

Artificial Intelligence Enabling Marketing in Africa: A Study of Precision Marketing Strategies and Economic Impact in Low-Income Markets

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Abstract. The digital economy is developing rapidly, and digital technology is gradually affecting people's production and lifestyle. In the context of traditional market research, the time lag and various reasons make it difficult for companies to meet consumer needs promptly, and the development of AI technology provides an efficient path to this dilemma. AI has a powerful data analysis capability, which can immediately reflect changes in market demand and provide advice to enterprises to launch more targeted products and marketing activities. This study analyses the African e-commerce platform Kilimall through a case study method to summarize the path of AI for precision marketing in the African market. However, AI relies on a large amount of consumer data, if the data is maliciously stolen will lead to the leakage of consumers' personal information, which will also make the enterprise face a crisis of trust, and the algorithms of AI may have loopholes that will lead to abnormal marketing activities, which will also affect the normal operation of the enterprise and the brand image.

Keywords: Artificial Intelligence, Precision Marketing Strategies, consumer data, Kilimall.

1. Introduction

Against the backdrop of accelerated development of the global digital economy, Artificial Intelligence (AI) is gradually changing the marketing model, especially showing unique advantages in business promotion, consumer reach and sales conversion in emerging markets. However, how enterprises can achieve accurate reach and optimize market penetration strategies through AI marketing in African markets with high unemployment rates, low-income levels, and limited spending power is still an urgent problem. In recent years, Africa is facing serious economic difficulties, according to the World Bank data show that the youth unemployment rate in sub-Saharan Africa is more than 30%, and even in some countries as high as 50%, low-income people, the per capita GDP of less than 2,000 U.S. dollars, consumption is mainly focused on food or daily necessities to maintain basic survival. Most of the African consumers, although they have a certain demand for quality, they prefer to buy reasonably priced cost-effective goods, especially low-income people. Most African countries are still dependent on agriculture and low-end manufacturing, with a single economic structure that relies solely on agriculture, making the African economy vulnerable to other factors such as price fluctuations in agricultural products and climate change, and having to rely on international food aid to survive. Africa's Internet penetration rate is growing, but still facing backward infrastructure equipment is expensive, logistics and payment infrastructure weaknesses limit the development of e-commerce due to Africa's relatively high proportion of the population, the formal employment opportunities are limited, African's Netflix economy has brought an unprecedented flow of dividends to the businessman, but due to the weakness of the e-commerce infrastructure, these high-energy cannot be converted into commercial value. Enterprises entering the African market need to combine the local consumption habits cultural differences and the current situation of infrastructure, to develop a targeted marketing strategy to seize the opportunities of this new situation field. There is a lack of research on AI marketing adaptation strategies for high unemployment environments and less research on how AI can optimize business marketing in low-income markets. This paper focuses on how AI can help Africa achieve a more efficient, accurate and stable marketing model by capturing consumer behavioural preferences through data analytics and

giving companies advice through a series of operations to help them optimize their marketing model to achieve a more efficient and accurate marketing approach.

2. Literature review

Today's marketing environment tends to be complex and increasingly competitive, and traditional marketing decision-making methods have been difficult to meet the needs. The application of artificial intelligence technology, on the other hand, has changed the marketing environment and opened new and unprecedented opportunities for marketing decision support systems. Artificial intelligence unleashes untapped sales potential for companies and reshapes the way marketing is done, especially in optimizing targeting efforts and enabling data-driven decision making, as well as playing a huge role in improving customer engagement of all kinds [1]. For example, Artificial Intelligence quickly processes massive amounts of data and provides accurate insights into customer needs, thus coming up with marketing strategies for companies more scientifically and efficiently, and most of the companies utilize AI applications for analysing consumer behaviour and predicting the likely consumption of the marketing process [2,3]. Specifically, the upgrade of AI technology has changed the brand marketing environment, with the help of artificial intelligence technology through data mining personalized recommendations, as well as analysis of consumer behaviour, to develop personalized marketing strategies, brand image, and improve the accuracy and efficiency of brand marketing strategy [4,5]. In general, consumers perceive AI and humans to offer relatively similar levels of personalization, but research has shown that AI can have a greater impact on consumers with high needs, leading to more precise personalization [6]. At the same time AI is also a virtual assistant that provides support and product recommendations in real time through user feedback, facilitating a more interactive brand experience that meets the needs and preferences of the consumer, thereby increasing customer satisfaction and loyalty to the brand, and allows for a deeper connection with the customer to drive business growth [7]. At the same time, the application of artificial intelligence has shown some drawbacks. For example, with the continuous progress of artificial intelligence, the demand for highly skilled workers in the field of production is increasing, and the development of artificial intelligence has widened the wage gap between workers, through data surveys as well as research found that artificial intelligence has obviously increased the wages of many workers, but it has also widened the huge gap between the wages of high and low-skilled workers, leading to a widening of the gap between the rich and the poor, and more and more low-income people [8]. AI marketing has enabled the market as a whole to be more efficient, meet individualized needs and make more rational decisions about strategic activities, but AI has limitations as well as potential threats to privacy and data security, and AI lacks empathy and emotional interactions and is a poor substitute for interacting with customers [9,10]. Based on this this paper analyses in detail the smart marketing strategies for African e-commerce platforms to provide feasible suggestions for local precision marketing.

3. Case study

The E-commerce platform Kilimall, occupies a pivotal position in the African market, and its core consumer group is concentrated in the young generation of 20 to 30 years old. Thanks to the high birth rate in Africa, consumer demand continues to be strong, providing a broad market space for the development of Kilimall. Kilimall uses artificial intelligence technology to deeply analyse user behaviour and segment the market to achieve the purpose of precision marketing. In addition, the platform also uses AI algorithms to study the user's purchasing history and browsing habits in detail, providing personalized product and content recommendations. For example, when a user has browsed many times about products in the category of character, such as purchasing foundation lipstick and other items, the platform will accurately recommend related products about the beauty category for the customer based on these data, which improves the probability of the user discovering the desired

product. In addition, Kilimall uses artificial intelligence to optimize the hair strategy of the advertisement, by analysing the huge amount of user data, the platform can accurately locate the target group that the advertisement needs to be placed to, as well as the time and channel of placement, for example, for the users who like to browse and shop at night, the platform will recommend a large number of related products during the night time to increase the exposure rate and click rate of advertisements, thus improving the efficiency of the marketing campaign. This improves the efficiency of the marketing campaign, and at the same time, the use of artificial intelligence to predict the effect of the marketing campaign, to adjust and optimize the marketing campaign in advance to avoid wasting resources.

Kilimall uses artificial intelligence to analyse the user's history of purchasing records, browsing content and consumer preferences to understand the user's interests and needs, to achieve precision marketing. In addition, for users who submit orders but do not pay, different amounts of coupons are issued according to the amount of the order, if the amount of the user's order is relatively large, the platform may provide a coupon for a larger discount to attract users to complete the payment, and for the order amount of a small number of users the platform will put a relatively small of coupons for personalized payment marketing. Kilimall uses artificial intelligence to analyse the data of massive users, subdividing users into different categories. The massive user data analysis, the user will be subdivided into different groups for different groups to develop differentiated marketing strategies, for the pursuit of fashion trends of young user groups platform will focus on recommending the current popular clothing, electronic products and other things, and for the focus on cost-effective user groups platform will push more preferential activities and cost-effective products. In addition, Kilimall through artificial intelligence algorithms based on the user's purchase history and browsing behaviour, to recommend related products to the user, to increase the rate of similar products, as well as according to the user's consumer interest and preferences to push personalized marketing content, to improve the user's click-through rate and the degree of participation to achieve the personalized recommendation of the marketing for the user to bring users a more high-quality and convenient way of shopping.

4. Mechanism analysis

4.1. AI-enabled precision marketing strategy framework

4.1.1 User portrait construction

Kilimall uses AI technology to deeply analyse user behaviour and segment the market for precision marketing. It also uses AI algorithms to provide personalized product and content recommendations based on users' purchase history and browsing habits. Through AI to optimize ad placement strategies and predict the effectiveness of marketing campaigns, Kilimall further enhances the effectiveness of marketing campaigns. For example, AI collects data from call logs and analyses consumer behaviour by call frequency, call duration, and to who the call was made to. High-frequency call users are more susceptible to social influence, socially active with high potential consumption demand, and may be more inclined to high-value consumption, making them suitable targets for precision marketing as a way of developing personalized advances and choosing the best time to market. Design recall strategies for low-frequency calls or social users, such as giving coupons for realistic discounts to stimulate their willingness to spend.

AI also analyses users' peak call times during the day to infer lifestyle habits, e.g., users who are active at night may tend to spend at night. It also analyses the users and specific groups of people through the object of the call, such as the frequency of calls with family members, colleagues and friends to infer the social circle and consumption tendency, and the combination of call length and social activity to infer the economic ability of the user. Artificial intelligence can also lock the user's interactive content, and divide the user into different groups to analyse the consumption characteristics and consumption preferences of each group, for example, through the tourism and

beauty or food to predict the consumption interest, through the collection of the user's sharing behaviour and social activeness to analyse the characteristics of the social behaviour, if the user frequently shares a certain type of product, may have a higher willingness to consume that type of product.

4.1.2 User portrait construction

Enterprises can use AI to predict consumption potential, collect multi-dimensional data from consumers, and then clean the collected data to remove erroneous data for more standardized processing operations, thus providing high-quality data for subsequent analysis and developing dynamic market penetration strategies. Launch preferential activities for price-sensitive groups, and when it is found that the consumption potential of a certain low-income region for a certain type of product is on the rise, quickly adjust the price of the product, promotional activities, and sales channels to enter that market, expand market share, and increase the penetration rate of the product. Ai marketing to help economic growth in Africa, the use of Ai technology to analyse the consumer's purchasing habits and preferences and accurately place advertisements to improve the click-through rate and the conversion rate.

4.2. Core advantages

4.2.1 Reduce the cost of customer acquisition

Enterprises in the low-income market to improve ROI strategy, with the help of AI to analyse consumer purchasing habits, historical data and preferences, enterprises can accurately locate the target customer groups, AI through the analysis of historical data and market trends to predict which ads are more appealing to the target customers, for example, a company that sells electronic products in Africa uses AI to analyse the customer data and then found that the young period of a certain area of body After analysing customer data, an enterprise selling electronic products in Africa found that young people in a certain region often browse the content related to electronic products and are more sensitive to price, and also found that they had purchased some affordable electronic product accessories in the past. Based on these data, the AI judged that this group had a high potential to purchase the newly launched affordable smartphones of the enterprise and identified them as a high-conversion-rate user group. Then optimize and adjust in advance to reduce the cost of advertising testing. Artificial intelligence realizes automated marketing methods, reduces manual operations, improves work efficiency, reduces labour costs, improves the input-output ratio of marketing resources, develops personalized marketing methods through precise positioning, and avoids wasting resources on non-target customers.

4.2.2 Enhance the repurchase rate

First of all, artificial intelligence is used to analyse the data of massive customers, analyse the consumption behaviour preference of potential customers and the frequency of purchase to build an accurate customer portrait, giving enterprises more accurate advice to push, such as pushing marketing content that meets the needs and interests of customers' products, so as to improve the acceptance and responsiveness of the customers to the marketing activities. Artificial intelligence customer service is a kind of AI chatbot, which can quickly respond to customer inquiries and provide solutions to customer problems to improve the customer service experience, and can also predict the problems that customers may encounter and proactively provide solutions, so that customers can feel the intimate service, improve the customer service experience, enhance customer satisfaction and loyalty, and thus increase the rate of repurchase. In addition, AI can also realize customer lifecycle management, using AI algorithms to identify customers in different lifecycles, especially high-value customers to formulate targeted marketing strategies, providing them with better service and exclusive coupons or discounts to motivate them to continue to buy.

5. Conclusion

This paper analyses the marketing methods of the African e-commerce platform and builds a precision marketing model. Specifically embodied in the construction of user profiles, predicting the purchase rate, but also summarized the advantages of intelligent marketing methods, to provide suggestions for the precision marketing of the African market. Most of the African consumers in the African market focus on cost-effectiveness. Consumers above the middle class pay more attention to brand awareness and quality and are willing to pay a reasonable price for high-quality products. Payment methods in Africa are mainly based on cash payment, because the trust in online payment is relatively low, so African consumers are more inclined to use cash payment, especially the low-income group. Africa's lack of infrastructure and insufficient logistics storage limits the development of e-commerce, so it is challenging for enterprises to enter the African market. AI technology's powerful analytical and processing capabilities have improved marketing efforts in Africa. AI automation reduces manual intervention and lowers marketing costs. Consumers in the low-income market are more sensitive to price, when the price changes, low-income consumers will quickly change their consumption behaviour, such as reducing the amount of purchases or go to buy alternatives, AI can adjust the price of the product according to the market demand competitors' prices and other factors through accurate analysis, to achieve dynamic pricing, to improve the competitiveness of the product's market and profit margins, to avoid losing potential consumers due to AI also utilizes multi-dimensional data to predict market trends and help companies discover more market opportunities. However, there are certain risks associated with AI marketing, which may lead to privacy leakage and security issues in the process of data collection, such as data hacking that may lead to leakage of user information and adversely affect consumers, or consumers suffering from harassing phone calls and scams, which not only disturb consumers but also cause enterprises to face a serious crisis of trust. The government needs to establish an online data regulatory framework to protect user data from attacks and raise awareness of user privacy protection, inform the scope of data use and obtain user consent. In addition, AI technology can be abused. Companies need to introduce third-party auditing mechanisms to ensure the fairness and transparency of algorithms. Over-reliance on AI may also lead to the loss of creativity and judgment of marketers, and the marketing content becomes mechanized and lacks a human touch, making it difficult to generate emotional resonance and win the trust and loyalty of consumers in the long term. So, the African market in the use of intelligent means to improve the accuracy of marketing at the same time, but also to avoid over-reliance on AI.

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