carry out effective customer classification, resulting in insufficient customer relationship management. In addition, the acquisition of customer information is not centralized and comprehensive, and it is difficult to form a complete customer portrait, resulting in the lack of customer relationship management. This affects the enterprise's overall understanding of customers and the improvement of service quality.

## **3. AIGC shortcomings in the marketing application**

### ***3.1. Legal risks caused by copyright infringement***

The AIGC may use unauthorized data when generating content, and the use of such data lacks a legal basis, making the output content subject to compliance issues. There are two possible situations when generating content: generating new, original content that is completely different from an existing work, or generating content that is substantially similar to an existing work or has elements related to an existing work. In the case of the latter, if the authorization of the relevant right holder is not obtained in advance, there is the risk of intellectual property infringement. In addition, AIGC also has infringement problems caused by the generation of false information, manuscript washing, painting washing, etc. Although these acts will not infringe on personal and property safety on a large scale, they are directly open, resulting in the easy acquisition and dissemination of false information, which may lead to the instability of public opinion.

### ***3.2. The quality of generated content varies***

At present, more businesses use AI to generate marketing content, including text, pictures, videos and other forms, but the content generated by artificial intelligence has logical confusion, factual errors, and even false content in order to attract attention, causing interference to the information received by people. In addition, the lack of manual review of AIGC content may lead to sensitive topics or inappropriate words, which may cause unnecessary comments or negative effects, so the quality of AIGC output content is also an issue for users to consider.

### ***3.3. Cost risk and industry panic***

When enterprises use AIGC, in order to enable employees to better grasp the application, there will be application and training costs, the cost of training a large language model (LLM) is about 200-1200W, if the need to feed a large amount of data, and even this cost will increase; At the same time, in order to enable relevant employees to learn the use of AIGC, there will be corresponding training costs. AIGC enables marketers to facilitate marketing interactions, but it also has an impact on practitioners. With the application of AIGC, traditional positions common in marketing, such as copywriting and graphic design, have been replaced by AI. However, AI lacks independent thinking, which may make the generated content lack uniqueness and artistry. Over the long run, content generated by artificial intelligence will also cause the customer communication process to lack human emotion and trust<sup>[12]</sup>.

#### **4. Optimization strategy of AIGC marketing application**

##### **4.1. Strengthen data management and risk prevention**

In the process of AIGC marketing, enterprises should pay attention to data management and protection, formulate data use systems according to legal requirements, clarify data sources and purposes, and strengthen the review and supervision of data use and decision-making. For the use of consumers' personal data, companies need to establish strict review and supervision mechanisms to prevent potential data ethics issues. At the same time, we should pay attention to the training and education of employees, cultivate their legal awareness of copyright and privacy protection, and supervise and manage employees to prevent legal risks.

##### **4.2. Improve AIGC audit and supervision**

AIGC is one of the reasons for the confusion or inaccuracy of the generated content due to the outdated or chaotic content of the database. Therefore, when using AIGC, attention should be paid to the check and update of the database to ensure the accuracy and authenticity of the generated content. Because of the hidden quality risks of intelligently generated content, businesses or enterprises should establish a strict and perfect content audit system when using AIGC to assist marketing activities, and fully understand the customer situation, laws and regulations, customs and other contents of the target market.

##### **4.3. Improve the efficiency of AIGC cost input**

Organizations should control costs and risks by applying AIGC in a planned way, prioritizing pilots in their minimum viable product (MVP) through potential assessment and prediction, and gradually expanding to more business areas. When conducting AIGC-related training for employees, enterprises should not blindly invest, but should do a good job in measuring the cost and benefit of training, and improve the return rate of new technology training for employees. Enterprises should also carefully analyze the advantages and disadvantages of artificial intelligence generation, use AIGC to assist marketing activities, attach importance to the training and skill improvement of practitioners, better utilize the marketing capabilities of practitioners with the assistance of artificial intelligence, and improve the effectiveness of AIGC marketing.

#### **5. Conclusions**

When AIGC penetrates into the full link of marketing, it will no longer bring "local and short-term" cost reduction and efficiency, but a more comprehensive marketing new path with long-term efficiency improvement space. When we apply AIGC, we should also fully realize the advantages and disadvantages brought by new technologies. Marketing activities have higher requirements and goals for the application and analysis of data, content innovation and implementation effect, so the application of AIGC in the field of marketing can better assist the analysis and generation of marketing activities. Therefore, enterprises should use AIGC to better achieve content production, personalized marketing communication, and bring more innovation and change to the whole marketing process.

#### **References**

- [1] Li Shuyin. *Research on the application of AI Marketing in Real Estate [D]*. University of International Business and Economics, 2022.
- [2] Overgoor G, Chica M, Rand W, et al. Letting the computers take over: Using AI to solve marketing problems[J]. *California Management Review*, 2019, 21 (4) : 156-185.
- [3] Davenport, Thomas, et al. How artificial intelligence will change the future of marketing[J]. *Journal of the Academy of Marketing Science*, 48 (2020).
- [4] Zhu Guowei, Gao Wenli, Liu Jiahui, et al. Review and prospect marketing: artificial intelligence research [J]. *Journal of foreign economics and management*, 2021 lancet (7) : 86-96.
- [5] Wang Xianqing, Lei Shaohui. A study on the impact of Artificial Intelligence on consumption and shopping experience in the new retail environment: Based on the perspective of retail reform and the reconstruction of human yard system [J]. *Business Economics Research*, 2018(17):5-8.
- [6] He Yuanqiong, Tang Yanyi, Zhang Junfang. *Rebellious research status and prospect in consumer*

psychology [J]. *Journal of foreign economics and management*, 2016, 38 (02) : 49-61.

[7] Zhang Jingming, Xie Jing. Discussion on retail marketing innovation from the perspective of Artificial intelligence [J]. *Research of Business Economics*, 2020(15):65-68. (in Chinese)

[8] Niu Jianguo, Xia Feilong. AIGC mechanism to promote the development of cross-border electricity quality research [J]. *Journal of economic enterprises*, and 2023 (10) : 85-94.

[9] Lei Chengfeng, Xing Zhenjiang. Reconstructing consumption behavior by AIGC: Influencing factors of continuous use intention [J]. *Technical Economics and Management Research*, 2024(06): 152-158.

[10] WANG Qining, ZHANG Chengchen, Li Xi, et al. Opportunities and challenges of agricultural e-commerce content marketing under AIGC model [J]. *China Collective Economy*, 2024(07):82-85. (in Chinese)

[11] Han Guoying, Zhang Ke. AIGC Marketing: Human-computer symbiotic marketing model promotes digital marketing to leapfrog to digital intelligence [J]. *Journal of Enterprise Economics*, 2018, 43(02):111-124.

[12] Zhou Yan. The practice and hidden worries of AIGC in Brand Marketing Communication from the perspective of availability [J]. *News Sentinel*, 2024,(08):17-19.