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НАЦІОНАЛЬНА АКАДЕМІЯ НАУК УКРАЇНИ
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PROSPECTS FOR THE DEVELOPMENT OF ARTIFICIAL INTELLIGENCE IN ENHANCING CUSTOMER INFORMATION MANAGEMENT

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Introduction and purpose of the research

Artificial Intelligence (AI) currently defines a new level of innovation in the realm of customer engagement. Its capabilities encompass the analysis of vast datasets, machine learning, and automated technologies, opening a broad spectrum of possibilities to enhance service quality and establish personalized interactions between businesses and customers. Purpose of the Work is leveraging AI for enhanced customer information strategies. The primary objective of this work is to explore and highlight the transformative impact of Artificial Intelligence on customer information strategies. The integration of AI technologies introduces a paradigm shift, offering innovative approaches to personalized interactions between businesses and customers.

The Main Material

AI has emerged as a transformative force across various industries, and its potential applications in customer information management are increasingly evident. As businesses strive to deliver personalized and efficient customer experiences, the integration of AI technologies holds promising prospects for revolutionizing how customer information is handled and utilized. This article explores the evolving landscape of AI in customer information management and the potential benefits it brings to businesses [1-4].

Personalization and Customer Insights. AI enables businesses to analyze vast amounts of customer data to uncover patterns, preferences, and behaviors. By leveraging machine learning algorithms, companies can personalize interactions, offering tailored recommendations and content based on individual customer profiles. This not only enhances customer satisfaction but also contributes to increased engagement and loyalty [1].

Predictive Analytics for Customer Behavior. AI empowers businesses to go beyond historical data and adopt predictive analytics to anticipate customer behavior. By analyzing past interactions, purchase history, and social media activities, AI systems can forecast future preferences and trends. This foresight allows companies to proactively address customer needs, streamline product offerings, and optimize marketing strategies.

Chatbots and Virtual Assistants. The deployment of AI-driven chatbots and virtual assistants has become a common practice in customer service. These intelligent systems offer immediate responses to customer queries, providing round-the-clock support. Through natural language processing (NLP) and machine learning, these bots

continuously improve their ability to understand and respond to customer inquiries, enhancing overall service efficiency [2, 3].

Security and Fraud Prevention. AI plays a crucial role in fortifying customer information security. Advanced algorithms can detect anomalies in user behavior and flag potential security threats. By implementing AI-powered authentication processes, businesses can ensure a secure environment for customer data, safeguarding against unauthorized access and fraud.

AI-driven Automated Customer Relationship Management (CRM) systems facilitate the automation of routine tasks, allowing businesses to focus on strategic initiatives. By automating data entry, lead scoring, and customer segmentation, AI enhances the accuracy and efficiency of CRM processes. This results in better-targeted marketing campaigns, improved sales processes, and more effective customer relationship management. **Sentiment Analysis for Feedback and Reviews.** AI-powered sentiment analysis tools enable businesses to gauge customer sentiments from reviews, social media, and other feedback channels. Understanding customer emotions and opinions provides valuable insights for refining products, services, and communication strategies. Companies can promptly address concerns, capitalize on positive feedback, and adapt their approach to meet evolving customer expectations [3, 4].

Conclusion

Artificial Intelligence is set to revolutionize the landscape of customer information management, offering unprecedented opportunities for businesses to enhance personalization, streamline operations, and improve overall customer satisfaction. As technology continues to advance, the integration of AI in customer-centric processes will likely become a cornerstone for companies seeking to stay competitive in today's dynamic business environment. Embracing these prospects wisely can lead to more meaningful and lasting connections between businesses and their customers. The overall perspective on the development of artificial intelligence for customer information revolves around creating more efficient, personalized, and adaptive systems. These systems respond to changes in customer perceptions and needs, ensuring a high level of satisfaction with products or services.

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