



Research Paper

The Impact of Artificial Intelligence Marketing on E-Commerce Sales

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ABSTRACT

AI in E-commerce refers to the integration of artificial intelligence technologies and techniques in the field of online commerce. This includes the use of machine learning algorithms, natural language processing, and computer vision to enhance various aspects of the e-commerce experience. AI in E-commerce aims to improve customer engagement, personalization, recommendation systems, fraud detection, inventory management, and supply chain optimization.

Artificial Intelligence (AI) in E-Commerce industry is being used by online retailers for giving visit bot administrations, examining client remarks, and for offering customized types of assistance to online customers. Truth be told, a 2019 Unbiased investigation found that 1 in each 5 customers are eager to buy products or administrations from a visit bot, while 40% of the online customers are searching for incredible offers and shopping bargains from talk bots. While the worldwide E-trade deals are projected to contact \$4.8 billion continuously 2021, Gartner predicts that around 80% of all client communications will be overseen by AI advances (with no human specialist) constantly 2020. Anyway, how has Artificial Intelligence in E-trade changing or changing the shopping experience in 2019? Through this part, we will feature a portion of the significant uses of Artificial Intelligence in E-commerce alongside a portion of the genuine business models.

Keywords: Artificial Intelligence, E-Commerce, Online Retailers, Modern Communication

I. INTRODUCTION

Artificial Intelligence (AI) has rapidly become a driving force in shaping the world of eCommerce. This transformative technology is redefining the way businesses operate, engage with customers, and manage their operations. In this in-depth analysis, we will explore the multifaceted impacts of AI in the realm of eCommerce, from the perspectives of both eCommerce businesses and brand owners. By delving into specific examples, case studies, and expert opinions, we will provide a comprehensive overview of how AI is revolutionizing the industry and highlight the latest developments in this ever-evolving landscape. Artificial intelligence is disrupting everything around us, and that's not necessarily bad. In fact, in 2022, 35% of companies worldwide adopted Artificial Intelligence (AI) at different levels of their business. The use of AI in eCommerce is, in particular, expanding. This article will explain how online store retailers and managers use AI in eCommerce and explore how it affects the digital shopping landscape. You'll learn from brands already applying AI and its positive and negative effects. We'll also provide you with tips on how to incorporate it into your eCommerce strategy.

Big data is the major contribution of AI to eCommerce. Its ability to process vast amounts of information fuels wise business decisions encompassing the entire online store operations. Here's how AI is transforming eCommerce as we know it:

1. Virtual Shopping

By analysing the wealth of consumer data on buying behaviour, preferences, and price sensitivity, AI algorithms can suggest relevant products to shoppers. These personalized product recommendations increase the likelihood of a purchase. Additionally, AI-powered virtual shopping assistants can provide buyers with customized offers and a more interactive shopping experience. Automated checkouts, on the other hand, facilitate a faster purchase journey with zero human error, less number of clicks, and simpler checkout forms. This also benefits online store owners as seamless checkouts decrease abandoned cart incidents.

2. Customer Assistance

AI is transforming customer service with automated chatbots that never sleep, and resolve issues instantly. That means human customer service representatives can provide more high-level assistance to buyers with more complicated issues. Meanwhile, customers save time when their concerns are addressed immediately. Employees can focus on other important tasks by reducing time spent on repetitive and basic tasks. Juniper Research forecasts of online transactions via chatbots in 2023.

3. Inventory Management and Pricing Strategy

Inventory management and demand forecasting are two other areas where AI benefits enterprises. It makes supply chains work more efficiently toward meeting accurate expectations. Predictive analytics allow businesses to accurately forecast demand, avoid stockouts, and prevent wastage based not only on past data but also on future events. On the other hand, warehouses can boost productivity through a product recognition AI technology that enables workers to locate items precisely. AI also empowers businesses to be dynamic with pricing strategies, ensuring they are competitive in the market without sacrificing profitability.

4. Marketing Campaigns

AI enables more tailored advertisements to individual customers based on their browsing and purchasing history.

Consequently, businesses can shift from traditional ads that cast a wide net to AI-inspired ones which target individuals most likely to buy. This, in turn, translates to reduced expenses on marketing and advertising efforts.

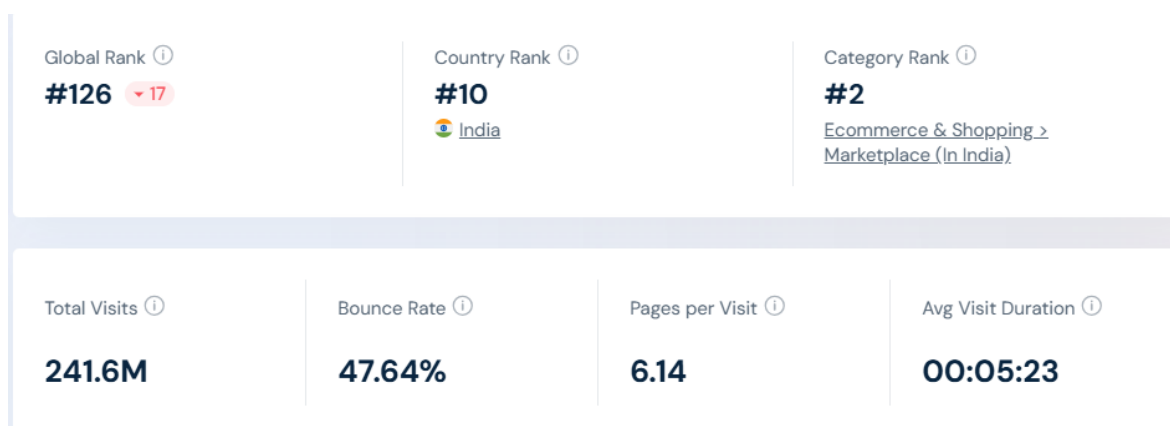
5. Fraud Prevention

Analysing data is one of the strengths of AI, and it is extremely helpful in on e Commerce platforms. Each transaction shows a risk score on AI-based systems to flag out-of-the-ordinary purchasing patterns. Plus, AI technology makes identity recognition more accurate using biometric and document verification.

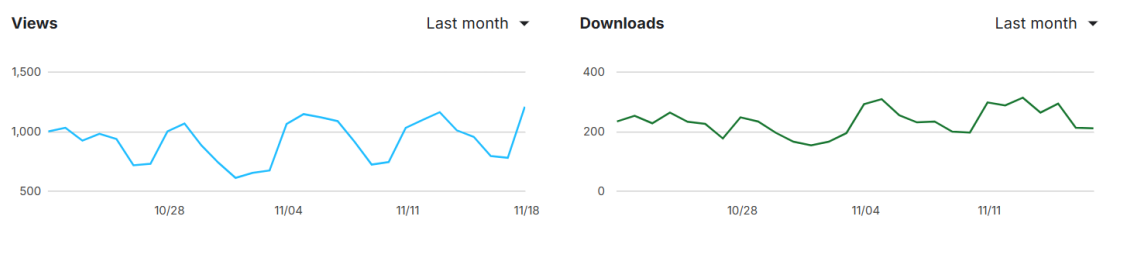
II. DATA ANALYSIS

What Brands Are Using AI in eCommerce?

Online marketplaces like Amazon and eBay leverage AI algorithms in several ways, such as suggesting products to customers on a more personalized level, improving their online shopping experience, and boosting sales. Fashion retailer IKbanet has implemented AI to help customers make confident purchasing decisions by providing accurate sizes that fit them perfectly. SHEPORA a line of beauty products, uses AI to offer customers bespoke skincare guides based on their preferences and skin type. The media-streaming company, Netflix, is known for its AI-driven “shows recommended for you” based on their users’ previous views and preferences. These brands have effectively integrated AI into their eCommerce strategies. They demonstrate **how to use AI in eCommerce** to mine the immense potential and benefits of this technology.



THAT IS THE DATA OF FLIPCART BUSINESS THROUGH E-COMMERCE MARKETING.



The Amazing Ways eBay Is Using Artificial Intelligence To Boost Business Success

our may not have realized it, but, the multinational e-commerce site, has used artificial intelligence (AI) and machine learning technologies for more than a decade specifically to match buyers with the right sellers. But that's not the only way they use AI technology to enhance the buying and selling experience on their site. Devin Wenig, eBay President and CEO "I believe that commerce, in particular, will be the focus of some of the most immediate and exciting applications of AI." If recent developments are any indication, eBay is jockeying to be the industry leader for AI implementations in online e-commerce.

The Amazing Ways eBay Is Using Artificial Intelligence To Boost Business Success

Adobe Stock

20+ Years of Data

With an estimated 179 million active buyers, 1.2 billion live listings and tens of millions of sellers across 190 markets, eBay is where the world goes shopping. The company was founded in 1995 and since then has played an important role in creating "an inclusive and accessible commerce platform." With numerous acquisitions and technology advances over the years, eBay is one of the world's top 10 e-commerce companies and in 2018. The company used two decades of data and customer behaviour insights to train its AI algorithms. These algorithms continue to get smarter every time a buyer and seller interact on the platform.

How eBay Uses Artificial Intelligence and Machine Learning

eBay uses artificial intelligence in personalization, search, insights, discovery and its recommendation systems along with computer vision, translation, natural language processing and more. They take a step to improve the customer experience, build and deploy the right infrastructure for the unique needs of eBay, apply core AI and domain AI science to all that we do, and ensure everything is done in service of the customer experience."

PROMOTED

Here are a few specific examples of how they use artificial intelligence.

Improve the buyer experience: AI-powered tools anticipate the needs of buyers, recommends items and inspires shoppers. With fine-tuned personalization abilities, the site tries to make the shopping experience customized to the needs of every shopper. A part of this was introducing Interests, the ability for shoppers to personalize their shopping experience based on their passions and styles.

Enhance search: eBay uses AI to understand the context of a search and then provide a full spectrum of relevant products. With computer vision, the company was able to add image search to its capabilities and made camera phones e-commerce devices to allow buyers to use images as a search query. As part of the app, artificial intelligence will help shoppers find items similar to the one they were looking at.

Platform as a service: eBay provides the cutting-edge AI-powered tools for sellers so they don't have to and to level the playing field for sellers who would never be able to compete with others who had this technology.

Data, metrics and analytics information is managed on the platform and can be used by the seller. Optimize pricing and selling: Machine learning can help sellers identify the best prices, when they should list a specific product and when to market themselves to better attract buyers.

Machine translation: Languages are no barrier between buyer and seller on eBay thanks to the company's machine translation capabilities. It's so good that the time to process orders for international clients has reduced significantly.

Advertisement engine: Promoted listings on eBay and advertisements off the site are all powered by AI algorithms to improve the purchase journey and help buyers discover more of eBay's inventory.

Leverage deep learning: While eBay has used AI for the past decade, there were still complex problems they were unable to solve. With the advances in deep learning, the company has been able to scale to larger and more complex data sets which ultimately allows them to process billions of data points and make their services even better.

: Finding the optimal box for shipping your item just became easier with eBay's augmented reality technology on their app. This feature allows you to place a real-world item into a virtual shipping box.

All of this investment in artificial intelligence is good for eBay's business as well. According to Tom Pinckney, VP of applied research at eBay. That helped the company record a net income of \$763 million for the fourth quarter of 2018.

Background

The intersection of technology and beauty has been redefining the retail industry, with AI playing a pivotal role in shaping consumer experiences. French beauty retailer, Sephora, with its commitment to innovation, has embraced this transformative wave, most notably evident in their 'Store of the Future' concept. With the first of its kind launched in Singapore in 2022 and a subsequent establishment in Shanghai, Sephora showcases a fusion of beauty, tech, and retail.

Key Takeaways

- Sephora's "Store of the Future" emphasizes a deeply embedded AI approach, driving personalization and enhancing the overall consumer journey.
- With features like AI-powered skin analyses, product label scanning, and individualized trend-based recommendations, Sephora showcases a proactive adoption of technology.
- The Beauty Live Studio's events and masterclasses align with Sephora's philosophy, aiming to extend customers' in-store engagement and create memorable experiences.
- Embracing local beauty trends, Sephora incorporates C-beauty products and supports them through initiatives like 'China celebrate', indicating their market adaptability.
- Beyond sales, Sephora aims for deeper community engagement in regions like China, recognizing the potential of the booming beauty tech market.

Deep Dive: Sephora's AI-Driven 'Store of the Future'

Approach

Sephora's AI strategy is driven by its obsession with experiential retail, striving to make skincare and beauty an intimately personalized affair. By harnessing the power of AI trend analysis, big data, and other technological advancements, Sephora aims to elevate the customer's in-store journey.

Implementation

Sephora's "Store of the Future" in Shanghai showcases a plethora of technologically advanced features aimed at elevating the customer experience. One of its standout elements is the skin analysis device which, powered by big data, offers in-depth insights into individual skin requirements. Augmenting the personalized experience is the AI-driven product recommendation system. By analyzing current beauty trends, it tailors product suggestions to align with each customer's unique needs.

Further enhancing the shopping journey, the store has a feature that allows customers to scan product labels, delivering a comprehensive breakdown of ingredients. In the realm of personalization, the store steps it up a notch by offering a unique gift customization service. Customers can infuse personal touches to their gift packages by adding distinct scents and voice messages.

Beyond the technological integrations, Sephora ensures its patrons have opportunities for immersive learning and community engagement through the Beauty Live Studio. This dedicated space is not only the venue for exclusive beauty masterclasses but also hosts a variety of community events, epitomizing Sephora's commitment to an enriched in-store experience.

III. Results

Sephora's innovative 'Store of the Future' in Shanghai seamlessly integrates a blend of both global beauty offerings and C-beauty products. The inclusion of C-beauty products is notably reinforced through Sephora's 'China celebrate' initiative, a strategic move aimed at amplifying sales for these local brands. Beyond its product offerings, the store's unique approach to customer engagement is evident. With a range of courses and exclusive events on offer, customers are enticed to spend a more extended period in the store, highlighting the success of Sephora's immersive retail strategy in fostering greater customer engagement.

Challenges and Barriers

The issue of algorithmic bias in AI systems poses a significant challenge, as there's a risk of producing results that may be perceived as unfair or inaccurate, potentially leading to customer dissatisfaction. Furthermore, the use of generative AI blurs the boundaries between human-made and machine-generated content, which prompts critical questions about copyright ownership. Additionally, the process of storing and analysing vast amounts of customer data necessitates stringent privacy protocols and emphasizes the imperative for robust cybersecurity measures to ensure data protection.

Future Outlook

Given the growing prominence of AI-driven experiences and the expansion of the beauty tech market in China, Sephora is poised to further innovate and integrate AI tools in its global outlets. With AI's role becoming increasingly central in understanding and catering to consumer needs, Sephora's commitment to the beauty community in China, and globally, is likely to solidify its position as an industry leader.

IV. Conclusion

Sephora's 'Store of the Future' stands as a testament to the transformative power of AI in retail. By seamlessly blending AI-driven insights with experiential retail, Sephora is not just setting a benchmark for beauty retailers but is also pointing towards the future of global retail – one that is deeply personal, engaging, and tech-driven.

THAT IS THE DATA OF AMAZON BUSINESS THROUGH E-COMMERCE

FINDINGS OF RESEARCH

What Are the Impacts of AI on eCommerce?

AI has had profound effects, both good and not-so-good, on the world of eCommerce.

Impacts

The benefits of AI can be felt by both parties in an online transaction.

For online shoppers:

- A more enjoyable shopping experience,
- Better choices in products and prices,
- Faster resolution of issues,
- Less returns on purchases.

For sellers:

- More accurate and relevant customer information,
- Higher numbers of satisfied and loyal customers,
- Savings of time and money,
- Diminished inventory wastage,

V. CONCLUSION

As highlighted in this article, artificial intelligence in Ecommerce is playing a leading role in driving innovative solutions and customer experiences. Some the leading use cases of artificial intelligence in Ecommerce is in the area of personalized shopping, product recommendations, and inventory management.

The study of AI marketing's impact on e-commerce reveals a transformative effect on sales metrics and marketing strategies. AI has significantly enhanced key performance indicators such as sales growth, customer acquisition cost (CAC), customer lifetime value (CLV), and return on marketing investment (ROMI). By leveraging machine learning, deep learning, and natural language processing, AI has enabled businesses to deliver highly personalized and targeted marketing campaigns, resulting in increased engagement, improved conversion rates, and overall sales growth. Key findings from the study include:

✓ AI-driven recommendation engines and personalized marketing efforts have led to notable improvements in sales performance, as evidenced by increased conversion rates and higher sales figures.

✓ AI optimizes ad spend and automates customer interactions, resulting in reduced CAC. AI tools such as chatbots and automated CRM systems have streamlined customer acquisition processes, leading to cost savings.

✓ AI's ability to analyse customer data and anticipate needs has improved customer satisfaction and loyalty, boosting CLV.

✓ AI analytics provide detailed insights into campaign performance, enabling more effective resource allocation and improved ROMI.

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