IMPORTANCE OF ARTIFICIAL INTELLIGENCE IN E-COMMENCE – A REVIEW ON CONSUMER RELATIONSHIP MANAGEMENT

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ABSTRACT

E-commerce is a term which is popularly used and heard with online buying or selling of products and services over the web. Ecommerce is useful both to buyer and seller. Whereas a seller just need a website that can be accessible over the World Wide Web. Whereas for the buyers it provides flexibility and shopping convenience on finger tips just on a digital device with internet. Along with online purchase and sales ecommerce may also involve payment gateways, online ticketing, online auctions, and internet banking and more. It basically performs business electronically with the use of internet services. Artificial intelligence (AI) on the other hand is a field of technology which deals with smart devices that mimic human intelligence for decision making. Implementation of AI applications has benefitted in various ways for different businesses; AI has hugely impacted Ecommerce to gain popularity across world. AI along with Machine Learning (ML) is useful in various online business fields for various reasons such as in analyzing customers shopping behavior and recommending products based on customers search history, AI enabled Voice or Image Input for smart search, chat bots for customer service and order processing, providing virtual assistance are some examples of Artificial Intelligent application in the field of E-commerce. This paper basically highlights the importance of Artificial Intelligence in the field of Electronic commerce also how AI in Ecommerce has been able to successfully build trust and security within the online consumers also how this has influenced the consumers buying behavior.

Keywords: Artificial Intelligence, Ecommerce, Machine Learning, Smart Search, Chat bots, Virtual Assistance.

Introduction

Artificial Intelligence has been hugely applied in Ecommerce; it has been hugely used in ecommerce to provide improved customers service and better experience. Ecommerce which is popularly called as Electronic commerce is an online activity which deals with online trade and commerce of products and services online over the web using internet. Whereas Artificial Intelligence (AI) is a term which deals with smart machines which incorporate human intelligence. AI basically means machines learning from experience. The main purpose of AI is to embed learning, reasoning and perception into machines. Artificial intelligence makes use of data mining, Natural Language Processing (NLP), and Machine Learning (ML) to interpret human languages and expressions. AI and ML have potential to optimize ecommerce business. With Artificial Intelligence, machines are learning how to assist us and how to perform manual tasks and what is fascinating is that they are doing their job incredibly good, allowing us to focus more on a strategic level of business [1]. In the practical world we can find various applications of Artificial Intelligence that are popularly used in different areas for different purposes. Many applications of AI can be observed trending in the field of social media, automobiles, healthcare sector, customer care service, agriculture, finance, education, sales and marketing and many more. As described this paper specifically focuses on the use of Artificial Intelligence in Ecommerce sector and its impact on online commerce. As predicted artificial intelligence (AI) is the technology that will have a profound impact on commerce, according to Gartner. By 2023, the majority of organizations using AI

for digital commerce will achieve at least a 25% improvement in customer satisfaction, revenue or cost reduction [2]. Ecommerce is one such field that has rightly acquired AI to enhance its business strategies. Implementation of AI in Ecommerce has brought real time response in business. AI has hugely impacted Ecommerce business to improve with business needs and provide customer with better experience. AI helps Ecommerce to closely investigate customer's requirement and provide best deals or suggestions according to customer past data search. Artificial Intelligence uses different algorithm such as content based filtering , collaborating filtering etc. to identify patterns by penetrating deep into large size data blocks.

Importance of Artificial Intelligence in Ecommerce

Artificial Intelligence no doubt has changed the overall business environment of Ecommerce. Every ecommerce website mainly focuses on personalization. Business owners want each visitor to have unique and personal experience. Major retailers like Google, Amazon, IBM etc., have hugely invested in AI to provide their customer with exotic purchase experience. Artificial Intelligence has helped e-commerce businesses get closer to their customers. With integration of AI, e-commerce platforms today are able to utilize large datasets regarding customer behavior and usage patterns [3]. Artificial intelligence self-learning algorithms has created personalized shopping experiences for online buyers, which has certainly raised business demand.

Benefits of AI powered Ecommerce: With Regards to Consumer

Customer Based Search

AI with machine learning has helped improved search mechanism through contextual and personalized search which has helped to scan text appropriately in ecommerce this has been beneficial for smart as well as quick search. For instance If a user has searched for a product then in the next visit as soon as the user visits same page then and uses initial letters to search for a information that was previously done then AI powered search list gets loaded with previous searches performed this is basically done with the help of search algorithm. This technique helps to improve customer's experience.

Voice and Image Search

Voice provides a much easier way to search on the web. Voice search helps a website visitor to search for a particular product or service by providing voice as input. Artificial Intelligence with Natural Language Processing (NLP) helps ecommerce manage product search using voice input.

Image search is another trending way to search for a particular product just by providing image as input for search. Many ecommerce website has adopted or may be seen providing image search utility to the visitors for search. With the use of Artificial Intelligence websites asks visitors to upload image as input to search for a particular product, color, shape or size the output displays result of similar images that matches the search image.

Voice and image search both are possible with Artificial Intelligence. Voice search can been seen as one of the most preferable type of search for visitors, where as image search is newly introduced concept can been seen at selected website but in future we can find more ecommerce businesses adopting it.

Chabot

Chabot's have become an important part of E-business today. Chabot's provides 24*7 assistance to customers with the use of AI. Chabot is AI powered software that helps to assist customers either though text chat or voice chats. Chabot are helpful to increase response time also chats bots are cost effective

when compared to hiring customer care execute for customer support. It can be said that Chabot provides real time client and customer interaction.

Product Recommendation

Product recommendation is basically based on a number of algorithmic decisions, AI with Machine Learning algorithm are basically use for recommendation algorithms, It basically provides every user with personalized experience. It helps a user locate by suggestion what they are looking for. Collaborative filter technique is used to provide customers with recommendations, which is basically based on search history, trends, and bestselling items from the website. AI gathers information from a lot of channels and provides deep insights that help businesses achieve seamless client experience.

Notification can also be linked with product recommendations, AI can send customized notifications. For instance, if a consumer has added product to the cart for later purchase or which was out of stock then, AI will notice this and alert the customer for offers or notify regarding the pending order also notification feature will notify consumer when the product is in stock.

Recognizing fake Customers reviews through

The role of reviews is to basically determine consumer opinion for a product bought also reviews helps new visitors for decision making. However it has been noted several times negative reviews are entered by business rivals or competitors to impact sales of a product. In such situation Artificial plays an important role to filter real and fake reviews or comments using language processing method by detecting unusual text. By detecting fake review AI has really helped ecommerce to enhance overall buying experience on the web.

Analyzing Big Data

AI systems used for data analysis too. Large volumes of data can be used to identify hidden insights, which help businesses for prediction which can be used for making business decisions. Today, AI systems can help businesses analyze data and provide a correlation between structured and unstructured data, indicate which products need to be procured, and also show the products which have to be discounted.

AI for After Sales Service

After sales service is an important factor that will surely impact any business. Business has to maintain and provide after-sales service as well. There should be prompt service or reply for consumers queries regarding a newly delivered product. Also return policy for a product must be simple and prompt; Artificial Intelligence can handle the above concerns well. AI automatically detects product delivery and sends customer feedback forms, ask the customer to rate the product and their service or send the survey form.

Growth of Ecommerce

Ecommerce has come a long way since the CompuServe launch in 1969. Continuous enhancement in technology has resulted major growth and adoption in Ecommerce business. It has been observed that today ecommerce can be seen focusing on keeping up consumer's expectation and providing best services to their consumers.

It can also be noted that ever since COVID-19 outbreaks consumers have moved online to make purchases that were normally made in physical stores, such as food and household items, apparel, and entertainment. It was seen by end of May of 2020, ecommerce transactions reached $82.5 billion — a

77% increase from 2019 [4]. According to traditional analysis it would have taken between four to six years for E-business to reach at the level that has reached during May 2020.

Objective and Conclusion

The main purpose of this research review was to bring an insight through the usages and benefits of AI in Ecommerce. The importance of Artificial Intelligence in the domain can be noted also how AI has benefitted growth in Ecommerce business by influencing consumers interest by providing best service resources and facilities for instant response and action .

Further it can be concluded that Artificial Intelligence has become an inseparable part of online commerce and also AI has helped Ecommerce manage, maintain and provide uninterrupted services to its online consumers. Artificial Intelligence has helped build personal relation with online visitors and consumers which is the main reason behind retaining old consumers in business for long time and also adding more new consumers to business. Artificial intelligence has been found playing a successful role in ecommerce it has spread its wings in E-business. Many AI applications are can be found commonly used and popular among most Ecommerce website. Also more and more AI enabled application is expected to be adopted and used in online business for business growth and for betterment of online consumer relationship management.

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