ARTIFICIAL INTELLIGENCE IN MARKETING AS A NEW CONCEPT AND BUSINESS OPPORTUNITY FOR INCREASING THE EFFICIENCY OF COMPANIES

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Abstract
The research paper examines the possibility of using artificial intelligence in the marketing activities of a company. Artificial intelligence in marketing is presented as a new concept and business opportunity to improve the efficiency of companies. Artificial intelligence can analyze user data to determine the profile of the target audience, identify customer preferences and study consumer behavior. The obtained data will help marketing specialists to offer effective and profitable strategies. The use of artificial intelligence will personalize customer needs and create a high-quality contingent in business. Customer data analysis improves the quality behavioral recommendations and will help to build market trends. The purpose of this study is to create a concept for the use of artificial intelligence in the marketing activities of companies to improve the effectiveness of key performance indicators of companies. Research objectives: to consider the elements of marketing with artificial intelligence, to find out the degree of its influence on the effectiveness of key performance indicators of companies; to develop a concept for the use of artificial intelligence in marketing. The following methods were used in the study: the method of analysis, the method of description and comparison. The scientific article used the following approaches to research and study of the material: scientific, systemic, innovative. As a result of the study, the authors proposed the structure of the concept of using artificial intelligence in marketing to improve the effectiveness of economic, technical, and environmental indicators of companies.

Keywords: Artificial intelligence; efficiency; competitiveness; concept; business opportunity; marketing.

Introduction

Marketing has become a particularly dynamic and rapidly evolving business activity in the past few years. The emergence of new challenges such as the Covid-19 pandemic, economic downturns, technological innovations, and international conflicts have had a significant impact on the marketing activities of companies [1]. Nowadays, artificial intelligence (hereinafter referred to as AI) in marketing is gaining importance due to the increase in computer performance, the decrease in computing costs, the availability of big data, and the
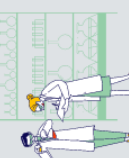
development of machine learning algorithms and models.[1] Also, with its incredible potential to analyze data to extract meaningful insights, AI helps organizations make more effective business decisions [2].

The aim of this study is to create a concept for the application of AI in the marketing activities of companies to improve the efficiency of companies.

Research objectives: to consider the elements of AI marketing, to determine the degree of influence of AI on the efficiency of companies, to develop a concept for the use of AI in marketing.

The object of the study is commercial enterprises, and the subject is the features of the influence of AI on the efficiency of enterprises.

The research problem raised in this article is to improve the efficiency of enterprises by implementing AI in marketing activities. To stay one step ahead of competitors, marketers should consider AI as a tool that will help in customer segmentation, achieve a higher level of consumer engagement.

All of the above features, as well as many other elements, have already become an important part of modern marketing.[2]

Methods and Materials

The following methods were used in the scientific research: the method of analysis, the method of description and comparison. Based on scientific research literature and expert articles, a definition of AI was given and its application in marketing was summarized. The concept of using AI in marketing was broken down into individual elements, each of which was explained. Also, by studying the materials of the Forbes company and statistics from Exploding Topics, the results of using AI in marketing were presented, the benefits of using AI and the impact of AI marketing on customers were studied. A relationship was established between AI marketing and traditional marketing.

These methods allowed us to consider a new approach based on the ability of artificial intelligence to improve and develop the marketing activities of companies.

Research Results

Researchers Ming-Hui Huang and Ronald Rust define AI as mechanisms that replicate human intelligence in computational and digital form, designed to imitate or surpass human capabilities, such as performing mechanical or mental tasks [3]. Based on the results of many scientific studies, it can be concluded that AI is different from other technologies in that it is able to learn from data and adapt autonomously over time [4]. This is what distinguishes AI

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[1]The state of AI in 2022 — and a half decade in review. URL:https://www.mckinsey.com/capabilities/quantumblack/our-   insights/the-state-of-ai-in-2022-and-a-half-decade-in-review (date accessed 21.02.2023).

[2]How to leverage AI in marketing: three ways to improve consumer experience. URL:https://www2.deloitte.com/si/en/p ages/strategy-operations/articles/AI-in-marketing.html (date accessed 21.02.2023).
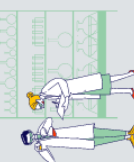
from earlier manufacturing or information technologies: AI can not only process information for human use, but also learn from data and update results without additional programming or human intervention [5]. Thus, AI marketing is a strategy for using AI to conduct marketing activities that help achieve business goals more effectively. Based on this definition, it can be concluded that AI marketing involves using technology to collect and analyze data to gain insights and forecasts, as well as make automated decisions about marketing initiatives and their implementation [6]. The main elements of AI marketing are presented in Table 1.

Artificial intelligence combines data science and computer science to make problem solving easier, while using machine learning and deep learning algorithms to create expert systems that predict or classify information based on input data.[3]

AI marketing and traditional marketing have some similarities in their goals and objectives, but they also exhibit clear differences.

Table 1

Key Elements of AI Marketing

No.	Element	Explanations
1	Machine learning	A branch of AI that focuses on using data and algorithms to simulate method of human learning, gradually increasing its accuracy [7]. It is also worth noting the automation of business processes [8].
2	Deep learning	A branch of machine learning that uses algorithms based on structure and the functioning of the human brain, called artificial neural networks.[4]
3	Big data analytics	The process of studying big data (massive, complex data sets that are constantly growing) to uncover information, such as hidden patterns, correlations, and market trends, that can help companies make decisions thoughtful and relevant business decisions [9; 10].
4	AI platforms	They provide the operation of software products that are capable of analyzing input data and interpreting the results obtained, and also assist in decision making [11].

Compiled by the authors

Similarities include a focus on customer acquisition and retention, and a desire to communicate with consumers. Both also focus on creating effective and personalized content campaigns, relying on data and insights to inform and optimize decision-making. It is worth noting that both use technology to reach the target audience.

The differences include that AI marketing uses machine learning algorithms to interpret large amounts of data and does so much faster than humans, while traditional marketing relies heavily on human analysis. AI marketing is better suited to personalization at scale through the use of data-driven segmentation, personalized recommendations, and automated customer

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[3]What is artificial intelligence? URL:https://www.ibm.com/topics/artificial-intelligence (date accessed 21.02.2023).

[4]What is deep learning? URL:https://www.ibm.com/topics/deep-learning (date accessed 25.02.2023).

service. Traditional marketing often relies on manual audience segmentation based on demographics, product/service preferences, and targeting with classic campaign methods such as TV ads, email marketing, and the like. AI marketing can also deliver results in real time by tracking customer behavior as it changes and using that to adapt strategies almost instantly, while traditional marketing takes much longer to produce and adjust results. It's worth noting that in AI marketing, automation of tasks such as A/B testing, campaign optimization, and consumer behavior analysis reduces the need for human intervention. Traditional marketing often requires more intensive manual labor or teams of people to analyze data, develop, and launch campaigns.

In conclusion, AI marketing and traditional marketing have a lot in common, as they share a common goal of attracting and retaining customers. However, AI marketing relies heavily on machine learning and automation, while traditional marketing relies on human expertise and a personalized approach.

Forbes has published statistics on the benefits of using AI in marketing (Fig. 1)
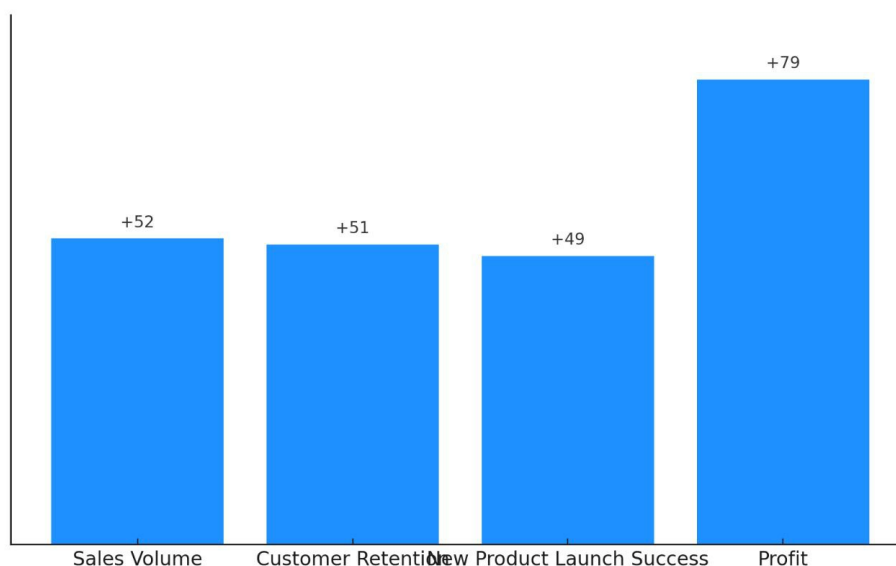

Figure 1. Benefits of Using AI in Marketing, %[5]

Research results collected by Forbes:

- sales volume increased by 52%;
- customer retention increased by 51%;
- New product launch success increased by 49%;
- Profits increased by 79%.

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[5] 10 Charts That Will Change Your Perspective Of AI In Marketing [Electronic resource]. — URL:https://www.forbes.com/sites/louiscolumbus/2019/07/07/10-charts-that-will-change-your-perspective-of-ai-in- marketing/?sh=8ded4792d037.

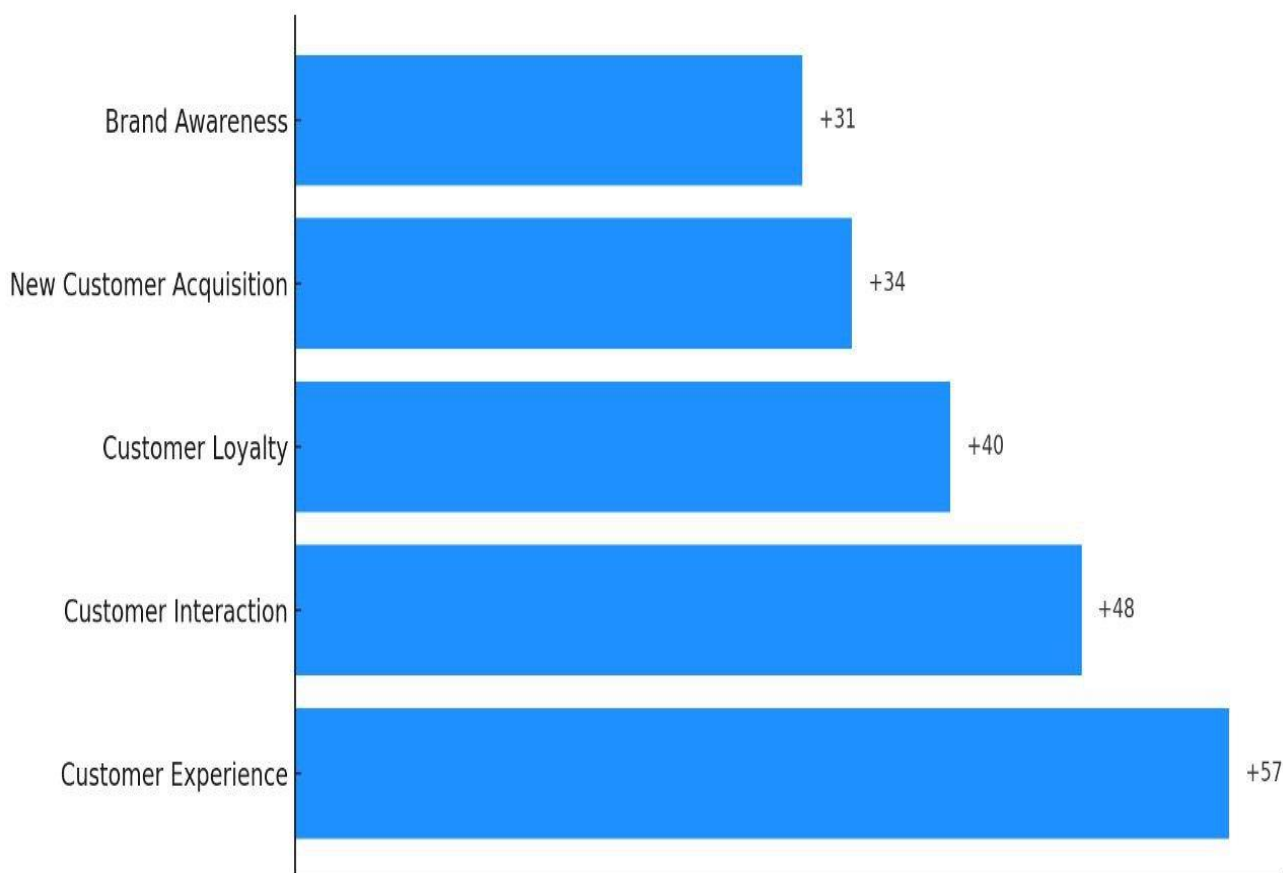Exploding Topics has published data on the impact of AI marketing on customers and brands (Figure 2).

Figure 2. Impact of AI Marketing on Customers, Brand, %[6]

Let's present an analysis of the research results from Exploding Topics:
- customer experience increased by 57%;
- customer interactions improved by 48%;
- customer loyalty increased by 40%;
- the efficiency of attracting new clients increased by 34%;
- Brand awareness increased by 31%.

The authors developed a concept for the use of AI in marketing (Fig. 3).

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[6] 57+ Amazing Artificial Intelligence Statistics (2023). URL:https://explodingtopics.com/blog/ai-statistics (date accessed 21.02.2023).
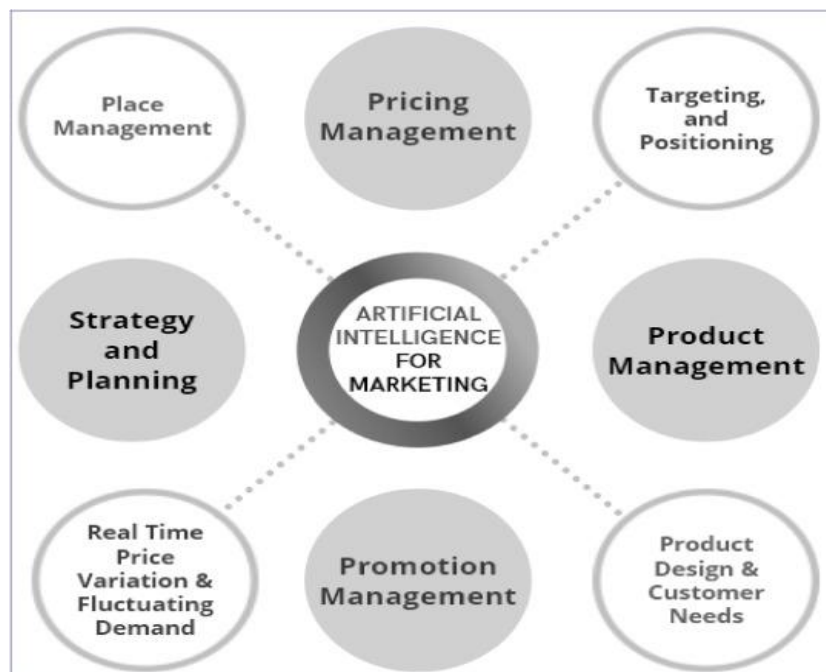
Figure 3. The concept of using AI in marketing (compiled by the authors)

Let's introduce the first block of the concept, which describes the elements of AI. Machine and deep learning include the following range of functions: data mining to study ever-growing volumes of databases, which allows for more effective marketing campaigns and marketing strategies. Pattern recognition to understand how elements (actions, events, objects, and information) can form new patterns that represent an opportunity for innovation or a threat to disrupt business operations or strategies. Also learning from big data, which can help in updating existing products/services and creating new ones.

Big data analytics can effectively automate the analysis of large volumes of structured and unstructured data, especially as the volume and velocity of data continues to grow. By analyzing large amounts of customer data, businesses can gain insights into consumer behavior and preferences, which can be used to develop more effective marketing campaigns and personalized content.

The effectiveness of AI-based marketing activities largely depends on choosing the right AI platform. These platforms can help you get valuable data for decision-making, ensure the correct operation of software products, and so on.

The second block describes the application of AI technologies. At the marketing research stage, AI is used to evaluate and analyze the market, collect necessary data, and better understand customers. For example, AI-based predictive analytics models are used to forecast future trends in consumer behavior by analyzing historical data on purchasing habits, demographics, and other factors. This data helps marketers make effective decisions when developing product development and advertising strategies.

At the marketing strategy stage, AI is used to make decisions on segmentation, targeting and positioning. Also to interact with the target audience, discover new patterns of customer preferences in unstructured data, recommend the best segment for the target audience. During the marketing activities phase, AI is used to gain the benefits of standardization and personalization. For example, payment and delivery are functions that can benefit from standardization through automatic payment and delivery tracking. Digital marketing can benefit from personalization, such as various recommendation systems, etc.

Conclusion

Thus, by using artificial intelligence, marketers gain a deeper understanding of the target audience, can improve the quality of service and customer loyalty, and improve the decision-making process. Thus, the introduction of artificial intelligence in marketing activities allows companies to achieve a high level of competitiveness, improve financial results, and increase the effectiveness of economic, technical and environmental indicators in a constantly changing market.

The authors of this scientific article present the following points of scientific novelty:

1. The concept of using AI in marketing is visualized.
2. Elements of the AI marketing concept are presented.
3. The concept of using AI in marketing has been developed and generalized.

The authors associate the prospects of their research with studying the experience of introducing artificial intelligence into the activities of large enterprises in the military-industrial complex.

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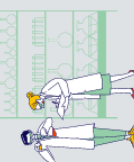
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