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## Implementation of Artificial Intelligence on Electronic Commerce

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Received-05.06.2023, Revised-11.06.2023, Accepted-15.06.2023 E-mail: rautniharika356@gmail.com

**Abstract:** *In the domain of e-commerce, marketing and online transactions, the internet has opened up new and exciting possibilities. Customers can make decisions more easily thanks to mobile technologies. Purchases can be made in more efficient and cost effective manner than visiting stores and business firm can boost their sales volume as a result of reaching a worldwide audience. Furthermore, online trading platforms customers will be able to acquire all of the necessary information concerning customer feedback on product quality and attributes as well as make an informed decision. As a result of the fact that these reviews are employed to assess the level of client acceptability, they can have an impact on the future of a product or services if they are satisfied with it, because of a company's selling performance and market share. They can also be used by businesses to assess the success of a product. As a result, textual customer review classification technologies are becoming an important part of every e-commerce development framework to assist businesses in determining the best selling strategy tactics to improve their marketability.*

**Key Words:** : Artificial Intelligence, E-Commerce, Online marketing, Customer attributes, technologies.

**1. Introduction-** Artificial objects are those that are made or generated by human rather than those that occur naturally. The most basic definition of intelligence is a process that entails a set of problem solving abilities that aid in the solution of real world situations<sup>3</sup>. It is " the science and engineering of producing intelligent machine, especially intelligent computer programme according to John McCarthy, the father of Artificial Intelligence. Internet users can browse, compare and purchase things or services using a variety of online platforms. In 1956, after year of work, American computer scientist John McCarthy used the term "Artificial Intelligence" for the first time at the Dartmouth Conference. This was the beginning of AI as a discipline<sup>3</sup>.

E-commerce is influenced by AI since consumers are always king of the market. More preferences are therefore supplied for online buying in accordance with the convenience of the customer. The ability to order new things in accordance with needs, wants, and desires without using a laptop is another benefit of AI for illiterate people who cannot write. Instead, they can use the voice search feature<sup>1</sup>. According to survey results, one in every two online consumers examined Amazon platforms or search engines for product ideas or to begin actively looking for things. Before making a purchasing choice, a large majority of online shoppers read up to six product reviews. Nearly two billion people will have made online purchase by 2020, with worldwide e-commerce revenue topping 4.2 trillion dollars. In the year following the pandemic, global retail e-commerce sales grew by more than 25% with Argentina reporting the biggest percentage rise. AI in marketing is still in its initial stage, there is paucity of systematic literature reviews demonstrating the in-depth research pattern in the AI- driven consumer market which leads to research problem like How can marketing make the most of AI technologies to increase customer satisfaction, market share and profitability? What are the current hot topics and future research directions for AI in marketing? The purpose of this work is to fill that research gap by conducting thorough review of literature on AI in marketing research field.

**2. Literature Review-** People typically associate the term "artificial intelligence" with automated robots that do tasks for humans because they have only seen human-machine interaction in robot only in movies or television programmes. Any machine that must think like a human requires artificial intelligence, which enables ongoing learning and problem-solving<sup>2</sup>. Expert systems are frequently used nowadays to resolve challenging problems in a variety of industries, including research, engineering, business, medical and weather forecasting. Artificial intelligence application areas are also having a significant impact on a number of different aspects of life<sup>3</sup>. AI is assisting e-commerce companies in improving consumer relationships.

E-commerce platforms are now able to make use of vast statistics pertaining to user behavior and usage trends thanks to the capabilities of AI. Online shoppers can enjoy customized purchasing experiences with the help of artificial intelligence self-learning algorithms<sup>4</sup>. E-commerce is the result of economic, scientific, technological, and cultural advancement. It is a revolution in both economics and technology. Using computer network technology as a foundation, it is based on the realize powerful, comprehensive business technology, information technology, and management technology integration<sup>5</sup>. Like any significant technological advancement, there are advantages and disadvantages. On the one hand, there are numerous apps that have been developed or are in the works that might significantly improve people's quality of life. But on the other



hand Artificial intelligence cannot be created by humans since it is a pre-programmed technology that uses knowledge that has already been acquired. AI is good at doing the same thing again and over again, but we have to manually change the codes if we want any changes or improvements. AI has infinite storage capacity, but it cannot be accessed or used in the same way as human intelligence<sup>6</sup>.

**3. Successful application of artificial intelligence-** (AI) in the modern era In the present, AI performs a very vital role. Nearly every profession makes use of artificial intelligence, including the field of education, computer science, medicine, job searching and human resource management. Below discussed some of the fields in further detail.

**EDUCATION-** For the field of education, AI applications have been created. And a huge number of processes have been sped up and made simpler. Students can easily join classes without having to physically attend classes in online courses since they can access all of the course materials through computers, laptops, and smart devices and can engage in them without interruption.

Both students and teachers were blessed by AI for the teachers. Concepts and questions from students are easily clarified by teachers. AI helps students and teachers move information from one location to another. AI can simply handle inquiries regarding our doubtful questions while delivering our various features to a course.

**MARKETING-** In all fields and sectors, artificial intelligence has been generating attention. Digital marketing serves as a current example. In the modern day, AI is a hot topic.

For companies to understand customer demands and goals. A massive amount of marketing data analytics from social media, emails, and the Web may be crunched by marketers with the help of AI marketing in a comparatively shorter length of time. In light of this, every company needs to use AI marketing.

**FINANCE-** The manufacturer produces a large number of goods and products because they want to make profit. They employed too many marketing techniques when they created the product to launch their product. Manufacturers first research the market, examine consumer behaviour, and do other things. Chatbot assistants, fraud detection, and task automation are all examples of artificial intelligence (AI) and machine learning in the finance industry. The use of AI by financial institutions (FIs) will be pushed by advances in technology, rising user acceptability, and evolving regulatory frameworks. By providing customers with 24/7 access to their accounts as well as financial advisory services, banks may greatly enhance the customer experience by automating time-consuming tasks.

**PRICING MANAGEMENT-** Pricing is a calculation-intensive task that takes into account a number of factors before determining the ultimate price. The complexity of the pricing task is increased by real-time price fluctuation depending on shifting demand. A multiarmed bandit system based on artificial intelligence can dynamically modify price in a real-time environment<sup>7</sup>. Automated AI pricing devices for e-commerce will simplify the human labour required to keep track of competitors' prices. By using data from both internal and external sources, businesses would be capable of determining commodity pricing.

**LOGISTIC WITH INTELLIGENCE-** When information technology is utilised to make machines and controls intelligent, it enables mechanical equipment to take the position of people in the logistics production process. This is known as intelligent logistics. Intelligent logistics will considerably improve service quality and operational performance when compared to traditional techniques of logistics.

**CUSTOMER SEGMENTAION-** Every association has calmed about each geographic, demographic, and behavioural measurement and metric during the era of statistics. Additionally, they have carefully obtained data from their business. You can collect information through these data points with the help of AI in order to enhance your buyer personas and more effectively segment your clientele. Expressing this will enable you to implement your strategies in that regard and improve the customer experience.

**CONCLUSION-** Artificial intelligence techniques have advanced, and with the development of more sophisticated technology, they are being used more and more frequently. As a result, they are having an increasing impact on e-commerce transactional factors including customer satisfaction and retention. Artificial intelligence will develop into a significant driver for transforming e-commerce over time. Particularly as research and technology advance, artificial intelligence technology has grown into a powerful instrument to increase revenue and manage E-commerce operations. The development and upgrading of the hardware and software that will operate the AI algorithms will result from AI-based e-commerce as well. However, the fusion of AI and e-commerce may make it so that those lacking in-demand skill sets would likely experience unemployment in the next years.



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