

# How Artificial Intelligence for Content Generation (AIGC) Enables Advertising Marketing: A Multi-Case Study Based on the Advertising Industry

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**Abstract:** In recent years, along with the rapid development of artificial intelligence technology, Artificial Intelligence Generated Content, or "AIGC", has been applied to various industries. For the advertising industry, AIGC technology has brought far-reaching impact on advertising creation by virtue of its high efficiency, speed and deep learning capability. For the advertising industry, AIGC technology has brought far-reaching impact on advertising creation by virtue of its high efficiency, speed and deep learning capability. As a comprehensive industry integrating marketing and communication, utilizing AIGC to empower advertising production and innovation has become important for major advertising companies to seize the consumer market. Against this background, the article starts from the technical characteristics of AIGC, introduces its application status in the fields of advertising marketing and advertising communication, and introduces the importance of AIGC for the development of the consumer market. fields of advertising marketing and advertising communication, discusses the empowering effect it brings to the field of advertising in the era of new media communication, and looks forward to the future. media communication, and looks forward to the development prospect of AIGC technology in the application of advertising, and at the same time puts forward coping strategies for risks and challenges. and at the same time puts forward coping strategies for risks and challenges.

**Keywords:** AIGC; Advertising Marketing; Advertising Communications; New Media

## 1. Introduction

### 1.1 Background of the Study

On 18 February 2024, an American technology company, Open AI announced the its newly developed artificial intelligence product "official launch of ". In an instant, the information about AI Sora became popular on social media, and a short video created by Sora gained hundreds of millions of views overnight. And three days after the official release of Sora, CCTV1 channel under "gave a detailed explanation and report on it the title of Artificial Intelligence, How Will It Change the World". So what kind of new AI product is it that can generate such a big social reaction in just a few days?

Simply put, AI the function of is that the user inputs a certain number of keywords and statements to make the AI carry out in-depth learning and combination of materials, and based on the Sora automatically generates pictures or videos containing the content of the user's input information under the framework text-generated graph model. The birth of this text-generated video function marks that the content-generating AI technology (i.e., Dall-E3 AIGC) has formally moved from the single-media dissemination of text-generated text and text-generated pictures to the new era of cross-media dissemination of text-generated video.

The application of technology is becoming more and more widespread, which AIGC in the advertising field can not only help advertisers create advertisements quickly and improve their work efficiency, but also combine brand images with a large number of materials to realise wild creativity. In addition, AIGC technology can also be used to achieve personalised and accurate advertising according to consumers' interests and preferences, and to collect and analyse consumers' advertisement click conversion rates, providing objective and real consumer data information to advertising companies.

It can be seen that the use of AIGC technology to empower the creation and dissemination of advertisements is becoming the focus and trend

of the future development of the advertising field. In this context, this paper will discuss the application of in advertising marketing and advertising communication, analyse the opportunities and challenges it brings, and look forward to the future development trend.AIGC

## 1.2 Objectives and Significance of the Study

### 1.2.1 Research target

The research goal of this paper is to explore the empowering effect of advertising marketing and communication, AIGC technology on summarise its in application the field of advertising marketing and communication, combine the current advertising current situation of , and give perfect methods and suggestions to help enterprises using AIGC for advertisement creation in the industry make better use of AIGC to achieve advertisement creation [1].

### 1.2.2 research significance

The article studies and summarises the application of AIGC technology in the field of advertising marketing and communication, to the gives problems arising from the corresponding solutions practice of AIGC in the field of advertising, and looks forward to its future development direction. This is conducive to advertising practitioners to make better use of the advantages of to empower advertising creation, and at the same time, it can also avoid the using AIGC risks and problems that may arise when technology AIGC , so as to add bricks and mortar for AI to move in the right direction of development.

## 1.3 Status of Research and Research Review

### 1.3.1 Current status of AIGC research

The current academic on research technology focuses on how to AIGC better realise automated or assisted generation of content , so as to improve the efficiency of content creation, reduce costs and, in some cases, create through the comprehensive use of AIGC technology innovative content that is out of the box. This is also in various industries today the goal and desired effect of the use of AIGC technology.

### 1.3.2 Current status of advertising research

The current academic research on advertising focuses on the "marketing effect" and "communication effect" of advertising. The research on "marketing effect" focuses on the preliminary market research, creative planning and copywriting, etc., while the research on "communication effect" focuses on the selection

of communication media and the evaluation of communication effect.

## 1.4 Research methodology

The article chooses the case study method in the research method, and adopts the secondary information collection method in the data collection. Through the collection of existing advertising using current advertising industry works created technology in the to analyse the role it plays in the advertising marketing and communication process, and also collect the public primary data of major advertising agencies and brands to support each other and assist the elaboration of the article's viewpoints.AIGC [3].

## 2. Research overview

### 2.1 AIGC Interpretation

AIGC is the abbreviation of , meaning Artificial Intelligence Generated Content. At present of by domestic industry, academia and research circles Artificial Intelligence Generated Content, the definition technology is "AIGC a new type of production method that uses artificial intelligence technology to automatically generate content after (User Generated Content). The international equivalent is "PGC (Professional Generated Content) and UGC AI-generated Media", which is defined as "a collective term for the production, manipulation, and modification of data or media through AI algorithms" . Simply put, [4] AIGC is an application based on AI technology, which collects and learns from a large amount of data, imitates human behavioural patterns and linguistic features, and generates a variety of content, including text, images, videos, and so on.

The development of technology can be traced back to the 1950s, when Alan Turing proposed the famous "Turing Test" to determine whether a machine is "intelligent", which marked the AIGC first time the concept of was proposed in the scientific community. However, limited by the level of science and technology at that time, AIGC was only limited to a small range of tests, until the 21st century, the significant increase in the arithmetic performance of computer equipment has brought new possibilities for the development of technology, and AIGC has entered a stage of rapid development. 2017, Microsoft's artificial intelligence girl,

"Xiaobing", completed the world's first film written entirely by artificial intelligence. The first collection of poems created entirely by artificial intelligence - "Sunshine Lost Glass Window". After that, NVIDIA, DeepMind and other technology companies launched their AI models. 2021, OpenAI developed the DALL-E Vincennes model and launched under the framework of the model ChatGPT . by now, the development of technology has basically moved towards maturity, and its application in various fields of society is expected to become the future model to change the development of business and help the transformation and upgrading of industries. However, to date, the challenges of AIGC technology remain in terms of accuracy and controllability [5].

As an AI-based application, AIGC usually involves several technologies in the field of AI in the process of its application. Natural Language Processing (NLP) is one of the key representatives, which enables AIGC to better understand and simulate human language patterns, and create textual content that matches the characteristics of human language. Computer Vision (CV) is another key technology that enables computers to better process image and video content to create more impactful image content. Machine Learning (ML) is the most central technology in , which plays a fundamental role in automated content generation by training AI models to recognise behavioural patterns and make predictions about them.AIGC

With these AI technologies, AIGC is characterised by high efficiency, high quality and high scalability. Its ultimate goal is to use these technologies to achieve automated and assisted generation of information content, thus reducing working time and improving working efficiency. As the areas in which technology can be applied continue to expand, it is gradually becoming a force to be reckoned with in the field of content creation.AIGC

## **2.2 Definition and Application of in Advertising AIGC**

Advertising, also known in academic circles as "marketing communications". As a special type of communication, it combines marketing and communication. Therefore, it has both the consumer idea at the marketing level and the media effect goal at the communication level. The study of advertising undergone has a

transformation era.from the "marketing" era to the "creative" era to the "integrated marketing" Nowadays, the academic research on advertising focuses on the "marketing effect" and "communication effect" of advertisements. The research on "marketing effect" focuses on the preliminary market research, creative planning and copywriting, etc., while the research on "communication effect" focuses on the selection of communication media and the evaluation of communication effect [6].

As a derivative of artificial intelligence technology, 's advantages of deep learning and automated content generation can AIGC bring about a reduction in production costs and a speeding up of the cycle for the advertising industry, laying the foundation for creative efficiency. The current academic on the research application of technology in the advertising industry has four main aspects:AIGC

The first is in the field of advertising creative production and delivery process. Using AIGC's capabilities, we can optimise and reconstruct the advertisement creative production process. Specifically, the traditional material production workflow includes demand → production → audit → placement → analysis, etc. Using intelligent expansion and automatic content generation functions, it helps advertisers simplify the process of advertisement creation, and greatly improves the efficiency of advertisers' production and placement; and secondly, AIGC can significantly reduce the cost of manpower and shorten the advertisement production cycle. In the past, it was necessary to complete the production of advertisement creativity through the links of "demand optimisation → original drawing → modelling → post-production → editing", but through AIGC, it can be shortened to the links of "demand description → production → editing", which greatly reduces the cost of manpower input. Again, AIGC can reduce the cost of materials and lower the threshold of process. In the past, photographers, equipment, studio, post-production, editing and other links were needed, but through AIGC technology, the placement personnel only need to inform the model of the camera scene, painting style and other content, and the model can be completed production, which is conducive to reducing the cost of material input. Finally, AIGC can solve the pain point of material collection and copyright, and generate legal materials in real

time. In the past, advertisers needed to collect materials and buy copyrights before advertising, but through AIGC technology, advertisers can generate materials on-demand based on the model without copyright disputes, which is a powerful solution to the pain points of copyright expenses and copyright disputes [2].

These four aspects are the current academic on the the macro level research use of technology in the field of advertising at. Based on this research status, this paper will of respectively AIGC make a detailed study, summary and generalisation the specific application of in the two fields of advertising marketing and advertising communication .AIGC

### **3. Application of AIGC in Advertising and Marketing**

#### **3.1 Consumer-Information-Screening and Filtering**

Market research is the first step in advertising and marketing. Advertising companies need to collect consumers' click conversion rate through published advertisements, and use the collected data to analyse consumers' purchasing needs and behavioural preferences, so as to accurately find the market demand point. Pre-market research often determines the fundamental direction of advertising and marketing, so how to accurately filter out valuable consumer information in the era of information explosion has become a problem that advertising workers must solve.

AIGC technology can screen, analyse and monitor background data of a large number of advertising works through its natural language processing and machine deep learning capabilities, accurately identify valuable consumer information and aggregate it into a data model that can reflect consumers' purchasing preferences, helping brands and enterprises to complete consumer market insights more efficiently. For example, Kimi, the hottest AI of the moment, can analyse a large amount of uploaded graphical and textual information, and automatically retrieve and summarise this information. Using Kimi's modelling framework in conjunction with Excel documents, fully automated data analysis and processing can be achieved in the true sense of the word [8].

#### **3.2 Technology Enabling Advertising Creativity**

Excellent advertisements often have some eye-catching creativity. In the era of new media communication, social media platforms have become the main battlefield for brands and enterprises to compete for the consumer market, enterprises can only attract consumers' attention in the complex cyberspace by shaping a unique brand image, and a good advertisement creativity often allows brands to show the difference between themselves and other competitors.

AIGC's advantages in the field of computer vision (CV) can bring a new perspective to the conception of advertising ideas. AIGC collects and analyses a large amount of materials in the Internet through machine learning capabilities, and by finding the graphic and textual materials that are most suitable for the brand's image and combining them freely, it can realize advertising ideas that are beyond the conception of the human brain. For example, Coca-Cola used AIGC to Norwegian Expressionist painter combine the book "The Scream" by the with Coca-Cola, and through the visual expression of oil paintings, Coca-Cola's product characteristics of "cool and refreshing" were shown in a graphic way, supplemented by the advertising slogan of "We let art and artwork be reborn". The tagline "We make art and artwork born again" describes the brand as a work of art that is comparable to oil paintings, and presents the brand to consumers in a new way that is eye-catching.Edvard Munch

After the Vincent Video AI framework was further enhanced, the empowering role of AIGC for advertising creativity shifted from a simple combination of print advertising materials to the video field. Huawei created "To Xiake, To Love", which used AIGC technology to recreate the footprints of Xu Xiake's exploration of Jizu Mountain in Yunnan Province, giving Xu Xiake's spirit of exploration a new light in the new era, and at the same time lending Xu Xiake's image to show its own brand image.

#### **3.3 Automated Creation of Advertising Content**

After determining consumer needs and advertising ideas, AIGC can assist advertisers in quickly generating advertising content, reducing the time required for advert creation and improving work efficiency. For example, in the process of shooting advertisements, it is necessary to make fine adjustments to the details

of lighting, product placement, etc., and in the post-shooting stage, it is also necessary to use computers to make fine adjustments to the photographs obtained from shooting. With the support of AIGC tools, you only need to send the product images and finishing requirements to AI, and then you can quickly get a perfect product image. This not only improves efficiency, but also guarantees the quality of the advertisement. However, AI-generated creativity may lack emotional depth and require human optimisation to ensure quality.

At present, the rapid content generation capability of technology has been applied in many industries. AIGC The of CCTV.com applies AIGC "Artificial Intelligence Editorial Department" artificial intelligence to news practice on a large scale, constructing a "five-wisdom" full-chain communication process integrating intelligent planning, intelligent collection, intelligent production, intelligent operation, and intelligent auditing, and realising the integrated intelligent production of the whole process of news and products. In March 2024, appeared in a news clip about migratory birds in CCTV's Evening News AI traces : the watermark "created by AI" was marked in the upper right corner on the same day, and the news on 3 April continued to use " by using AI to explain the "strong convective weather to make pictures. "Strong convective weather" [8].

#### **4. Application of AIGC in Advertising Communication**

##### **4.1 Tailoring and Precision Placement of Advertisements**

In the current era where social media communication is the main mode of communication, AIGC technology is revolutionising the way social media platforms operate, especially in the area of content filtering and pushing. Through sophisticated algorithms and machine learning capabilities, AIGC can accurately analyse users' behavioural preferences, interests and interaction patterns. Based on this, advertising agencies and brands can use the data from AIGC in-depth analyses to recommend tailor-made advertising content for users. This not only ensures that potential consumers are exposed to the product information they are interested in, but also enhances the level of personalisation of the ad content. The result is

that users can see exactly what they are interested in, which in turn triggers their desire to buy and then their purchasing behaviour. At the same time, the personalised information service can also bring consumers a good brand interaction and purchase experience, and subconsciously deepen the user's goodwill and brand loyalty [5].

Using the advantages of AIGC customisation and precise placement, native ads have developed rapidly, and we can often find native ads in our daily life in our circle of friends and QQ news. At the same time, there is also the rapid development of community marketing. Brands can use the purchase data and preferences of consumers collected by AIGC to build a consumer community with "Interesting Edge" as the core, in which the brand regularly releases some product information and activity announcements to attract consumers to interact with each other, so that the consumers spontaneously spread the information content and further improve the quality of the products and services. In this community, the brand regularly releases product information and event announcements to attract consumer interaction, so that consumers will spontaneously disseminate the information content, and further increase and consolidate brand loyalty.

##### **4.2 Diversification of Forms of Advertising Communication**

Another significant application of AIGC technology in the field of advertising communication is that it has broadened the boundaries of advertising communication forms. With the development of technology, nowadays advertisement communication is not only limited to the traditional forms of print advertisement and video advertisement, but also AR interactive advertisement, CGI advertisement and other forms of advertisement communication based on AI technology are gradually entering into people's daily life. 2023, French women's clothing brand Jacquemus released a CGI advertisement created by AI rendering on social media platforms, and the advertisement gained a lot of clicks once it was issued. The CGI advertisement, which gained a large number of clicks as soon as it was issued, featured several huge Jacquemus purses driving by in the form of vehicles on the streets of Paris. The perfect reproduction of the Parisian carriageway and the huge purses passing by in the form of vehicles

formed a magical surreal sense, and this unique form of advertisement attracted the attention of many consumers. By coincidence, Shanxi Culture & Tourism used CGI technology to produce a promotional video for the 2024 "China's Non-heritage Noodle Conference", in which the noodles were draped over the Eiffel Tower and the buns were placed in the centre of the Colosseum in Rome, the combination of the virtual and the real made the promotional advertisement particularly vivid and interesting.

### 4.3 Innovations in Cross-Media Communication in Advertising

Along with the continuous upgrading and updating of the AI text-to-graphic and text-to-video frameworks, AIGC technology is now better able to automatically convert content from one media format to another, e.g., AIGC can convert the content of a radio advert into a short video advert, or the informative content of a print advert into a broadcast advert. Such conversion capabilities not only retain the information of the original advert content, but also add additional auditory and visual elements, making it more suitable for different platforms and consumer groups. This capability not only greatly expands the dissemination channels of advertising information content, enabling product information to reach different consumer groups in various forms, but also better promotes the dissemination of digital public service advertisements, so that digital public service advertisements can reach every audience group, and help public welfare cause to develop better in the era of new media communication. In addition, cross-media communication also provides for more creative space content creators, enabling them to tell stories in innovative ways to attract and keep KOL marketing consumers' attention.

### 5. Problems and Solutions faced by in the Field of Advertising, Marketing and Communication AIGC

The application of technology can reduce the time needed for ad creation and bring sky-high creativity to ad content. At the same time, AIGC AIGC can also optimise the brand experience of consumers and achieve good interaction between brands and consumers through personalised advertising. All these technological advantages help to promote the better development of advertising marketing and communication in the

new media era. At present, the application of technology also faces some problems and challenges. AIGC

Firstly, AIGC still suffers from the problem of inaccurate information content in the process of data collection. The inaccurate information collected can easily lead to mistakes in advertising and marketing strategic decisions for enterprises and brands, and when the inaccurate information is applied to the advertisement content, it can cause the negative impact of false advertisements; secondly, the personalised and accurate placement of advertisements can easily lead to the leakage of consumers' privacy, and the consumers' personal information, Internet history, geographic location and other sensitive information will be collected by AIGC, which, once leaked, will bring great risks to consumers' privacy and safety. Once this information is leaked, it will bring great risks to the privacy and security of consumers [7]; In addition, the popularity of AIGC technology is still in its infancy in the field of advertisement marketing and communication, which is bound to bring a certain impact to the advertisement industry, in view of these problems, this paper now puts forward the following solutions.

### 5.1 Introducing a Manual Review Mechanism to Strengthen Data Authenticity Verification

The system shall rely on reliable AIGC and accurate data sources. Before using any data source, the system should carry out strict data validation and screening to ensure that the data used are authentic and reliable. Meanwhile, for automatically AIGC collected data, multi-source data validation and cross-verification methods can be adopted to improve the authenticity and reliability of news data.

Although AIGC can generate content quickly, a sound and robust manual review mechanism is still essential. Before using the data collected by AIGC for market analysis and advertisement content creation, it is necessary to strengthen the manual review and gate keeping of the data to ensure the accuracy and objectivity of the information, so as to avoid the potential risk of false advertisements. By introducing professional advertisers to conduct content auditing and adhering to the harmonious symbiosis of "man and machine", errors or distorted content generated by AIGC can be detected and corrected in a timely manner.

### 5.2 Strengthening Data Protection Awareness and Privacy Data Regulation

In the data collection process of , usually involves some of the consumers' private data, and once this privacy is leaked, it will not only bring potential risks to the privacy and security of consumers, but also make the enterprise lose its credibility, and bring extremely serious negative impacts to the image of the enterprise. Therefore, the protection of consumer privacy is an obligation that brands and enterprises must fulfil. Enterprises need to strengthen the awareness of protecting consumers' private information, establish special information banks to save consumers' private information, and arrange professional information security personnel to audit, categorise and look after consumers' private information. Strengthening the supervision of consumers' private data is conducive to circumventing AIGC the potential risk of information leakage during the use of , bringing consumers a safer purchasing environment.AIGC

### 5.3 Improvement of Relevant Laws and Regulations and Establishment of a Feedback and Monitoring System

The application of in the field of advertising is still in its infancy, and in the process of popularisation, it is bound to face many problems, for which the government should speed up the AIGC legislative process of the application specification of in the field of advertising, and make clear through laws and regulations AIGC the scope of application of in the advertising industry and the application process . At the same time, enterprises also need to build up a complete feedback AIGC and supervision system to encourage consumers to on provide feedback AIGC-generated advertisement content. By collecting and analysing consumers' feedback, problems in the content can be discovered and corrected in time. This feedback can also be used to improve the performance and accuracy of the system.AIGC.

### 6. Conclusion

This article firstly starts from the technical level of AIGC, and introduces the development history of AIGC and its specific functional characteristics in detail. Immediately after that, the article analyses the current development of the advertising industry in the new media era. Against this background, the article analyses the

application of AIGC in the field of advertising and marketing from the aspects of "market research", "advertisement creation" and "automated content generation", and from the aspects of "precise placement" and "automated content generation". The application of AIGC in the field of advertising communication is analysed from the aspects of "precise placement", "diversified forms of communication" and "cross-media communication". The article also gives targeted solutions to the problems arising from the application of AIGC technology in the field of advertising, helping enterprises and brands to make better use of AIGC technology to empower the creation and dissemination of advertisements.

The application of the field of to AIGC technology in advertising marketing and communication brings opportunities and challenges . In the face of the future, the advertising industry brands and enterprises need to actively embrace new technologies and continuously innovate content forms and production methods to adapt to consumer demands and market changes. At the same time, they also need to pay attention to the potential risks and challenges brought by the technology to ensure the authenticity of the advertisement content. Only by giving full play to the advantages of technology while overcoming the risks and challenges it brings can we promote AIGC the sustainable development of the field.advertising marketing and communication.

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