Retraction

Retracted: Construction and Development of Modern Brand Marketing Management Mode Based on Artificial Intelligence

Journal of Sensors

This article has been retracted by Hindawi following an investigation undertaken by the publisher [1]. This investigation has uncovered evidence of one or more of the following indicators of systematic manipulation of the publication process:

(1) Discrepancies in scope
(2) Discrepancies in the description of the research reported
(3) Discrepancies between the availability of data and the research described
(4) Inappropriate citations
(5) Incoherent, meaningless and/or irrelevant content included in the article
(6) Peer-review manipulation

The presence of these indicators undermines our confidence in the integrity of the article's content and we cannot, therefore, vouch for its reliability. Please note that this notice is intended solely to alert readers that the content of this article is unreliable. We have not investigated whether authors were aware of or involved in the systematic manipulation of the publication process.

In addition, our investigation has also shown that one or more of the following human-subject reporting requirements has not been met in this article: ethical approval by an Institutional Review Board (IRB) committee or equivalent, patient/participant consent to participate, and/or agreement to publish patient/participant details (where relevant).

Wiley and Hindawi regrets that the usual quality checks did not identify these issues before publication and have since put additional measures in place to safeguard research integrity.

We wish to credit our own Research Integrity and Research Publishing teams and anonymous and named external researchers and research integrity experts for contributing to this investigation.

The corresponding author, as the representative of all authors, has been given the opportunity to register their agreement or disagreement to this retraction. We have kept a record of any response received.

References

[1] H. Cui, Y. Nie, Z. Li, and J. Zeng, "Construction and Development of Modern Brand Marketing Management Mode Based on Artificial Intelligence," *Journal of Sensors*, vol. 2022, Article ID 9246545, 11 pages, 2022.

Research Article

Construction and Development of Modern Brand Marketing Management Mode Based on Artificial Intelligence

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The continuous development of the times and the application of artificial intelligence technology are more mature and common; as a new concept and way of thinking artificial intelligence technology plays an important role in brand marketing, brand marketing artificial intelligence era has truly arrived. Based on such a background, it is necessary to explore the value of artificial intelligence in brand marketing management and specific implementation strategies. With the help of artificial intelligence technology, we can realize the accurate capture of consumer demand, the accurate portrayal of consumer groups, and the high quality of brand marketing. The essence of strategic brand management is a brand management system based on brand value. With the help of the brand management system, all the company's contents are integrated and used to guide all the company's business actions. At the same time, the company's brand plan and framework are properly adjusted to constantly improve the brand's own value and promote the sustainable development of the brand and the company. In this paper, we briefly explain and analyze several brand marketing management modes and management countermeasures commonly used by modern enterprises and discuss the problems and optimization countermeasures in modern enterprise brand marketing management, hoping to enlighten the enhancement of enterprise brand marketing promotion effect and promote the sustainable development of enterprises.

1. Introduction

Artificial intelligence (AI) is a new technical science that simulates, extends, and extends the theories, methods, technologies, and application systems of human intelligence [1, 2]. In the past few years, innovative technologies represented by big data and artificial intelligence are reshaping the entire marketing industry, the application of AI to marketing can be seen as a disruption, and the introduction of AI allows brands to continuously adjust their marketing strategies through data to capture important business opportunities and value [3, 4]. The importance of "big data" in the field of artificial intelligence is very high, and data is considered to be the new energy in the information age. With the advent of the Internet era, the rapid development of information technology and big data has led to the rise of artificial intelligence (AL), which promotes the renewal of science and technology in the industry and has profoundly affected the change of people's lifestyles and the innovation of business models [5, 6]. Artificial intelligence is a trendy term today, which covers a wide range of research on how to simulate human thinking and behavior to produce intelligent products that can respond with simulated human intelligence. Smartphones and intelligent robots are all products of artificial intelligence technology, bringing convenience and a new user experience to people's lives [7, 8]. The use of artificial intelligence in user data analysis and the experience of the value of user scenarios, as well as changes in human-computer interaction scenarios and behavioral habit insights can break the traditional marketing solidified thinking and can potentially change the marketing approach [9, 10]. Artificial intelligence and marketing from the media, brands to online operations at different stages, and from different types of analysis have different application scenarios. Combining

artificial intelligence and marketing, apply the analysis results of different data to different scenarios. At the same time, as artificial intelligence gradually deep into the marketing, the enterprise also faces three challenges, namely, the challenge of thinking, business challenges, and data challenges. For example, for business challenges, first, the use of IT technology to achieve the data of the enterprise's daily business is through the quantification and semantics of enterprise data management and user portrait depiction. Second, the marketing staff will promote the data business process, and the quantified user portrait will be directly used for customer analysis and positioning from the business perspective, so as to pave the way for the subsequent automated operation and continuously bring new value and business opportunities to the brand by combining technology and creativity around the pain points of the brand.

According to its internal conditions and external environment, the enterprise determines its mission and development goals. To ensure the realization of strategic planning and decision-making goals, the implementation of enterprise decisions relies on dynamic management in the implementation process [11, 12]. Enterprise strategy guides all enterprise activities, and the development and implementation of strategy are the focus of all management activities. The key to the development and implementation of strategy includes three aspects: first, analysis of changes in the external environment of the enterprise; second, review of internal conditions of the enterprise; and finally, the development of the strategic goals of the enterprise based on this and the dynamic balance of these three. Therefore, the task of strategic management is to achieve the strategic goals of the enterprise and maintain this dynamic balance by formulating strategy, implementing strategy and saying that management. The study [13, 14], on the other hand, studied the comprehensive competitiveness of corporate brands, and through this important indicator, fully recognized the opportunity brought by the rapid development of China's economy to enterprises, and that China has achieved a huge breakthrough in the cultivation of brand awareness and the creation of brand capability from scratch to excellence, which is unprecedented for China. Therefore, it is of great historical significance to improve the evaluation of brands for China's automobile enterprises. The study [15, 16] in "Strategic Brand Management and Control" starts from the development history of brands, explores and analyzes the measures and means for enterprises to strengthen their core competitiveness, and uses the extensive characteristics of brands to achieve a grasp of the connotation of brands. The elements of brand management such as how to establish a corporate brand management control system, scientifically manage each brand asset, optimize brand portfolio strategies, and innovate on mature brands are discussed, deepening the cohesion and understanding of deeper brand consciousness and enriching the essence of branding. Research [17, 18] in the article "Brand Management" based on the actual situation of enterprise development, from the enterprise practice to draw nutrients, came to the important conclusion that the development of enterprises cannot be separated from brand management. From the perspective of enterprise brand management, the brand cultivation, brand management, and brand management of enterprises are introduced in detail. A sound management process—designing the brand, expanding the brand, perfecting the brand, and rebranding—is indispensable for a company to achieve long-term development. These basic brand development processes are the basic conditions for brand creation and are indispensable; therefore, companies should implement them without wavering in order to achieve true strategic brand management and operation.

In collecting domestic literature on brand strategy analysis, I found that although domestic scholars have rich research on brand strategy, it is not comprehensive, especially for domestic brand strategy research literature is not much, although there are also brand strategy research related articles, but brand management measures proposed on the lack of focus, and I hope the research in this paper can make up for the current lack of domestic research.

2. Modern Brand Marketing Management Mode

2.1. The Logical Model of Marketing Management Structure. The basis for the existence of modern marketing management ideas comes from the modern structure of market management. The framework has features related to existing elements of modern marketing management. This set of characteristics begins with human functional behaviors such as consumer behavior, organizational behavior, and adaptive behavior and creates stories based on the company's goal structure, business mechanisms, marketing relationships, and so on. Like resource allocation, supply, expenditure, etc., it reflects the essence of human production relations, exchange relations, consumption relations, and social relations. Modern market management is a comprehensive strategic socialization movement carried out in a broad social environment, its content is historical and practical, and there are many participants. Therefore, their governance structures cannot be analyzed and clarified from the perspective of traditional mechanisms, but can be explained with arguments based on the facts and reality of their existence in the sense of structural science and systems science. The content of the modern marketing management system clearly combines the three interdependent and interdependent components of marketing core elements, marketing organization core elements, and market environment computer peripherals. The market is based on consumer demographics. According to consumer demand, including potential demand determined by the nature of use and the scale of circulation, the logical structure corresponds to the potential market, efficient market, target market, and end consumer market for other goods or services. Marketing agencies often rely on their business and products or services to manage production and marketing to respond to the market and make a profit. The functional level of the organization is enterprise-level management, enterprise-level management, and product-level management. It is shown in Figure 1.

2.2. Current Situation of Enterprise Research

2.2.1. The Company's Market Competition Strategy.
Now, private industrial enterprises understand the market, but not the market, to understand the market, product knowledge should be extended not only to commodities but also to quality issues, products, brands, services, etc. Enterprises as an effective complement to the national economy must have a deep understanding of the market, especially to survive and develop in the competition of large enterprises. Choosing the right sales and marketing staff is considered to solve the company's distribution problems, leading to a gap between marketing and production and purchasing and logistics. Private industrial companies no longer focus on business mechanisms, management, and mainstream competition, but on hype and packaging. At the same time, the means of market competition are unique, there is no market competition strategy, and price wars often focus on short-term rather than long-term interests.

2.2.2. The Construction of Marketing Channels of Enterprises.
A marketing channel is a set of interrelated entities that facilitate the seamless transfer of products and services to consumers and users in market exchanges. Distribution channels create added value for end customers through the coordinated actions of their participants. In addition to horizontal channels, more and more multichannel marketing systems are making their voices heard, and channel members are also aware of the importance of channel resources and are trying to increase control over channel behavior through different strategies such as channel adjustment and channel smoothing. Participants are in the marketing channel "usually manufacturers, wholesalers, agents, retailers, subsidiaries and end users, consumers" and some distribution organizations. Each node in the channel system can be considered the next node provider and client of the previous node. The relationship between supply and demand runs through the entire channel process. Enterprises do not pay attention to channel creation, do not pay attention to the key links of the enterprise supply chain, and do not pay attention to the needs of market customers, which can easily lead to channel deadlock and serious channel conflicts.

2.2.3. Enterprise Sales Team Management and Talent Development.
Currently, the management of the company is mainly controlled by the family, and the main investors are the main body. Currently, some private industrial companies have unclear stage skill requirements, unclear identification levels and professionals, insufficient attention to job structure, insufficient selection of appropriate tasks, lack of targeted identification strategies, and lack of initial identification. A major source of conflict between contractors and external talent is that many external talents suffer from overestimation of skills, unclear integration of business and personal goals, overlap or confusion between career plans and career goals, excessive demands on personal content, and lack of professional ethics. From a business perspective, we see no special requirements or business development stages for the above issues and implementation, and a thorough
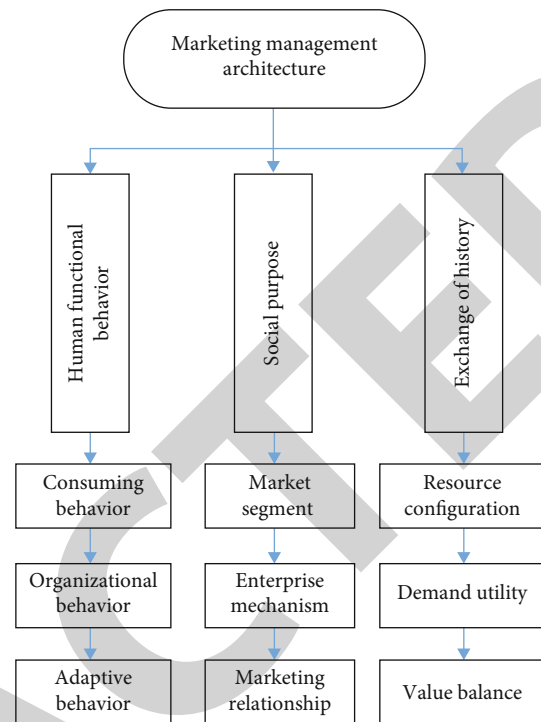

FIGURE 1: Logical model of marketing management architecture.

understanding of strategic options is essential. Gradually, based on the overall localization scheme, talents at different levels can be attracted to establish a management team with professional knowledge. For companies, it is important to move beyond family-based management in the start-up phase to accelerate the growth of the business.

2.3. Enterprise Marketing Cycle Theory

2.3.1. Characteristics of Product Introduction Period.
When a new product just hits the market, this and the next generation of other branded products are not yet on the market. And the growing share continues to grow and even reaches replacement. We call this phase the initial phase of creating this product. The main feature of this stage is that the underlying demand in the initial market increases and the product becomes scarce. Although the volume on the market is small, sales are increasing. Second, other branded products of this generation have not yet entered the market. Products in this market occupy the entire market share, and there may be production products, but the cost of small units is high. Third, when there is competition, that is, the competition of this generation to replace the previous generation, the greater the comparative advantage of this generation in terms of price and quality, the longer the time of substitution.

2.3.2. Characteristics of Long-Term Growth of Enterprises.
Due to the lack of products, knockoffs of other brands of this generation appeared and kept appearing on the market. Competition between different brands is getting fiercer. On the one hand, supply continues to increase, driving market growth and
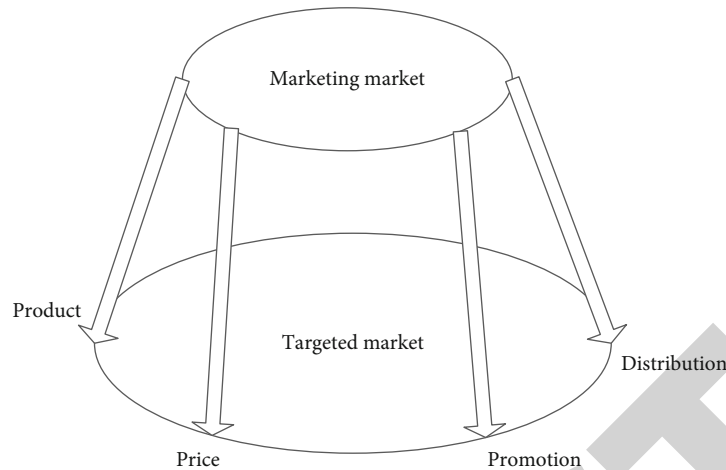
Figure 2: Marketing mix diagram.

sales, ultimately balancing supply and demand. On the other hand, different brands exchange information with each other and have their own market share, and social brands start reducing their share from the highest average price and finally reach the lowest price. The number of product brands in this stage increases rapidly, the market sales continue to increase, the absolute market turnover increases, the increase in the social supply capacity of the third product exceeds the increase in the social demand for this product, finally, the supply and demand balance is reached, and we call this stage the growth stage of the production of this product.

2.3.3. Characteristics of Enterprise Maturity. Due to the high switching cost of exiting the industry and the inertial products produced by the company reaching a balance between supply and demand, the competition between different brand products is further intensified. Prices of some products began to drop to stimulate sales growth. The market share is increasingly towards low cost prices, and the concentration of high-quality brands further promotes the scale expansion of these famous brands, which in turn drives the growth of social demand and sales. However, the products of other brands, under the background of market sales growth, have a backlog of products, their market share has declined, and finally, they must withdraw from the market. After a lot of scouring the sand, some famous brand products and leading companies finally appeared in the market. We call this stage the maturity of this generation of products. The main features of this stage are first, many well-known brands in the market are continuously optimized and concentrated in the process of elimination, forming some brand-name products; second, there is an oversupply of products, product prices fall, market sales increase, and absolute market profits may fall; third, the number of brands is decreasing, the average market share of brands rises from the lowest value and eventually reaches the highest value, and the profitability of brand-name products increases, as shown in Figure 2.

2.4. Strategic Management Process Theory. Strategic management process is a reasonable way for enterprises to gain stra-

tegic competitiveness and achieve excessive profits. It is a dynamic management process in which the three links of strategic analysis, strategic selection and evaluation, and strategic implementation and control are interrelated, repeated, and perfected.

The first step of the strategic management process is to analyze the internal and external environment where the enterprise is located. The external environment is analyzed to find the opportunities as well as threats to the development of the enterprise, to make use of the opportunities in the external conditions and to avoid the threats and other unfavorable factors in the strategy formulation and selection. The analysis of the internal environment is to develop the company's own strengths or weaknesses, so that it can make use of its own resources efficiently by avoiding its weaknesses when formulating and implementing strategies.

The second step of the strategic management process is the selection of strategy, and the essence of this process is to explore, develop, and select a strategy. With limited resources and capabilities, enterprises cannot choose all possible directions of development. Through strategic selection, enterprises can make use of their resources and capabilities to adapt to changes in the external environment, so as to achieve sustainable competitive advantages over competitors. The external opportunities and challenges are the external motivation for strategic choice, and the internal advantages and disadvantages are the constraints for strategic choice.

The third step of the strategic management process is the implementation and control of the strategy. After formulating the strategic plan, the enterprise needs to realize the strategic objectives through specific action plans. Generally, the implementation of the strategy can be promoted through the following aspects: developing functional strategies including specific production, R&D, and sales; constructing the organizational structure of the enterprise; and providing a favorable environment for the implementation of the enterprise strategy. In the specific implementation process to control the implementation, compare the feedback back to the actual results and the previously formulated strategic objectives, if there is a certain deviation, it is necessary to provide effective

measures to correct, if necessary need to reexamine the internal and external environment, develop and select a new strategic plan, and repeat the start of a new round of strategic management implementation process.

3. Artificial Intelligence Algorithms

3.1. GA Genetic Algorithm. Genetic algorithm (GA) is a computational model of biological evolution that simulates the natural selection and genetic mechanism of Darwinian biological evolution and is a method to search for the optimal solution by simulating the natural evolutionary process. Combining GA genetic intelligence algorithm with cognitive waveform technology, a GA genetic intelligence algorithm model based on adaptive waveform optimization is constructed. In this chapter, the theory of neural network and backpropagation algorithm is deeply analyzed and studied, GA genetic intelligence algorithm is applied to cognitive transmission system, and the adaptive parameter learning strategy of GA genetic intelligence algorithm is proposed. The sample data set is obtained through the adaptive waveform system constructed in Chapter 3, the pulse width T and the signal-to-noise ratio (SNR) are used as the input training data of the neural network, and the bit error rate is used as the output training data. The adaptive waveform parameter and environmental parameter learning model are used to verify the prediction performance of the constructed model by MATLAB code simulation. At the same time, the error analysis of the prediction model is carried out, and the influence of the number of samples on the prediction performance is studied. The simulation results show that the proposed GA genetic intelligence algorithm model has a good prediction effect. Compared with the adaptive waveform algorithm, the bit error rate prediction curve based on the GA genetic intelligence algorithm has a better convergence effect and effectively reduces the system code implementation. It can help the system achieve more efficient and intelligent cognitive communication.

$$P_G(z) = \frac{1}{\sigma\sqrt{2\pi}} \exp\left[-\frac{(z-u)^2}{2\sigma^2}\right], \tag{1}$$

$$R_G(t) = \frac{No}{2} \cdot \delta(t), \tag{2}$$

$$s_G(f) = \frac{No}{2}. \tag{3}$$

Lognormal noise refers to a noise signal whose logarithm of the probability density function follows a normal distribution. By consulting many literatures, it is found that in the measurement and control system, when the high-resolution radar observes the ground or the observation angle is small, the probability density curve of the ground clutter fits the logarithmic state distribution, so the ground clutter interference of the measurement and control communication system can be replaced with lognormal noise. The probability density function formula of lognormal noise

is expressed as

$$p_L(x, u, \sigma) = \left\{ \frac{1}{x\sigma\sqrt{2\pi}} \exp\left[-\frac{(1nx-\mu)^2}{2\sigma^2}\right], \tag{4}$$

$$E_n(x) = \exp\left(\frac{(\mu+\sigma^2)}{2}\right), \tag{5}$$

$$D_n(x) = [\exp(\sigma^2) - 1] \cdot \exp(2\mu + \sigma^2). \tag{6}$$

The probability density function distribution of the sea clutter noise obeys the distribution, so the sea clutter noise is also called Weber noise. The distribution of the probability density function of sea clutter noise obeys the distribution, so sea clutter noise is also called Weber noise. The expression of the probability density function of the noise distribution is equation (7). The measurement and control communication environment includes land, ocean, space, and other scenarios, among which, sea clutter is the main noise interference source of sea surface measurement and control communication.

$$f(x, \lambda, k) = \left\{ \frac{k}{\lambda}\left(\frac{x}{\lambda}\right)^2 \exp\left[-\left(\frac{x}{\lambda}\right)^k\right] \right\}, \tag{7}$$

$$J(t) = A_s \cos(2\pi fst + \varphi s). \tag{8}$$

3.2. Minimum Mean Square Error Optimization Criterion. The minimum mean square error optimization criterion is a criterion function that minimizes the mean square error of unknown and known quantities. In the target detection of the measurement and control system, the smaller the MMSE value is, the better the target tracking effect is. At time $k+1$, the filtering state estimation error is expressed as

$$\varsigma_{k+1}|_{k+1}(\gamma_k) = x_{k+1} - x_{k+1|k+1(\gamma_k)}. \tag{9}$$

The estimated state value is calculated from the waveform parameters at time $k+1$, and the mean square error function is expressed as

$$F\left[\varepsilon_{K+1|K+1}(\gamma_k)\right] = E\left[\left\|\varepsilon_{K+1|K+1}(\gamma_k)\right\|^2\right], \tag{10}$$

Then, the criterion function of the minimum mean square error criterion can be expressed as

$$\gamma_K^* = \arg\min\left\{ E\left[\left\|\varepsilon_{K+1|K+1}(\gamma_k)\right\|^2\right] \right\}. \tag{11}$$

The maximum signal-to-noise ratio optimization criterion is a criterion function that maximizes the ratio of signal strength to noise strength. During environmental detection, the transmitted signal will be interfered by various clutter and noise during the transmission process, and the noise intensity in the environment will change in real time with time, which will affect the real-time change of
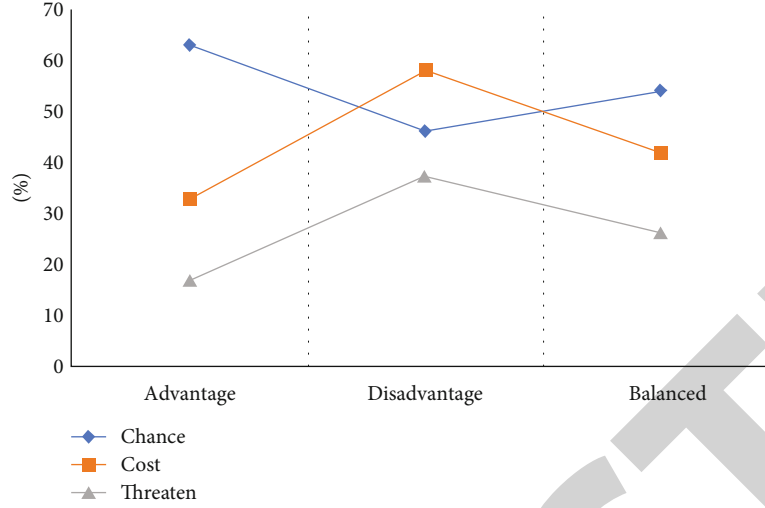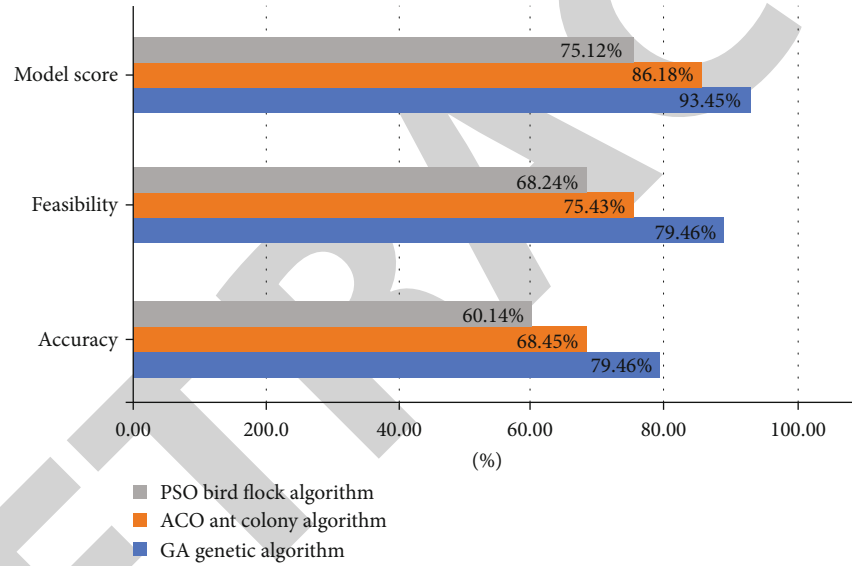
Figure 3: SWOT marketing matrix of enterprises.

Figure 4: Performance comparison under different artificial intelligence algorithms.

the signal-to-noise ratio. Therefore, when the signal-to-noise ratio reaches the maximum value, the corresponding waveform parameters currently are most suitable for the current environment. The criterion function for the signal-to-interference-to-noise ratio is

$$SINR = \frac{|y_s^2(t)|}{E[|y_n^2(t)|]}, \tag{12}$$

$$a_k^* = \arg \max \left\{ \frac{|y_s^2(t)|}{E[|y_n^2(t)|]} \right\}. \tag{13}$$

The minimum mean square error criterion is not suitable for the measurement and control communication scenario because among the two criterion functions we have discussed above, the minimum mean square error criterion is mostly used in the tracking and detection system of cog-

nitive radar, which is more concerned with the accuracy of target state estimation, while the communication scenario in this paper is a measurement and control communication environment, which is more concerned with communication, quality optimization rather than target tracking and state estimation.

$$P_e = \frac{m_s}{n_s} \times 100\%, \tag{14}$$

$$\theta_k^* = \arg \min \left\{ \frac{m_s}{n_s} \times 100\% \right\}. \tag{15}$$

3.3. *Quantized Convolution Calculation.* The quantized convolution calculation is a convolution calculation using the quantized low-bit value, and the quantized convolution calculation that does not require an inverse quantization operation will be introduced. Different from the numerical
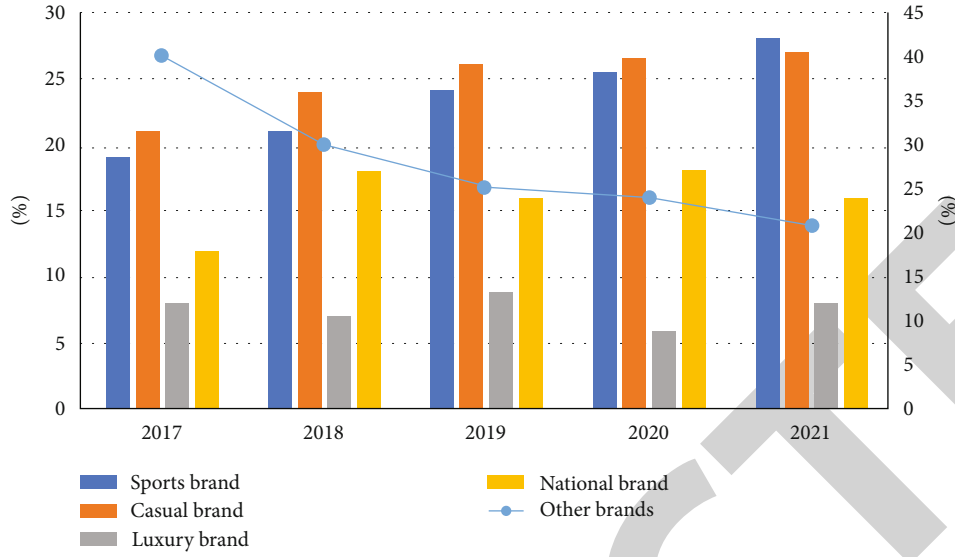
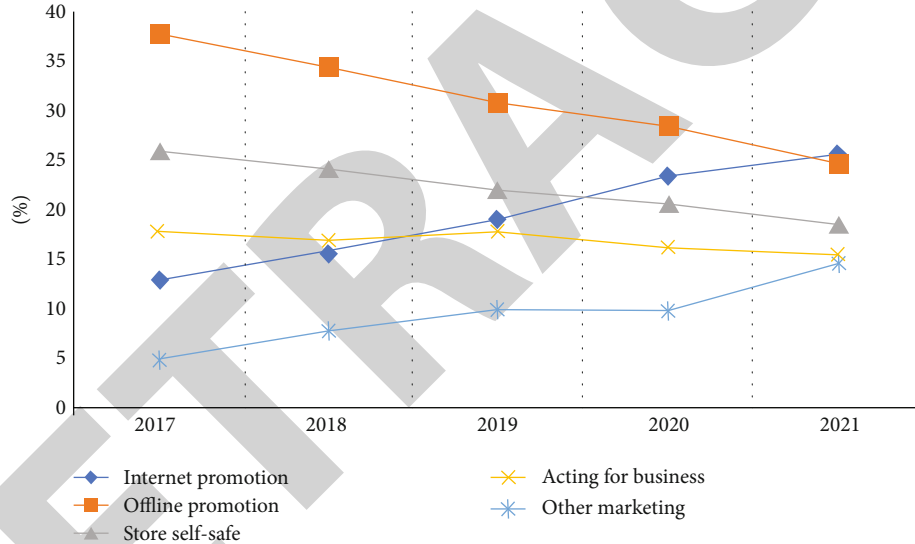Figure 5: Marketing share of different brands.

Figure 6: Proportion of different brand marketing strategies.

compression network that requires inverse quantization during model inference, the quantized convolution calculation only needs to perform sparse prediction (whether it is zero or not) and does not require inverse quantization to restore numerical accuracy, so less computation is required. The amount and less computational complexity, the operation is faster. Equation (16) shows a classical convolution calculation process:

$$Y = \sum_i^N w_i \otimes x_i, \tag{16}$$

where the multiplication sign represents the convolution operation. For simplicity of description, the bias is ignored here. For a given quantization function f, the correspond-

ing quantization convolution calculation process is shown in formula (17), where the plus sign represents the low-bit numerical quantization convolution operation.

$$f(Y) = f\left(\sum_i^N w_i \otimes x_i \right), \tag{17}$$

$$f(Y) = f \sum_i^N f(w_i \otimes x_i). \tag{18}$$

Since SeerNet only needs to predict the sparsity of the feature, that is, the spatial position of the zero value in the feature map after the ReLU layer and the max pooling layer, SeerNet does not need to perform inverse quantization. The calculation process of quantization convolution
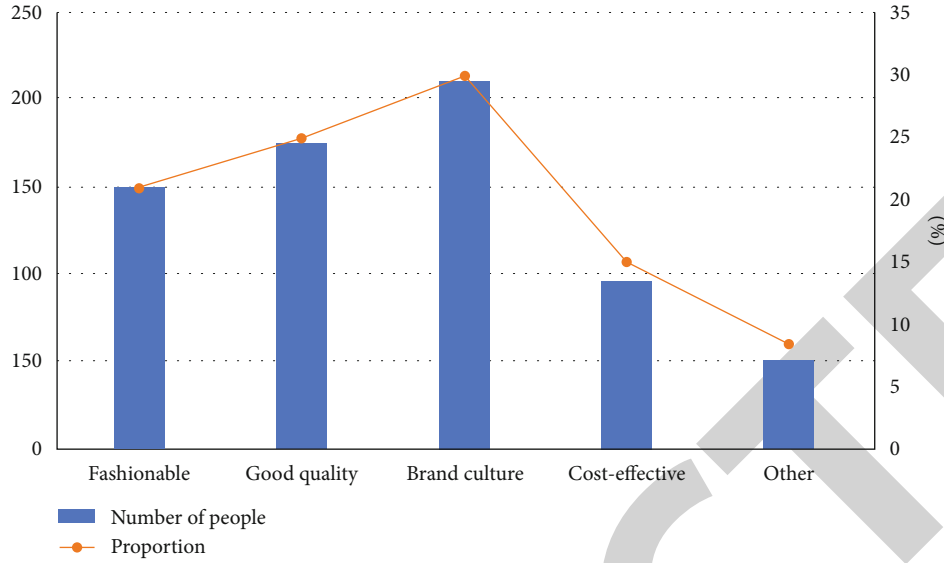
FIGURE 7: Marketing competitive advantages of different brands.

is shown in the following formula:

$$\text{sign}\,(f(Y)) = \text{sign}\,\left(\sum_{i}^{N}(f_w(w_i) \oplus f_x(X_i))\right). \quad (19)$$

In many commonly used CNN models, Conv layers are usually followed by different combinations of batch normalization layers, ReLU layers, and max pooling layers. ReLU makes negative-valued features become zero-valued features, the max pooling layer makes only the value with the largest absolute value in a subregion to be retained, and other positions are discarded.

$$s(t) = A.rect\left(\frac{t}{T}\right).\exp\left[j\left(2\pi fct + \frac{kt^2}{2}\right)\right]. \quad (20)$$

4. Construction and Development of Modern Brand Marketing Management Model under the Background of Artificial Intelligence

4.1. Modern Brand Marketing Management Mode under the Background of Artificial Intelligence. About the concept of brand strategy, commonly speaking, it is a corporate strategy implemented by enterprises to open up the market, increase the market share, and obtain a greater rate of return, through the improvement of product quality, considerate and meticulous service, and other means to increase the visibility of the enterprise in the industry and create a good brand image. Brand not only refers to the product's trademark, packaging, and other external signs but also the product quality, performance, quality, cost-effective, and other

aspects of the comprehensive performance. The brand strategy is a collection of enterprise reputation, production and operation, product development, human management, and other comprehensive work involving enterprise operation, which has a decisive role in the hierarchical position of the enterprise in the market body and needs to be raised to the core position of the top-level design of enterprise management. Therefore, the purpose of corporate brand strategy formulation is to maximize the brand influence in the industry and to be able to meet or even exceed customers' expectations of the company or its products.

Corporate brand strategy management is systematic, long-term, and comprehensive and is an effective way to cultivate corporate competitiveness, accumulate competitive advantages, and differentiate from competitors. However, within the enterprise, the implementation of brand strategy is related to all important departments such as technology, finance, personnel, and sales and is the result of mutual collaboration and cooperation; outside the enterprise, the brand strategy will involve the upstream and downstream industrial chain, sales, and circulation of all links, so it is necessary to systematically plan the brand strategy of the enterprise.

Under the market economy, in order to win in the extremely fierce interenterprise competition, as a business operator, we must put the brand strategy management in an important position, improve the ability of resource integration and management, give full play to the role of the top-level design of managers, establish a good enterprise target positioning and continuous reform and innovation, improve the quality and efficiency of enterprise development, establish positive corporate values, and promote the transformation of enterprises in the competition. In order to form a unique competitive advantage, the enterprise can develop steadily and healthily. Enterprises should first have a clear market positioning of their products, take targeted measures around the market positioning, and produce and operate products with their own characteristics and market
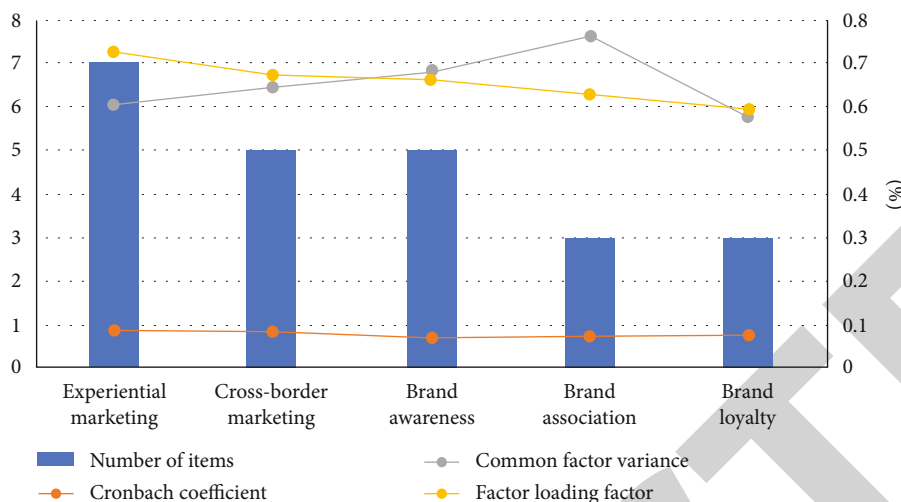
Figure 8: Reliability and validity test of different brands.

Table 1: Reliability and validity test of different brands.

	Experiential marketing	Cross-border marketing	Brand awareness	Brand association	Brand loyalty
Number of items	7	5	5	3	3
Cronbach coefficient	0.872	0.854	0.718	0.744	0.786
Common factor variance	0.605	0.645	0.681	0.759	0.576
Factor loading factor	0.726	0.673	0.66	0.628	0.594

needs, so as to stand out in the market competition for enterprises. "Know yourself and your enemy, a hundred battles will not be lost," in the market competition, the enterprise only on the brand strategy for continuous self-analysis, the brand concept will be deeply implemented to each employee and enhance the cohesion of the enterprise staff, to be able to avoid deficiencies in the competition, strengths, and weaknesses and constantly improve business performance.

From the data in Figure 3, we can see that when an enterprise is in competitive competition, its opportunities account for 63%, costs account for 33%, and threats account for 17%. The proportion is 46%, the cost is 58%, and the threat is 37%; when the enterprise is in balanced competition, its opportunity is 54%, the cost is 42%, and the threat is 26%.

From the data in Figure 4, we can see that the accuracy of the GA genetic algorithm is 79.46%, the feasibility is 89.27%, and the average score of the model is 93.45%; the accuracy of the ACO ant colony algorithm is 68.45%, and the feasibility is 75.43; the average score of the model is 86.18%; the accuracy of the PSO bird flock algorithm is 60.14%, the feasibility is 68.24%, and the average score of the model is 75.12%. The various performances of the GA genetic algorithm are the most accurate and reliable under the three still-intelligent algorithm models.

From the data in Figure 5, we can see that from 2017 to 2021, my country's sports brands and leisure brands show a steady upward trend. In 2017, sports brands accounted for 19% of marketing, and in 2021, the proportion of marketing

rose to 28%; in 2017, leisure brands accounted for 21% of marketing, and by 2021, the proportion of marketing has risen to 27%, while luxury brands accounted for 8% of marketing in 2017 and 8% in 2021.

From the data in Figure 6, we can see that the current marketing methods of different brands mainly include Internet promotion, online promotion, self-selling in stores, and agency business. In 2017, Internet sales accounted for 13%, online sales accounted for 38%, store sales accounted for 26%, and agency business accounted for 18%; in 2018, Internet sales accounted for 16%, online promotion accounted for 34.5%, store sales accounted for 24.3%, and agent business accounted for 17.2%; in 2019, Internet sales accounted for 18.9%, online promotion accounted for 31%, and store sales accounted for 17.2%. 2.1% and 18% of the agents are engaged in business.

4.2. Construction and Development of Modern Brand Marketing Management Model. Under the increasingly fierce market competition of various brand products, the marketing of each brand not only actively improves the existing organizational structure to ensure a competitive advantage in development and operation but also pays special attention to the management of distribution channels, which greatly increases its profits. Improve marketing efficiency. In addition, in the process of operation, the company has also formulated a scientific strategic investment plan, sponsored large-scale events, and used the influence of celebrities to strengthen the brand, providing consumers with the possibility to enhance brand awareness. A rich

brand culture is the company's greatest competitiveness. But the company's current celebrity clout is difficult to replicate, especially for younger consumers in this day and age.

From the data in Figure 7, we can see that the main advantage of different brands in marketing competition is the degree of novelty of styles, with 150 people accounting for 21% and 175 people accounting for 25% of quality problems. The number of respondents is 210, accounting for 30%; the number of cost-effective people is 95, accounting for 15%.

From the data in Figure 8 and Table 1, we can see that the KMO value obtained by inspection is 0.946, which is close to 1, and the significance of 0.000 is greater than 0.05. In factor analysis, the cumulative variance of each item is 62.496%, which is greater than 50%. The common degree of each item is greater than 0.4, indicating that the information loss of each variable is less. The factor loading coefficients are all greater than 0.4, which proves that there is a correlation between variables and items.

5. Conclusion

The rapid development of the Internet era has led to the rapid development of artificial intelligence, which also has a profound impact on people's lifestyles. Companies have to develop unique intelligent products according to the rapidly changing market, timely adjustment of marketing strategies planned and organized marketing activities to provide consumers with satisfactory intelligent products and services, and marketing strategy is an important guarantee to achieve corporate value. However, any marketing strategy and means to bring consumers a sense of freshness is short-lived, especially for different consumer groups using the same marketing tools will certainly have limitations. At this point, enterprises must find a breakthrough, flexible response to market demand, the pursuit of more novel marketing strategies to attract consumers, and achieve sustainable development of enterprises. The core of strategic brand management is a brand management system based on brand values. With the help of brand management system, we can integrate the whole company's content and control the whole business of the company, while correctly matching the brand design and the company's reference structure with the company's own value, so that the brand can be continuously developed and strengthened, and the added value of the company can be continuously increased to achieve sustainable development.

Data Availability

The experimental data used to support the findings of this study are available from the corresponding author upon request.

Conflicts of Interest

The authors declared that they have no conflicts of interest regarding this work.

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