



Impact of Artificial Intelligence on E-Commerce Business

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Abstract: Artificial intelligence has manifested its existence in every field of concern. Almost every area of business is taking benefit of the applications of artificial intelligence. Be it medical, finance, marketing or any other sector. E-commerce business has evolved rapidly in the past few years. So how will artificial intelligence bang the E-commerce sector especially in a fast developing economy like India and Especially in E-commerce sector? Artificial intelligence is going to personalize the shopping experience for the user and improve the shopping familiarity. For retailers, it is a medium to perk up sales, deliver better engagement and improve the customer's service quality.

Key words: Machine algorithms, Data Security, searching, customer service

I. Introduction:

AI has been becoming an important part in the way how many consumers interact with the digital platforms. The huge competition in the e-commerce business has pushed the e-commerce businesses to make use of artificial intelligence technology to get ahead of the competition.

II. Methodology:

This article is purely based on the secondary source of data obtained from various journals, publications and websites. This is descriptive analysis.

Objectives of the Study:

- To understand the present status of e-commerce
- To study the impact of artificial intelligence in e-commerce

III. Discussion:

Let us discuss artificial intelligence is benefitting the E-commerce Business:

1. Searching Products Made simple:

Searching is the first step in most of the online purchases. The search results must be in relevance to the keywords. When the consumer could not find the list of items of his search, he may shift to other vendor or platform. The search generally includes those keywords in the title name and the description. Many a time this method may not be the best technique to find the accurate results. Artificial intelligence techniques allow consumers to send the images and find the most relevant or accurate search result. This decreases a lot of search time for the consumer as a consumer no longer has to hang on for hours.

2. Recommendation Systems:

All the E-commerce websites like Snapdeal, Flipkart, Amazon etc., apply the artificial intelligence. AI and machine learning algorithms can foresee the performance of buyer from its past searches, interests, regularly selected products. By predicting the behavior of the consumer, E-commerce websites are able to propose the products that user is highly preferred in. This develops the user experience as he no longer need to spend more time searching the product. It also helps the E-commerce websites to progress their turnover.

3. Inventory Management:

The foretelling analysis of data science services is making an enormous impact in the inventory management. Inventory management is a dreadful when it comes to keeping the inventory up to date, shelves filled and everything available in the supply chain. Machine learning algorithm can forecast the future demand for the manufactured goods based on the history data. The more and more usage of predictive analytics in the E-commerce improves the efficiency of inventory management data. Artificial intelligence applications have enabled the retailers to predict the real-time inventory needs of the business.

4. Systematic Sales Process:

Prior to AI, sales policies were relying on cold calling, email marketing, ad placements etc. Artificial intelligence applications are used by the E-commerce retailers to collect data patterns and to generate powerful insight from the data. Firms can increase the sales by using the historical data and data-driven responses. Nowadays, people are more liable towards social media platforms for shopping stimulation. Deep learning techniques can be used to spot the preference and concerns of the customers. Artificial intelligence can scrutinize millions of data and expand the correlation between the buying patterns and user data.

5. Better Customer Understanding:

For the speedy expansion of any business, it is very significant to know the target customers better. There are many ways to achieve this. E-commerce websites can send online questionnaires to the target consumers, get feedback using Google forms, and ask for evaluation and appraisal for the better customer understanding. Artificial intelligence and natural language processing have also made it possible to get to know the insight of the customer about the brand. NLP can understand the phrases used by the user about the brand. It can understand all the responses whether positive, negative or neutral. E-commerce businesses can learn more about the customer prospects and respond according to the situation.

6. Improved Customer Service:

Every industry wants to offer the preeminent service to their customers. Chatbots and virtual shopping assistants allocate users to automate the customer service. AI-powered chatbots have the capability to interact with clients, answer their queries and resolve issues in real time. Natural processing algorithm in the chatbots lets them to identify with the context of the customer's message. Shopping chatbots can assist in finding the products. Users have to just enter their needs and chatbot will locate the most relevant products for them. Chatbots can also program deliveries, book complaints and lever returns for the customers. They are available 24/7 at the service and have a high reaction rate.

7. Better Decision Making:

E-commerce can make better choices with the use of Artificial intelligence. Data analytics have to finger a lot of data every day. This data is too enormous for them to handle. Moreover, analyzing the data also becomes a difficult task. AI prompted the decision-making process of E-Commerce. AI algorithms can easily identify the complex patterns in the data by predicting user behavior and their purchasing pattern.

8. After Sales Service:

Firm's duty is not only to sell but to support the customer in the entire buying cycle. After sales service is an essential part of E commerce. Artificial intelligence can computerize the response forms, replacements and handling any other uncertainty in the product life cycle. By solving the customer's issues, the brand value of the website gets improved.

9. Cyber security:

Artificial intelligence has also improved the cyber security of the E-commerce websites. It can check or prevent any fraudulent activities. E-Commerce has to covenant with a lot of dealings on daily basis. Cybercriminals and hackers can scythe the user account to gain unauthenticated access. This can lead to the disclosure of private data and online scams. The reputation of the business also gets a big blow. To put off this, Artificial intelligence and machine learning algorithms are developed that can alleviate the chances of fraud activities over the website.

The AI risk in ecommerce may not go up to the level of other sectors. Contrast to a military contractor, most ecommerce vendors need not to worry about drone warfare, submarines, or chemical weapons. But whether we sell a product through your Shopify site or collectibles on eBay, it's important to understand what can potentially create AI dangerous and avoid dicey contexts involving artificial intelligence. Here are a few areas where AI safety has to be considered:

1. Data privacy violations

AI systems often collect data from an individual's personal life, including financial and medical data, which may raise concerns about privacy and data security. An ecommerce retailer will have a large cache of customer data including names, addresses, purchase histories, and financial information. It's the legitimate responsibility of the vendor to keep this data private. If it isn't properly secured, and if AI systems can access it without permission, it can do considerable harm to the vendor business's reputation.

2. Technical failures

AI systems may also flat to technical glitches and failures. These can lead to operational disruptions, loss of sales, and damage to the company's reputation.

3. High implementation costs

Developing AI technologies is expensive for software companies, and many add along these development costs in their pricing.

4. Ethical concerns

Like any technology, AI could pretense serious bullying to societal infrastructure. Some AI algorithms have been accused of using copyrighted individual content without consent. AI can also rapidly generate false news articles or deep fakes, making it seem like forms have said things they haven't.

5. Bias and discrimination

Whether they power search engines or chatbots, AI algorithms are a reflection of their training data. In a prejudiced society, AI education models may include data that discriminates based on age, race, gender, and nationality. This becomes difficult if we use AI in functions like human resources or customer relations.

Biased algorithms can lead to unfair outcomes, particularly in areas such as hiring, lending, and criminal justice, where decisions have an effect on personal lives intensely. To address bias in AI, data scientists must give careful consideration to algorithm design and the data sources they use to guide the system.

6. Job displacement

There's an alarm that machines will replace large volumes of human workers in the near future. Concerns of job displacement are nothing new, dating back to the Industrial Revolution, but the rapid advancement of AI capabilities has some believing that jobs in some sectors will soon be the occupied by machines. As far as ecommerce is concerned, the job losses could extent customer service, marketing, and content creation.

7. Lack of transparency and accountability

AI algorithms—particularly those based on deep learning and neural networks—can be intricate and obscure, making it difficult to understand how they turn up at definite decisions or recommendations. This lack of transparency can wear away trust in AI systems, particularly in significant applications such as health care and finance, but also in ecommerce, where transparency and accountability are supreme.

IV. How to overcome risks related to AI?

Every technology is a double edged weapon having both benefits and glitches, and so as AI. The user should take precautions to avoid the AI in every sector and of course in E-commerce.

- Applying vigorous data security and privacy measures
- Addressing possible bias in AI algorithms
- Making AI systems transparent and understandable
- Maintain human errors of AI applications

V. Conclusion:

Digital Platform has made life easier for the vendors as well as consumers. E-commerce websites are observing an exponential climb in their sales. Artificial intelligence companies have helped E-Commerce websites in offering the better user experience. Artificial intelligence research in the field of E-commerce is leveraging the sales of E-commerce too.

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