

The Relationship of Big Data and Marketing

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Abstract: In today's era of informatization and digitization, big data has become an important force driving social progress and enterprise development. As a bridge between enterprises and consumers, marketing's transformation and innovation also rely on the support of big data. The rise of big data has not only changed the face of traditional marketing, but also brought unprecedented opportunities and challenges to marketing. By delving deeper into and analyzing big data, enterprises can more accurately grasp market trends, gain insights into consumer needs, and thus develop more effective marketing strategies. Therefore, exploring the correlation between big data and marketing is of great significance for enhancing the market competitiveness of enterprises and achieving sustainable development. Based on this, this article explores the correlation between big data and marketing for reference by relevant practitioners.

Keywords: Big data; Marketing; Relevance; Measure

1. Introduction

With the popularity of the Internet and mobile devices, consumers' shopping behavior and consumption habits have undergone tremendous changes. Traditional marketing methods can no longer meet the personalized needs of consumers, and enterprises need more precise and effective marketing strategies to attract and retain customers. The emergence of big data provides a new solution for enterprises. Through the analysis and mining of massive data, enterprises can better understand consumers, predict market trends, optimize products and marketing strategies, and achieve precision and efficiency in marketing^[1].

2. The correlation between big data and marketing

2.1 Big data can help businesses better understand consumers

Through big data analysis, enterprises can collect a large amount of consumer behavior data, such as purchase records, search history, social media behavior, etc., in order to gain a deeper understanding of consumer interests, needs, and preferences. Based on these data, enterprises can accurately infer consumer purchasing motivations and behavior patterns, providing strong support for product positioning, market promotion, and sales strategies. A certain e-commerce platform can provide personalized recommended products based on user behavior data on the platform, thereby improving the user's purchasing experience and sales.

2.2 Big data can help enterprises accurately position themselves in the market

Traditional market research methods often require a lot of time and resources, and the results may have certain errors. Big data analysis can quickly and accurately identify the characteristics and preferences of the target audience based on massive data samples, providing enterprises with precise market positioning and product promotion strategies. The sales situation of a certain product may vary in different regions. Through big data analysis, companies can understand the preferences of consumers in different regions and develop targeted marketing plans.

2.3 Big data helps enterprises achieve refined management

By analyzing massive customer data, enterprises can understand their consumption preferences, purchase cycles, complaint stability, loyalty, and other information, thereby providing personalized products and services, improving customer satisfaction and loyalty. A certain mobile phone brand can use big data analysis to understand the purchasing history, usage, and preferences of different customers, and provide

personalized recommendations, pricing, and after-sales service to enhance the customer's purchasing experience and loyalty.

3. Challenges faced by marketing in the context of big data

With the widespread application of big data, the collection, storage, and analysis of personal data have become the norm, but this has also raised concerns among consumers about privacy breaches. The sources of big data are diverse, including various online and offline channels. How to effectively obtain, integrate, and analyze this data has become a challenge. There are differences in format, standards, and quality among data from different sources, which also increases the difficulty of data integration. In big data, it is difficult to ensure the authenticity and accuracy of information, and there is a large amount of noise and errors. The application of big data technology also requires professional skills and talent support. Currently, talent with relevant skills is relatively scarce in the market, which has become a challenge. With the continuous development of big data technology, new marketing methods and methods are constantly emerging. Enterprises need to constantly innovate to adapt to market changes, and innovation also means risks and uncertainties. Enterprises need to carefully evaluate and invest resources to try^[2].

4. The application measures of big data in the field of marketing

Systematize and integrate data from different channels, including online and offline data, consumer behavior data, market research data, etc. Data collection is the first step of big data marketing, including collecting data from various channels and integrating it into the central database. Enterprises can collect data through various methods, such as online survey, customer satisfaction survey, transaction data, social media activities, web analytics and so on. Through effective data collection, enterprises can obtain a lot of information about consumer behavior, preferences and needs. In the process of data collection, enterprises need to pay attention to the quality and accuracy of data. Ensure the transparency of data collection process, abide by relevant laws and regulations, protect consumers' privacy and avoid violating relevant regulations. Data integration is the process of integrating data from different channels into a central database, which can be a data warehouse or a data lake for storing and managing all collected data.

4.1 Consumer segmentation and personalized recommendations

By analyzing big data, consumers are divided into different sub-markets and personalized marketing strategies are formulated for each sub-market. This can be achieved by analyzing consumers' purchasing history, interests, social media activities and other data. Consumer segmentation is the process of dividing consumers into different groups or market segments, so that businesses can better understand their needs and behaviors and formulate corresponding marketing strategies. Through big data analysis, companies can group and identify different market segments according to consumer attributes, behaviors and interaction data. In order to achieve consumer segmentation, companies can use machine learning and artificial intelligence technology to automatically identify consumer characteristics and classify them according to these characteristics. Enterprises can also use data visualization tools to present the results of market segments for better understanding and application^[3].

4.2 Market trend analysis and prediction

By collecting and analyzing various relevant data, such as sales data, market research data, consumer behavior data, etc., enterprises can observe and analyze the development dynamics of the market. By analyzing sales data, enterprises can understand the sales trends of products or services, identify which products or services are popular and which are not. Through market research data, companies can understand consumer preferences, interests, and changes in demand, as well as the actions of competitors. Through consumer behavior data, companies can understand the process and path of consumer purchasing decisions, thereby better understanding market trends. By utilizing big data analysis models and algorithms, enterprises can predict future market conditions based on historical data and trends. Enterprises can use time series prediction models to predict sales data and predict future sales trends. Through social media analysis and public opinion monitoring, companies can understand the voices and emotions of consumers, thereby predicting market demand and trends. These prediction results can help enterprises make timely adjustments and optimizations to cope with market changes.

4.3 Social media analysis and word-of-mouth management

By analyzing topics and user comments on social media, companies can understand consumer opinions and evaluations of their products and brands, help improve their products or services, respond to consumer feedback in a timely manner, and maintain good word-of-mouth. Social media analysis refers to the collection and analysis of topics, discussions, and user comments on social media. Enterprises can monitor and analyze data on social media platforms such as Twitter, Facebook, Weibo, etc. to understand consumer opinions and evaluations of their products and brands. Through social media analysis, companies can understand consumer opinions and feedback, including evaluations of product quality, service attitude, after-sales support, and other aspects. Enterprises can improve their products and services in a timely manner based on these feedbacks, meeting the needs and expectations of consumers. Social media analysis can also help companies identify potential

problems and complaints, take timely measures to solve them, and avoid the spread of negative word-of-mouth. Through effective social media analysis and word-of-mouth management, companies can enhance their brand reputation, not only promoting loyalty and repurchase from existing customers, but also attracting new customers. Enterprises can use big data analysis tools and technologies to monitor and analyze data on social media, respond and interact with consumers in a timely manner, and improve customer satisfaction and reputation^[4].

5. Conclusion

In summary, the correlation between big data and marketing is becoming increasingly close, and big data has become an indispensable and important resource for enterprise marketing. By making reasonable use of big data, enterprises can more accurately locate target markets, formulate marketing strategies, and improve marketing effectiveness and market competitiveness. The application of big data also faces challenges in various aspects such as data security, privacy protection, and technological updates. While enjoying the benefits brought by big data, enterprises should also actively respond to these challenges and continuously improve and optimize their big data marketing system. With the continuous progress of technology and the expansion of application scenarios, the integration of big data and marketing will become more profound, bringing more opportunities and value to enterprises.

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