

# Research on the application of artificial intelligence technology in marketing field

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**Abstract:** with the era of comprehensive artificial intelligence, artificial intelligence technology is more and more widely applied in the field of marketing, not only can improve enterprise's marketing ability and core competitiveness, and can also provide customers with quality services. In order to realize precision marketing, enterprises should actively use artificial intelligence technology, establish artificial intelligence marketing concept and build big data management platform, real-time access to marketing data, precise positioning of target customer groups, explore potential customer groups; Big data is used to analyze customers' consumption preferences, achieve accurate information push, and stimulate customers' consumption desire. At the same time, enterprises can also develop personalized customer communication service system by using virtual robots, comprehensively improve customer satisfaction and enterprise marketing competitiveness and economic benefits.

**Key words:** artificial intelligence; Big data; Marketing; Applied strategy

## Introduction

Artificial intelligence technology provides a new development opportunity for the intelligent and integrated development of enterprise marketing. It can not only locate the target customer group, make targeted marketing programs, improve the marketing level, but also predict the market development trend and improve the marketing efficiency. Enterprises should view and apply artificial intelligence technology comprehensively and dialectically. They should not only correctly understand the positive impact of artificial intelligence technology on enterprises and consumers, but also be alert to the data and legal risks brought by it. Through the construction of artificial intelligence marketing system, enterprises can accurately analyze market data, tap market potential, accurately locate target customer groups and push product information, and provide 24-hour intelligent customer service, which helps enterprises to stimulate marketing vitality, win the first place in the fierce market competition, and achieve sustainable marketing increment.

## 1. Artificial Intelligence marketing technology

### 1. Basis of artificial intelligence marketing

This paper holds that AI marketing refers to an efficient and personalized new marketing model in which enterprises capture consumer insight and consumer behavior information based on big data, cloud computing and AI technology, conduct intelligent analysis, match consumers' dynamic demands and push enterprise and product information, collect online data in real time, and carry out highly synchronized product and business data. It can be seen that the basis of AI marketing is big data and AI technology, and the integration and extraction of data is an important driving force to promote enterprise marketing. In the era of digital economy, artificial intelligence will become the breakthrough of enterprise marketing model innovation. Through artificial intelligence technology, enterprises can obtain valuable market data such as consumer shopping preference, brand attitude and product sales, such as search volume, page views, sales volume and sales evaluation, so as to provide accurate data for marketing decisions of enterprises. In addition, products, prices, places and promotions can be presented in real time in the form of data, which also provides consumers with a more convenient and accurate shopping experience, thus improving the marketing level of enterprises.

### 2. Artificial Intelligence marketing features

AI marketing is characterized by intelligence, including data analysis and marketing decision intelligence. Firstly, AI marketing can collect marketing data from various channels of enterprises in various ways, and use cloud computing, blockchain and other technologies to analyze massive data. Through data analysis, it can obtain consumer demand and market changes, so as to improve the efficiency of marketing data analysis and processing. Second, enterprises can formulate marketing plans according to marketing data, more objectively analyze the target customer group and marketing market, determine the best marketing plan, and further improve the accuracy of corporate decision-making.

### 3. Artificial intelligence marketing purpose

The purpose of AI marketing is to create more value for enterprises, and providing the best service for consumers is one of the main advantages of AI marketing. Among them, enterprises can use big data technology to obtain consumer data in real time, and conduct data analysis and market forecast, saving enterprise data analysis costs, reducing marketing costs, and obtaining maximum benefits. At the same time, enterprises can also use artificial intelligence technology to reshape and optimize the marketing process, enrich the marketing layout, so as to grasp the consumption trend, directly hit the consumption hotspot, promote the consumption behavior, and improve the marketing performance of enterprises.

## 2. Challenges facing the application of AI technology in marketing

### 1. Security

Artificial intelligence can not be separated from the Internet and computers, relying on computer systems and software for data analysis and calculation, the computer network security requirements are relatively high. The Internet is an open environment, it is easy to be infected with computer viruses, suffer network hacker attacks, once the enterprise affects the computer data collection and analysis work. Once the data is lost, it will affect the results of enterprise marketing big data analysis, difficult to analyze consumer data, marketing data, but also may leak enterprise marketing data, leading to the disclosure of confidential information, affecting the quality of marketing work.

### 2. Privacy

In the context of artificial intelligence marketing, enterprises need to acquire consumer data and information and dig these data deeply. Enterprises have established customer databases, such as personal information, purchase records, consumption evaluation and other data, and use the Internet to push product or store information to users. Once the enterprise system suffers from network attacks, it is easy to leak customer data, which will affect the development of marketing work, but also affect customer satisfaction with the enterprise service. Some enterprises frequently push product information to consumers, which is easy to make consumers dislike the brand and affect the effect of artificial intelligence marketing.

## 3. The application strategy of artificial intelligence technology in marketing

### 1. Scientific analysis of consumer demand

Enterprises should actively build artificial intelligence marketing centers, introduce artificial intelligence talents, and use big data, machine learning and algorithm technologies to collect customer data, such as collecting user shopping data, satisfaction evaluation and other data, and associate user personal data, mining the connection between these data, and synthesize data analysis results to create customer user image, so as to achieve accurate push. Enterprises can link online shopping platforms with consumer social media, associate their social platform information and evaluation with brand data, and analyze consumers' attitudes toward brands and products. For example, collect product photos and videos released by consumers on social platforms such as Weibo and Douyin, and analyze their consumption needs and preferences based on this information. In addition, enterprises can also use big data to build a consumer behavior prediction model and import consumer data collected in the early stage. For example, they can capture consumers' facial expressions with the help of face recognition technology, so as to analyze consumers' shopping desire and scientifically predict consumers' purchase intention. Artificial intelligence algorithm can help enterprises comprehensively collect consumer data, and use the algorithm to analyze consumer behavior, better grasp consumer needs, and match them with high-quality products and services. Enterprises should make dialectical use of AI technology, not only collect consumer data comprehensively, but also protect consumer privacy data, avoid malicious disclosure of personal information, or sell user data at will, win the recognition of consumers and accumulate more loyal users.

### 2. Optimize the advertisement delivery plan

Advertising is an important means of enterprise marketing, but also the direct carrier to catch consumers' eyes. With the rise of new media such as Douyin, Weibo and wechat public accounts, advertising channels are becoming more and more extensive, and AI technology can help enterprises optimize advertising delivery plans and gradually expand the audience group of advertising. First of all, enterprises can use computer algorithms to calculate the advertising moment when consumers click and watch the most, then collect consumers' visit to the store and order data through the advertising link, analyze the most attractive advertising and advertising platform, and further define the advertising platform and program. For example, enterprises can try to advertise in Douyin, Weibo and video APP, and use big data and cloud computing to analyze the advertising volume of each platform and the sales data before and after the advertising broadcast, so as to build a more intuitive data model, screen out the platform with the highest number of ads, determine advertising partners, and further expand the influence of advertising. Secondly, enterprises can also use artificial intelligence or obtain real-time advertising data, such as advertising playback volume, click volume and consumption on each platform to evaluate the advertising plan and effect, identify the optimal advertising marketing plan, and further reduce the advertising marketing cost. For example, enterprises can use research and development of intelligent advertising purchase and delivery procedures, use big data to analyze consumer behavior, label consumers, design different labels according to consumer preferences, optimize advertising content and delivery time, and further improve advertising and marketing effect.

### 3. Realize intelligent recommendation of consumers

Artificial intelligence technology can help enterprises obtain consumer information in an all-round and multi-channel way, so as to help enterprises analyze consumer preferences, consumer demands and brand goodwill, achieve precision and intelligent recommendation, and avoid excessive push of information to cause consumer solutions. First, enterprises should establish a big data management platform, import the data of each branch and sales channel into the big data management platform, use artificial intelligence technology to analyze and classify all kinds of data, screen the data according to the sales region, product type and product range, analyze the preferences and consumption ideas of consumers in different regions, and describe the consumers. To analyze their consumption behavior, it is convenient to recommend products and services to consumers in a timely manner, and meet their personalized consumption needs. For example, enterprises can analyze the data of product sales, popular products and consumer satisfaction in different seasons and regions, so as to clarify consumer demand in different regions. For example, the best-selling dehumidification products and sunscreen products in the rainy season of southern Fang Mei should be prepared in advance, and the relevant products should be accurately pushed to consumers in southern

China. Second, enterprises can use artificial intelligence technology to obtain different types of consumer data, in-depth mining of the data, personalized recommendation, and the data automatically back to the enterprise database, convenient for the production department, sales department and after-sales service department to share data, so as to achieve cross-departmental cooperation, further improve the efficiency of marketing. For example, enterprises use machine learning, language processing and other artificial intelligence technologies to build multidimensional data labels, use computer algorithms to accurately identify the regions and needs of consumers, realize intelligent recommendation of related products or services, further expand the target customer base, improve the sales performance of enterprises.

#### 4. Provide 24-hour intelligent customer service

Under the traditional marketing model, enterprises can only rely on manual customer service work, due to the high labor cost, unable to serve consumers 24 hours, peak consumption, difficult to timely answer the consumer consultation, affecting the sales performance. Artificial intelligence has changed the traditional customer service model, using intelligent robots instead of human customer service to solve simple problems, to provide consumers with 24 hours of service, to help enterprises promote orders. First of all, enterprises can actively introduce virtual robots, used in the enterprise website or e-commerce shopping APP, according to the product characteristics, consumers most frequently asked questions, write questions and answers, and the data into the virtual robot control program, easy for virtual robots to quickly screen answers, to solve consumer problems. Virtual robot can analyze the input problems of consumers, split the sentence structure and sentence components, and quickly screen similar problems in the database, on the basis of consumers to reply, and give the corresponding solution strategy, 24 hours online reply to consumer questions. Secondly, enterprises can also use artificial intelligence algorithm, speech recognition technology to develop intelligent robots, provide voice consulting services, meet different customer needs, and further win the trust of consumers. For example, intelligent robots can analyze the voice of consumers, extract the key words, use the voice recognition technology to screen the answer database data of the system, and timely dialogue with consumers, stimulate their desire to buy, if the robot cannot solve the problem of consumers and then transfer to human customer service, it can reduce the workload of human customer service. It can also provide 24-hour online services for consumers, reduce service costs for enterprises and improve marketing earnings.

## 4. Conclusion

In the era of “Internet +”, enterprises need to integrate artificial intelligence technology into marketing management, build an efficient and stable big data management system, comprehensively obtain consumer data domain, and use algorithms to improve the effectiveness and accuracy of data collection and analysis, achieve accurate information push and advertising optimization, expand brand influence and marketing effect. At the same time, actively collect social media data, create brand consumer model, introduce virtual robots, provide unlimited quality intelligent customer service, so as to enhance consumer satisfaction and brand loyalty, promote the sustainable development of enterprises.

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