APPLICATION OF BIG DATA ANALYSIS IN INNER MONGOLIA HOTEL INDUSTRY

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Data is a collection of data that represents a large scale, covering diversity, high speed, complexity, authenticity and high value. With the rapid development of the Internet and information technology, big data has become an important topic that has attracted much attention in various industries, and it continues to show us the infinite value it contains. With the rapid development of the Internet and the continuous advancement of information technology, the era of big data has quietly arrived. In this era, data is considered a valuable "new oil", and its applications have penetrated into various fields, including medical care, finance, manufacturing, tourism, and hotels. In the tourism and hotel fields, big data technology is increasingly used. Based on this, this paper analyzes the application of big data technology in Inner Mongolia hotels.

Keywords: Big data technology; Inner Mongolia hotel; application.

ПРИМЕНЕНИЕ АНАЛИЗА БОЛЬШИХ ДАННЫХ В ГОСТИНИЧНОМ БИЗНЕСЕ ВНУТРЕННЕЙ МОНГОЛИИ

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С быстрым развитием Интернета и постоянным развитием информационных технологий незаметно наступила эра больших данных. В эту эпоху данные считаются ценной «новой нефтью», и их применение проникло в различные области, включая здравоохранение, финансы, производство, туризм и гостиничный бизнес. В сфере туризма и гостиничного бизнеса все чаще используются технологии больших данных. На основании этого в данной статье анализируется применение технологий больших данных в отелях Внутренней Монголии.

Ключевые слова: Технология больших данных; отели Внутренней Монголии; Китай; туризм.

Big data refers to large-scale data collections covering diversity, high speed, complexity, authenticity and high value. With the rapid development of the Internet and information technology, big data has become an important topic that has attracted much attention in various industries, and it continues to show us the infinite value it contains. With the rapid development of the Internet and the continuous advancement of information technology, the era of big data has quietly arrived. In this era, data is considered a valuable “new oil”, and its applications have penetrated into various fields, including medical care, finance, manufacturing, tourism, and hotels. In the tourism and hotel fields, big data technology is increasingly used. Through big data mining and analysis, tourism companies can more accurately conduct market forecasts, customer demand analysis, customized products and services, improve customer satisfaction, and enhance the company's competitiveness [1, p. 13]. Hotel companies can also use big data to analyze customer behavior, preferences, needs and feedback to develop more targeted strategies to improve customer experience and loyalty, thereby promoting business development. The application of big data technology has been widely used in the tourism and hotel industry, which can help the industry discover new opportunities and optimize business operation processes.

The tourism industry is an industry full of uncertainties. The application of big data can provide more accurate and comprehensive market forecasts and help tourism companies formulate corresponding marketing strategies. For example, based on big data analysis, we can predict future peak seasons and customer preferences, as well as individual needs in specific markets or fields, thereby helping companies optimize product strategies and marketing plans. Digital tourism platforms have become an indispensable part of the tourism industry. With the application of big data, platforms can better process massive amounts of data, better track and grasp user experience and feedback, and help tourism companies provide better quality products. product and service [2, p. 25–27]. For example, using big data technology, travel platforms can better analyze massive review data to predict consumer demand for products and discover better service opportunities.

The Inner Mongolia hotel market is a large and complex market with many influencing factors, such as macroeconomic environment, policies and regulations, seasonal changes, etc. Therefore, the prediction of Inner Mongolia's hotel market has always been the focus of researchers and tourism companies. With the continuous development and application of big data technology, big data analysis plays an increasingly important role in Inner Mongolia hotel market forecast. The prediction of Inner Mongolia hotel market by big data analysis is mainly realized through the following aspects:

1. Data collection and organization. Forecasting the hotel market in Inner Mongolia requires a large amount of data as a basis. These data include macroeconomic data, tourism industry data, demographic data, etc. At the same time, this data can be obtained through various channels, such as government agencies, tourism companies, and news media. By collecting and organizing these data, a relatively complete market data framework can be established to provide a basis for subsequent data analysis.

2. Data cleaning and preprocessing. After data collection, data cleaning and preprocessing are required to ensure data quality and reliability. Data cleaning includes removing duplicate data, filling in missing values, outlier processing, etc., while preprocessing includes data transformation, feature selection, etc. The purpose of these works is to improve the reliability and representativeness of the data and provide a good foundation for subsequent feature extraction and model building [3, p. 60–62].

3. Feature extraction and model establishment. After data cleaning and preprocessing, feature extraction and model building need to be performed on the data. Feature extraction refers to converting raw data into features with predictive significance, such as seasonal factors, week factors, sunrise and sunset times, etc. Model establishment refers to selecting an appropriate model and associating features with target variables to achieve prediction of the Inner Mongolia hotel market. Common models include regression models, neural network models, decision tree models, etc.

4. Model evaluation and optimization. After the model is established, it needs to be evaluated and optimized to ensure its predictive capabilities and reliability. Model evaluation includes model precision, recall, etc. Model optimization refers to improving the predictive ability and reliability of the model by adjusting model parameters, increasing the amount of data, and improving data quality. Big data analysis plays an important role in predicting the Inner Mongolia hotel market. It can effectively predict the future development trend of the Inner Mongolia hotel market and provide an important reference for tourism companies to formulate marketing strategies. At the same time, big data analysis has also greatly promoted the development of the tourism industry and provided tourists with a more colorful travel experience [4, p. 31].

The application of big data analysis in hotel marketing in Inner Mongolia has become more and more common. By analyzing massive amounts of data, Inner Mongolia hotel marketing strategies can more accurately locate target customers, improve marketing effectiveness, and increase market share. The following are some applications of big data analysis in hotel marketing in Inner Mongolia [5, p. 80]:

1. Customer group analysis. Using big data analysis, hotels can classify and identify customer groups, better understand customer needs and preferences, and formulate more precise marketing strategies. For example, hotels can identify high-value customers, potential customers and general customers by analyzing customers' historical orders, search records, comments and other information, and develop different marketing strategies for different customer groups.

2. Competitor analysis. With the help of big data analysis, hotels can understand competitors' marketing strategies, prices, promotions and other information, so as to formulate more effective market competition strategies. For example, hotels can analyze competitors' websites, advertisements, social media and other information to understand competitors' pricing strategies, promotion strategies, etc., and formulate more powerful market competition strategies [6, p. 43–45].

3. Market trend analysis. Through big data analysis, hotels can understand changes in market trends and customer needs, adjust marketing strategies in a timely manner, and improve market competitiveness. For example, hotels can analyze market data and user behavior data to understand the latest travel trends and customer needs, so as to launch products and services that are more in line with customer needs [7, p. 23].

4. Booking behavior analysis. Using big data analytics, hotels can understand customers' booking behavior and preferences to better understand customer needs and improve customer satisfaction and loyalty. For example, hotels can understand customers' preferences and needs by analyzing customers' booking history, search records, comments and other information, so as to provide customers with more personalized services and recommendations [8, p. 12–13]. The application of big data analysis in hotel marketing in Inner Mongolia has become more and more common. By analyzing massive amounts of data, Inner Mongolia hotel marketing strategies can more accurately locate target customers, improve marketing effectiveness, and increase market share.

With the continuous development of big data technology, Inner Mongolia hotels will have a deeper understanding of customer needs and preferences, allowing them to provide more personalized services. With the continuous increase of online booking, social media and other channels, the Inner Mongolia hotel market needs to integrate data from multiple channels to achieve omni-channel data integration and analysis [9, p. 15]. This will help companies understand the market and customer needs more comprehensively and develop more effective market strategies and marketing activities. With the continuous development of artificial intelligence technology, the tourism and hotel

industries will more extensively apply artificial intelligence technology, such as natural language processing, image recognition, machine learning, etc., to analyze and apply big data to achieve more intelligent services and manage. Artificial intelligence technology will be widely used. As data privacy and security issues continue to become more prominent, Inner Mongolia hotels will pay more attention to data security and compliance issues, adopt more effective measures and technologies to protect customer privacy and data security, and comply with relevant laws, regulations and industry standards, data Security and compliance will be the focus.

Библиографический список

1.*Цзян, Х.* Исследования по применению технологий больших данных в управлении отелями / Х. Цзян // Модернизация торговых центров. – 2022. – № 2. – С. 13. (in Chinese)

2.*Ву, М.* Применение технологий больших данных в электронной коммерции / М. Ву // Economic Research Tribune. – 2023. – № 2. – С. 25–27. (in Chinese)

3.*Би, Дж.* Влияние технологий больших данных на внешнюю торговлю и стратегии реагирования / Дж. Би // Национальная экономика обращения. – 2023. – №1. – С. 60–64. (in Chinese)

4.*Лян, Дж.* Анализ влияния технологий больших данных на международную экономику и торговлю / Дж. Лян // Индустрия маркетинга. – 2023. – № 8. – С. 31. (in Chinese)

5.*Хан, Б.* Краткий анализ важной роли технологий больших данных в возможностях управления рисками и контроля инклюзивных интернет-финансов / Б. Хай // Financial Circle. – 2023. – №1. – С. 80. (in Chinese)

6.*Чжу, Ю.* Применение технологий больших данных в электронной коммерции / Ю. Чжу // Компьютерные знания и технологии. – 2021. – №3. – С. 43–45. (in Chinese)

7.*Вэй, В.* Краткий анализ исследований и применения технологий больших данных в электронной коммерции / В. Вэй // Электронный мир. – 2017. – №2. – С. 23. (in Chinese)

8.*Лю, З.* Краткий анализ возможностей и проблем технологий больших данных в развитии мобильной электронной коммерции в провинции Ляонин / З. Лю // Современная экономическая информация. – 2018. – № 5. – С. 12–13. (in Chinese)

9.*Чен, Ф.* Исследование точной рекламы на основе технологий больших данных / З. Лю // Навыки и обслуживание компьютерного программирования. – 2019. – №1. – С. 15. (in Chinese)