

Analysing Market Trends with AI

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ABSTRACT

Businesses now operate differently due to disruptive technologies such as the Internet of Things, big data analytics, blockchain, and artificial intelligence. The latest disruptive technology is artificial intelligence (AI), which has the greatest potential to change marketing. International practitioners are trying to identify the best AI solutions for their marketing function. However, a thorough review of the literature can demonstrate the value of artificial intelligence (AI) in marketing and suggest future areas of research.

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Introduction

Concept & Importance of Market Trend Analysis

In the long term, artificial intelligence (AI) will become an important part of every business organization in the world. Significant changes in the AI landscape are reflected in the latest AI-driven automation trends. AI is a branch of computer science that trains computers to understand and imitate human behaviour and communication. By providing data AI has created a new intelligent machine which is capable of thinking, reacting and completing tasks in the same way as humans do. Artificial intelligence (AI) is capable of performing highly specialized and technical tasks such as robotics, audio and visual recognition, natural language processing, problem solving, and more. Facial recognition can be used to identify people for security purposes, while object detection can be used to separate and analyze photos. Artificial intelligence (AI) is evolving, evolving and disrupting industries at a breakneck pace. AI analytics can help businesses identify trends, patterns, and outliers that may suggest potential opportunities or risks by quickly and accurately evaluating vast amounts of data. Furthermore, it can help companies automate decision-making procedures, helping to save time and money when making difficult decisions.

Analysing Market Trends with AI

A crucial step in market research is market segmentation, which AI algorithms can automate. AI-powered segmentation techniques can identify unique consumer groups by assessing a variety of customer qualities and behaviours, enabling targeted marketing strategies. A company's present content strategy can be complemented with AI, which is an intriguing and cutting-edge technology. This technology is a broad phrase that covers a variety of technologies, including computer vision, deep learning, natural language processing, and machine learning. Because of its capacity to analyse data and offer analytical tools, machine learning has a huge impact on the digital marketing environment. Thus, it helps marketing teams carry out needs-based evaluations. By concentrating on other facets of digital marketing, businesses that employ AI tools save time. As a result, it is recommended

that AI be used in digital marketing to stimulate innovation and boost productivity in the next years.

Traditional methods vs AI-driven approaches

Traditional analytics is static. AI analytics is dynamic. Traditional data analysis focuses on dashboards made up of visualizations. These dashboards are predefined and based on typical business queries. Responding to a new topic requires time and technical skills, often several days (or weeks), as well as the support of a data analyst or scientist. In contrast, AI analytics allows users to dynamically query and combine information to solve business problems without the need for expert assistance. Natural language processing allows users to ask questions in natural language in an AI system that provides a conversational interface.

Traditional analytics is Driven by Hypotheses. AI Analytics is Driven by Data

Dashboards, as noted earlier, are often predefined based on general requirements or business-specific views. These dashboards are fundamentally biased because they predetermine what is most necessary and only display facts related to previously identified opinions. These theories will be influenced by the individual's experiences as well as their limitations in time and energy. In contrast, AI evaluates all the data and provides objective answers based on extensive testing. By allowing data to drive analysis, AI does not ignore the important information hidden beneath surface measurements. Of course, biased data can lead to misleading answers. Therefore, companies must ensure that their data is as complete and objective as possible to effectively leverage AI technologies.

Literature Review

AI Techniques for Market Trend Analysis

Machine learning methods will become more important in solving important marketing problems. Machine learning methods must be tightly integrated with the remaining four components of the unified framework. First, these methods are well suited to extracting

insights from large amounts of data. Although text and image data have been widely studied, we encourage researchers to consider audio, video, and consumer tracking data as well as network data and data in hybrid formats. Second, the application of machine learning methods in marketing research needs to be expanded and extended. Prediction, feature extraction, descriptive explanation, causal explanation, prescriptive analysis, and optimization are all applications with different needs for transparency of methods and theoretical connections, creating various obstacles.

Third, important questions need to be addressed methodologically. We believe in the use of machine learning methods to help map the entire customer buying journey, especially in the early stages, as well as develop decision support capabilities that include all aspects of the marketing function and perform an overall analysis of market structure, including branding, location, and competitive analysis. Fourth, we argue for the convergence of machine learning techniques with marketing theories. However, due to the nature of machine learning methods, finding such correlations remains difficult. We activate the integration of human knowledge and domain knowledge in the use of machine learning methods, balancing theory-based and data-driven perspectives, investigating the Potential theoretical connections between different types and aspects of machine learning methods and studying the theoretical implications for business. 'adoption by AI. Market research can enhance data collection, analytical capabilities and gain actionable insights using algorithms and AI approaches.

Specific Utilities of Artificial Intelligence in Various Marketing Segments

Figure 1 illustrates the different key marketing segments of AI efforts. Pricing, strategy and planning, product, promotion, and placement management are all essential in marketing scenarios involving AI-based systems. Other concerns, such as targeting and positioning, scenarios and mental models related to product design, and end-customer desires, have been identified as essential elements of the AI application.



Figure 1: Several Segments for AI applications in Marketing Domain

Present Real-World Examples of Businesses Using AI for Trend Analysis

Alibaba is the world's largest e-commerce marketplace, selling more than Amazon and eBay combined. Artificial intelligence (AI) is used to predict what customers want to buy in Alibaba's daily operations. The company uses natural language processing to automatically generate product descriptions for the website. Alibaba is also using artificial intelligence in the City Brain project to build smart cities. By tracking every vehicle in the city, the project uses AI algorithms to help reduce traffic congestion.

Methodology

Data Collection and Preparation

Machine learning plays a crucial role in streamlining data collection and analysis processes in market research. Researchers can automate the collection of consumer data from multiple sources, including social media, online surveys, and customer reviews using an AI-powered system. Sentiment analysis, topic modeling, and social listening enabled by natural language processing (NLP) tools, allowing researchers to draw important conclusions from unstructured data. Additionally, surveys are conducted using AI-powered chatbots, providing real-time feedback and increasing data accuracy.

Data Collection Methods

Predictive models can be created by analysing past data and detecting patterns using machine learning techniques. These models can then be used to predict sales, customer preferences, and market demand. For example, Netflix uses AI algorithms to predict user preferences and provide personalized recommendations, which has a huge impact on content creation and financial performance.

Automated Market Segmentation

A crucial step in market research is market segmentation, which AI algorithms can automate. AI-powered segmentation techniques can identify unique consumer groups by assessing a variety of customer qualities and behaviours, enabling tailored marketing campaigns [1-8].



Figure 2: www. precendenceresearch.com

Conclusion

As a result of technology, large data, and competitiveness, autonomous AI agents powered by machine learning techniques will proliferate in every area of business and marketing during the ensuing decades. In order to address new substantive concerns in the area, increase understanding of businesses and customers, and develop scalable and automated decision support capabilities that will be crucial for business, it is critical for academic research to make use of the rich digital information available.

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