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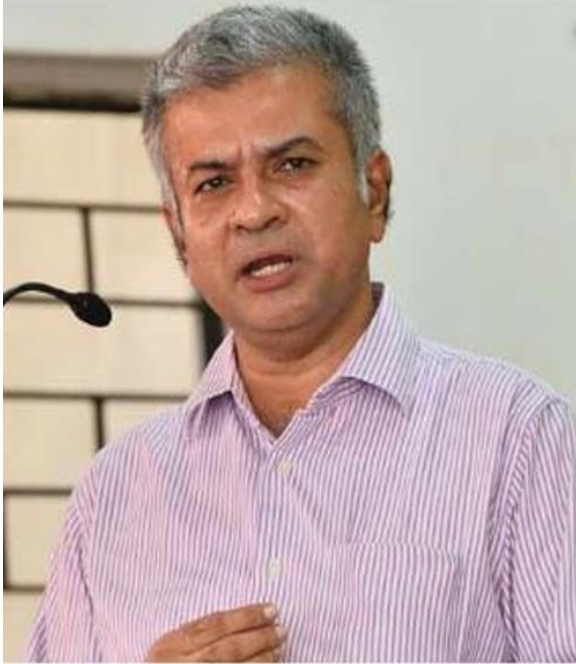
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ABOUT US

WHITE BLACK LEGAL is an open access, peer-reviewed and refereed journal provided dedicated to express views on topical legal issues, thereby generating a cross current of ideas on emerging matters. This platform shall also ignite the initiative and desire of young law students to contribute in the field of law. The erudite response of legal luminaries shall be solicited to enable readers to explore challenges that lie before law makers, lawyers and the society at large, in the event of the ever changing social, economic and technological scenario.

With this thought, we hereby present to you

Digital Future: How to Advance E-commerce Business with Generative AI

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ABSTRACT

With the development of information and communication technologies artificial intelligence is becoming increasingly popular. The main aim of companies in today's e-commerce world is to influence customer behaviour in favour of certain products and brands. The application of artificial intelligence as an innovative tool in the field of e-commerce may seem as a positive step forward. The paper focuses on the description of the essence of e-commerce and artificial intelligence and their benefits. The aim is also to evaluate the importance of artificial intelligence and its use in the context of e-commerce based on available studies on this issue. The advent of generative AI has catalyzed seismic shifts across a plethora of sectors, with e-commerce being one of the most significant beneficiaries. By leveraging the power of generative AI technology, businesses can generate unique content such as product descriptions, images, and even entirely new merchandize. This has the potential to significantly change the way e-commerce entities operate. In the ever-evolving realm of e-commerce, specific terminologies often rise to prominence, stimulating discourse in online retail circles and motivating corporations to adapt their operations accordingly. Currently, the term capturing widespread attention is generative AI. While not a nascent technology, it has gradually moved into the spotlight following the surge in popularity of Open AI's Chat GPT. This has triggered a discourse among online merchants about the potential advantages of generative AI for e-commerce and its optimal utilization strategies.

In this article, we discuss the transformative potential of generative AI within the e-commerce landscape, highlighting its most beneficial applications across customer experiences. We also

explore how e-retailers can leverage this technology to augment their sales. As the e-commerce sector experiences exponential growth, propelled by innovative technologies and evolving consumer preferences, one crucial development is incorporating generative artificial intelligence into diverse facets of customer engagement. Empowered by advanced generative AI models such as Chat GPT, generative AI is changing how online enterprises interact with customers, provide personalized recommendations, and improve overall customer satisfaction.

KEYWORDS: Artificial intelligence · AI · Machine learning · E-commerce · Electronic commerce

Introduction

The term "generative AI" refers to computational techniques that are capable of generating seemingly new, meaningful content such as text, images, or audio from training data.. It has always been challenging for retailers to consistently grow and defend market share, let alone to deliver ground breaking technology. But lately, generative AI in ecommerce has given ecom leaders more capacity to innovate at a minimal cost.

In the hyper-competitive e-commerce landscape, gen AI enables today's retailers and brands to seamlessly and automatically serve their customers needs at scale. The best of their use cases offer insight into all-time highs across personalization, engagement, conversion rates, revenue and efficiency. Let's explore the latest proven use cases, for the sake of approvable budgets and doable timelines.¹

Research Methodology

In the present paper Doctrinal Methodology has been adopted by the researcher through the primary and secondary sources and by studying books, articles and other relevant materials in different libraries and through Internet. The present study is based on both primary and secondary sources.

How does generative AI build upon the legacy of AI in ecommerce?

¹ Boboc PC (2020) VAT and e-commerce. Current legal framework and the 2021 changes. ClujTax F.J., 39

AI and ecommerce have had a long-lasting relationship way before generative AI tools stepped into the limelight. Personalized product recommendations, dynamic pricing, live support, and demand forecasting are just a few of the multiple capabilities artificial intelligence has ushered into the ecommerce industry . However, most of these AI commerce applications are based on predefined rules, lacking versatility and cross-task adaptability.

Unlike traditional AI ecommerce solutions, generative AI, typified by foundational models like ChatGPT, showcases **higher adaptability**. It can learn from data without explicit programming, excels at tackling unstructured data, and can imitate that personal touch customers expect from retailers.

E-commerce and Artificial Intelligence

The modern information age brings along new possibilities, software, and technological innovations usable in marketing and shopping. New technologies force companies to be more creative. Technologies help increase the efficiency, quality, and cost-effectiveness of services provided by businesses. Contemporary creativity is based primarily on the development of the so-called information and communication technologies, which have a major impact on the development of the business environment. The effectiveness of information and communication technologies depends on several factors, such as investment in human capital and an appropriate combination of e-commerce solutions. One sector where the digital transition and importance of e-commerce are particularly pronounced is retail, where digital tools, such as Websites, replace (to a certain extent), or complement physical commerce.²

Meaning of E-Commerce

Since being described for the first time in the 1980s, e-commerce has become a global growing trend and is now one of the most popular online activities. The development of the Internet and the advancement of digital technologies has led to changes in consumer behaviour. Now, people are increasingly using e-commerce to make purchases. Electronic commerce, or e-commerce for short, means commerce that takes place in the online environment of the Internet, with the Internet being

² Song X, Yang S, Huang Z, Huang T (2019) The application of artificial intelligence in electronic commerce. In: The 4th annual international conference on information system and artificial intelligence, e-commerce system IOP: Conference Series, Hunan, China, pp 1–6

considered as a single platform that connects the seller and the buyer. E-commerce includes the use of the Internet, Web portals, mobile applications, and browsers to make a purchase. These are therefore digitally enabled business transactions between sellers and customers. Almost all Internet users are currently online shoppers. E-commerce is the result of economic, scientific, technological, and cultural development. The development of e-commerce is changing the way businesses do business as well as consumer behaviour and is making a significant contribution to the progress of the global economy . As the importance of the Internet is growing, online commerce provides a competitive advantage to those who sell online. Internet commerce gives all businesses in the world access to a global online market in which they generally have the same chance to compete with each other. Consumers are now imposing new requirements and businesses are constantly exposed to challenges of how to meet these requirements. The implementation of e-commerce in the company requires fundamental changes to be made in the current business models and business activities, as well as the implementation and use of sophisticated digital technologies.³

Meaning of Artificial Intelligence

Thanks to artificial intelligence, technical systems are able to distinguish the environment in which they find themselves, recognize the problem, and solve it, while working toward the predetermined goal. The computer system receives data that are prepared or collected by its sensors, such as cameras. It processes this data and then responds. Artificial intelligence systems can work autonomously and to some extent adapt their behaviour based on the analysis of previous steps. Over the last few decades, artificial intelligence applications have evolved rapidly. In the early stages, artificial intelligence was used in expert and knowledge systems to provide recommendations. At present, in the age of technological advancements, artificial intelligence has become more human and more capable of solving problems, learning, manipulating objects, and navigating physical space .⁴ Thus, innovation and more efficient use of technology have led to the creation of intelligent systems that can manage and monitor business models with reduced human participation . The development of artificial intelligence has brought enormous economic benefits to humanity, improved almost all aspects of life, and significantly promoted social development and brought about a new era. Artificial intelligence is considered to be a new interdisciplinary

³ Zhang D, Pee LG, Cui L(2021) Artificial intelligence in e-commerce fulfillment: a case study of resource orchestration at Alibaba's Smart Warehouse. Int J Inf Manage 57

⁴ SAS: artificial intelligence—what is it and how it works, https://www.sas.com/sk_sk/insights/analytics/what-is-artificial-intelligence.html. Last accessed 10 Jul 2021

technological science that develops theoretical methods, technologies, and applications for the simulation and expansion of human intelligence . The application of artificial intelligence has been examined in sectors such as health care, business, education, manufacturing, marketing, and financial management. Artificial intelligence systems should have capabilities such as information processing for communication in natural language, the ability to store and present information, automatic reasoning—using stored information to answer questions and draw new conclusions, machine learning to adapt to new circumstances, and to detect new patterns of behaviour.⁵

Role of Artificial Intelligence in E-commerce

Today, e-commerce is one of the industries that makes the most of artificial intelligence by building a huge customer base, trying to understand customer needs, doing real-time research, coming up with ultimate solutions, and many other activities.

Use of Artificial Intelligence in E-Commerce

Artificial intelligence can take several forms. When it comes to software artificial intelligence, this includes so-called virtual assistants, image analysis software, search engines, and speech and face recognition systems. Artificial intelligence built into material devices include robots, self-propelled cars, or drones.⁶

Artificial Intelligence Assistants—Chatbots

The e-commerce Web site is available to customers 24 h a day, 7 days a week, with 24-h customer support provided by virtual assistants/chatbots. The primary function of the chatbot is to automatically answer customer questions, respond to simple voice commands, and provide product recommendations using a natural language processing system. Chatbots can also be defined as a type of software application that uses artificial intelligence to conduct an online conversation via text or voice media with consumers visiting a given Web site or application. Chatbots are able to

⁵ Dwivedi YK, Hughes L, Ismagilova E, Aarts G, Coombs C, Crick T et al (2021) Artificial intelligence (AI): multidisciplinary perspectives on emerging challenges, opportunities, and agenda for research, practice and policy. *Int J Inf Manage* 57

⁶ Polishchuk V, Kelemen M, Gavurová B, Varotsos C, Andoga R, Gera M, Christodoulakis J, Soušek R, Kozuba J, Bliš tan P, Szabo S (2019) A fuzzy model of risk assessment for environmental start-up projects in the air transport sector. *Int J Environ Res Public Health* 16(19)

respond to customer questions and requests, which can help consumers find suitable products, check order status, compare different products, and help consumers with their payments. In case of complaints or questions, they will direct customers to the customer support service staff, who will take over.⁷

Recommendations Tool

Using an artificial intelligence algorithm, it is possible to carry out statistical programming, forecasting, and analysis of consumer behaviour, large datasets and predict which products have the potential to attract customers. Based on recent searches for potential customers, the algorithm is able to record key information of the searched product. The recommendation tool then generates the appropriate suggestions for the browser and displays what will ultimately help customer's find the product quickly⁸

Visual and Voice Search

Using artificial intelligence, it is possible to implement visual and audio searches on Web sites. Visual and audio searches are based on image and sound processing algorithms. Customers do not need to enter keywords in the search; they can search for the product using an image or voice. In a visual search, a potential customer uses an image or photo as input instead of a regular text search. The customer takes a certain object or text or uploads an image, which is then recognized by the search engine and displayed in the search results. Voice search allows users to use spoken language as an input. Results are displayed once a voice query is transcribed by the system. Voice search is based on intelligent natural speech recognition and processing technologies. The user is thus presented either with a spoken answer or relevant results in the form of text or image.⁹

Customer Relationship Management

Customers are an important part of an e-commerce business. In the past, companies used employees to manage customer relationships. Nowadays, artificial intelligence systems are becoming more and

⁷ Swathi B, Babu SS, Ayyavaraiah M (2019) Artificial intelligence: characteristics, subfields, techniques and future predictions. *J Mech Continua Math Sci* 14(6):127–135

⁸ Bughin J, Seong J, Manyika J, Chui M, Joshi R Notes from the ai frontier: modeling the impact of AI on the world economy, <https://www.mckinsey.com/featured-insights/artificial-intelligence/notes-from-the-ai-frontier-modeling-the-impact-of-ai-on-the-world-economy>. Last accessed 10 March 2024

⁹ Kumar T, Trakru M (2019) The colossal impact of artificial intelligence in e-commerce:statistics and facts. *Int Res J Eng Technol* 6(5):570–57

more popular. Artificial intelligence is able to predict how consumers will behave when shopping, what products selected customers will choose and how the company can build and maintain the best possible relationships with them. Using artificial intelligence, a company may obtain information on customer satisfaction and carefully plan how to respond to customer needs and requirements, regardless of time and situation. Artificial intelligence helps people build a balanced environment in which man and machine work together to make a profit and sales.¹⁰

Perspective of Artificial Intelligence in E-commerce

Human intelligence often seems to be limited in performing certain tasks in e-commerce. This concerns in particular the forecasting of demand and supply chain mechanisms. It is in these cases, which are a challenge for businesses that artificial intelligence appears to be a useful tool. Shankar states that artificial intelligence helps increase the profitability of e-commerce through all available tools, helps improve personalized recommendations and payments. It also improves customer relationship management, logistics management, and inventory optimization. Artificial intelligence technologies have been integrated into marketing and retail, where big data analysis is used to develop personalized customer profiles and forecast customer shopping habits. Understanding and predicting consumer demand through integrated supply chains is more important than ever, and artificial intelligence technology is likely to be an essential integral element. The development and implementation of artificial intelligence require a high level of acceptance of this technology in the future. Using such technology, traders can match product information with information that consumers are looking for in order to ensure the efficient consumption of products or services. Artificial intelligence helps e-commerce follow business trends, changing customer needs in the market. The company can gather a wide range of information, assess customers, and then adequately respond to their requirements and habits by providing quality services. Once a proper response is chosen, the business entity can expect increased customer comfort, increased satisfaction, and balance of supply and demand mechanisms.¹¹

¹⁰ Soni VD Challenges and solution for artificial intelligence in cybersecurity of the USA, <https://ssrn.com/abstract=3624487>. Last accessed 11 Feb 2024

¹¹ Loureiro SMC, Guerreiro J, Tussyadiah I (2021) Artificial intelligence in business: state of the art and future research agenda. J Bus Res 129:911–926

Deploying generative AI in ecommerce: consumer perspective

There is nothing more effective than offering a one-of-a-kind experience for an influx of customers. So, no wonder over [60% of retail organizations](#) employ artificial intelligence to improve customer interactions, with 40% dedicating teams and budgets to the technology.

Just like its parent technology, generative AI accounts for many applications that upgrade online shopping experience on ecommerce platforms and beyond.¹²

1. **1. Personalized product visualization Customization is the new status quo for the ecommerce industry**, with the majority of customers favouring a curated shopping experience on ecommerce websites. Generative AI lives up to the demand and allows customers to customize and play with the styles, colours, and fabrics of the products.

2. **2. Virtual try-ons**

3.

Around 19% of US beauty consumers say that virtual product try-ons would help them feel more confident purchasing products digitally. Generative AI brings the visual try-on experience to each screen, allowing consumers to create realistic representations of clothes and other products. Unlike traditional virtual try-on tools, gen AI applications make the fitting experience more mindful of a body shape, skin tone, and personal style. And that's exactly what Google has done lately. The tech giant pushed out a new virtual try-on feature that demonstrates how clothes look on real models with different hair types, body types, skin types, ethnicities, and sizes. Style transfer technique, which is another gen AI offshoot, is also helpful in transforming the customer's vision into a realistic piece of clothing or dproduct. In simple words, **this technique allows the customer to take two images — a self-portrait and a style reference image — and blend them together to try on a new style.**¹³

¹² Tousignant L Robots learned how to write fake Yelp reviews like a human, <https://nypost.com/2017/08/31/robots-learned-how-to-write-fake-yelp-reviews-like-a-human/>. Last accessed 11 March 2024

¹³ Luo X, Tong S, Fang Z, Qu Z (2019) Frontiers: machines versus humans: the impact of artificial intelligence chatbot

3. Human-like chatbots

Traditional chatbots and virtual assistants guide customers through basic linear flows but have a hard time thinking outside the predefined boundaries. By leveraging the power of generative AI chatbots, retailers can swap generic responses for human-like interactions and provide accurate 24/7 support to users. Generative AI can also supplement digital agents with natural language processing capabilities that enable the bots to process natural human language inputs (voice or text) and serve up empathetic outputs for after-sales support and issue resolution.¹⁴

4. Product Discovery and search personalization

In product discovery, generative AI can analyze user preferences, behavior, and past customer purchase history to offer personalized recommendations. In 2023, over 50% of retailers applied gen AI to curate personalized product bundles. On the same line, gen AI tools can anticipate user preferences and search intent, reducing search time to a couple of clicks.

They also **make products more discoverable by improving tagging accuracy** and enabling more intuitive, conversational search. Instead of browsing hundreds of product names, **customers can describe what they are looking for in their own words**, and the smart assistant will make recommendations. Gen AI powered tools can also interpret uploaded images and process short video clips.¹⁵

Leading generative AI use cases in ecommerce: business perspective

To increase margin and customer satisfaction levels, retailers stretch themselves thin across numerous tasks. Inventory glut, complex supply chains, and an exploding number of distribution channels and

disclosure on customer purchases. *Mark Sci* 38(6):937–947

¹⁴ Makridakis S (2018) Forecasting the impact of artificial intelligence, Part 3 of 4: The potential effects of AI on businesses, manufacturing, and commerce. *Foresight: Int J Appl Forecast* 49:18–27

¹⁵ Kumar SL (2017) State of the art-intense review on artificial intelligence systems application in process planning and manufacturing. *Eng Appl Artif Intell* 65:294–329

customer touch points top the list of pain points. But now, they can leave business complexity and tedium to generative AI in ecommerce.

1. Content generation assistant

Creating accurate product content for thousands of SKUs is not for the faint-hearted. That's why gen AI-generated content was among the first use cases that picked up steam in ecommerce. **Gen AI powered solutions have simplified content production for product descriptions, listings, and even tailored promotional materials.** For example, **Amazon** has debuted generative AI tools to help sellers write product descriptions at scale.

And the capabilities of artificial intelligence do not end there. Heinz has used generative AI to create images for advertising, while Shoplazza, an ecommerce website builder, has implemented gen AI models to transform mannequin models into real models. Whatever it is, artificial intelligence reduces the cost of content creation and streamlines manual tasks.

2. Market research

When testing the waters of new markets and customer cohorts, retailers need to comb through vast amounts of data to inform their strategies. Social media platforms, customer insights, competitors' ecommerce companies, and other valuable data have to be taken into account and made sense of.

Here's how generative AI can help with analysis-related tasks in ecommerce:

- **Market intelligence** — gen AI can help simulate market scenarios, produce synthetic data to fill data gaps, and forecast customer responses based on historical data.
- **Information summarization** — instead of spending months on research, retailers can employ AI tools to read and analyze existing material.
- **Novel market and customer segmentation or product opportunities** — gen AI algorithms can uncover untapped market and customer segments as well as identify new product niches within the target market.¹⁶
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¹⁶ Juniper Research: AI in retail. segment analysis, vendor positioning & marketforecasts 2019–2023, <https://www.juniperresearch.com/researchstore/fintech-payments/ai-in-retail>. Last accessed 11 March 2024

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- **3. Planning for promotions and campaigns**

Generative AI technology can also supercharge sales and marketing campaigns of retailers with highly personalized customer loyalty programs and discount structures. Smart algorithms analyze customer and reference data to create tailored rewards and incentives cut out for individual customer preferences.

Moreover, **gen AI-based tools can get to the bottom of EPoS data** and transactional information to unearth actionable insights on sales trends. This information can then **underpin promotional efforts, inform price strategies, or set the direction for production processes** according to the expected demand.¹⁷

4. Boosting retail media networks

Selling media to advertisers is one of retail's biggest new trends that has given birth to **retail media networks** or RMNs. RMNs help brands advertise in places naturally inhabited by consumers, while retailers driving the network get to unlock a new revenue stream.

Retail media networks rely on loyalty and transaction data to sell ad inventory to third-party brands. So the endgame for RMNs' use of gen AI — one particularly valuable endgame — is its analytical capabilities. By analyzing and deriving insights from customer data, gen AI tools can tell retailers what advertiser categories to draw to their RMNs.

Within the network, gen AI tools can help advertisers tie together and optimize their ad spend. Generative artificial intelligence can also analyze the best-performing offerings of advertisers, match them to relevant consumers, and generate campaign configurations to replicate ad success. It's a win-win for both: advertisers get the bang for the buck, while retailers get to generate more RMN revenue.¹⁸

5. Supply chain and inventory management

Out of all industries, retail supply chains are the most dynamic due to ever-evolving customer demand, a large number of products, and rapid product life cycles. Generative AI adds simplicity to supply chain

¹⁷ Kar R, Haldar R (2016) Applying chatbots to the internet of things: opportunities and architectural elements. Int J Adv Comput Sci Appl 7(11):147–154

¹⁸ Soni VD (2020) Emerging roles of artificial intelligence in ecommerce. Int J Trend Sci Res Develop 4(5):223–225

management by taking over the analytics inherent in the process.

Gen AI tools can analyze sales information and demand trends to make demand predictions, calculate safety stock levels, and identify slow-moving stock. These tools can also assist gen AI ecommerce businesses in:

- **i -Running what-if scenarios** to get prepared for supply chain disruptions and fluctuations in demand
- **ii-Evaluating suppliers** by analyzing financial reports, performance metrics, and other data
- **iii-Optimizing logistics routes** by analyzing warehouse locations, transport links, and demand patterns
- **iv-Improving last-mile delivery** by selecting the right delivery or pickup routes based on traffic conditions, weather, and other data.¹⁹

6 .Gen AI-driven pricing

Generative AI models support AI-driven tools in identifying the optimal path to a retailer's sustainable financial health. To do that, AI tools perform price simulations where they create various market scenarios based on historical data, competitors' behaviour, and potential future events. **Price simulations also allow retailers to locate key-value categories and items in their portfolio, refine their pricing strategy, and spot implicit cross-dependencies between products.**

Demand-based pricing is another ecommerce area where generative AI shines. Here, ecommerce owners can **model demand curves** based on various influencing factors such as seasonality, economic factors, and other variables to optimize pricing during spikes or slowdowns in demand.²⁰

7. Fraud detection

Generative AI and ecommerce make a powerful combo when it comes to anomaly detection. Traditional methods of fraud detection often rely on predefined rules or models, which may not capture the ever-evolving nature of fraud techniques. Conversely, **generative AI stays adaptive to new fraud patterns by constantly vacuuming up consumer data and analysing it with past interactions.**

¹⁹ Davenport TH, Ronanki R (2018) Artificial intelligence for the real world. Harv Bus Rev 96:108–116

²⁰ Polishchuk V, Kelemen M, Gavurová B, Varotsos C, Andoga R, Gera M, Christodoulakis J, Soušek R, Kozuba J, Bliš tan P, Szabo S (2019) A fuzzy model of risk assessment for environmental start-up projects in the air transport sector. Int J Environ Res Public Health 16(19)

By understanding genuine past customer behaviour patterns and previously detected fraud patterns, generative AI can simulate fraudulent activities and train machine learning systems to detect and counteract them. Paired with a conversational interface, generative AI can also notify fraud engineers about risk flow and give reliable recommendations on what to do next.²¹

Leveraging generative AI for ecommerce takes dedicated effort

The promise of generative AI is enticing. But it can only deliver on its promise if implemented with your unique business strategy, needs, and constraints accounted for.

1. Get ready for generative AI transformation

A convincing, measurable business case is the foundation for any AI-based adoption. Your business case should define a target application of generative AI to a specific business challenge and the outcomes to measure its effectiveness. Also, your business case will give you a better understanding of the data needed to train the model and the technical expertise required to set the AI infrastructure in place.²²

2. Choose the right model

The choice of a foundational model depends on your use case, the type and quality of your data, and the limitations of your infrastructure. The technologies powering the model also differ based on your requirements. You might consider implementing Generative Adversarial Networks (GANs) models for image generation, while models like GPT are more suitable for text-only applications.

Mind that gen AI tools are not compliant with industry-specific regulations automatically from the onset, so it's imperative to identify the right training and deployment method to keep your customer data,

²¹ Kelemen M, Polishchuk V, Gavurová B, Szabo S, Rozenberg R, Gera M, Kozuba J, Andoga R, Divoková A, Blišťan P (2019) Fuzzy model for quantitative assessment of environmental start-up projects in air transport. Int J Environ Res Public Health 16(19)

²² Zhang C, Yang L (2021) Study on artificial intelligence: the state of the art and future prospects. J Indus Inf Integr 23

historical sales data, and other data safe.²³

3. Train, evaluate, and fine-tune the model

The training process begins after collecting and preprocessing data. A lot of back-and-forth identifies the optimal model architecture, hyperparameters, and training algorithm to achieve stable and safe performance. Once the model is trained, you should consistently evaluate its performance and fine-tune the model based on periodic test results.²⁴

4. Deploy and monitor

When the model is up and running, it's time to make it a part of your ecommerce architecture.

Based on your objectives, you may need to deploy it to a cloud-based service, create a dedicated interface, or integrate the documents and knowledge databases of your ecommerce business with the model. Once the model is deployed, it needs regular performance monitoring to make sure it lives up to expectations.²⁵

5. Maintain and improve

AI-based models are only as good as the data powering them. Therefore, make sure to refine data patterns to prevent model drifting and update the model as and when necessary. In some cases, your model may need retraining, in other times, new monitoring processes may keep your model up to date. As your ecommerce business grows, be sure to scale the model accordingly.

Keep in mind that AI adoption success goes beyond the pilot. You need to embrace a mature and calibrated practice supported by tailored tactics and hands-on advice from an experienced vendor.²⁶

²³ Huang MH, Rust RT (2018) Artificial intelligence in service. *J Serv Res* 21(2):155–172

²⁴ Russell SJ, Norvig P (2016) *Artificial intelligence: a modern approach*, 3rd ed, Pearson, Essex

²⁵ Lu Y, Xu LD (2018) Internet of Things (IoT) cybersecurity research: a review of current research topics *IEEE. Internet Things J* 6(2):2103–2115

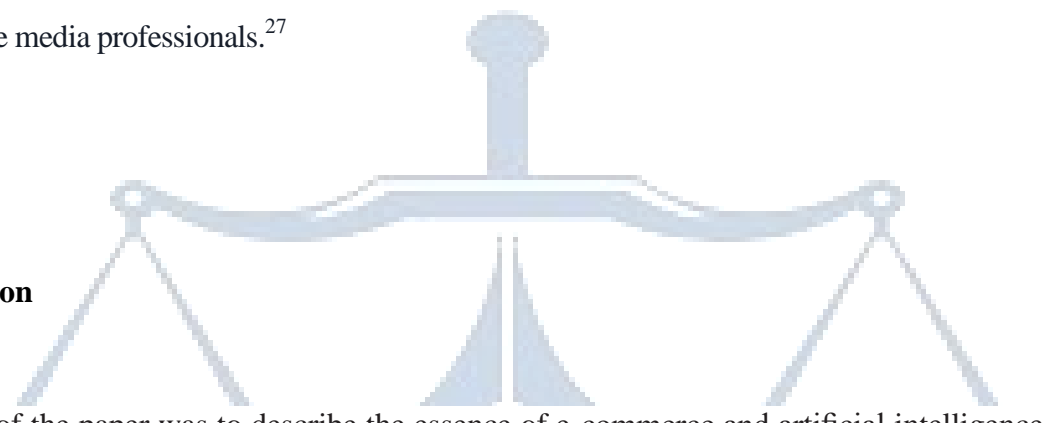
²⁶ Di Vaio A, Boccia F, Landriani L, Palladino R (2020) Artificial intelligence in the agri-food system: rethinking sustainable business models in the COVID-19 scenario. *Sustainability* 12(12)

6. Don't get caught in the hype, focus on the gains

The potential of generative AI in ecommerce is infinite, stretching from more efficient sales processes to unparalleled customer experiences and beyond. Instead of getting carried away with the persuasive abilities of AI technologies, retailers should rely on a specific business case to spearhead their gen AI journey.

The right choice of a gen AI model, infrastructure readiness, and dedicated human expertise cracks the code of adoption and makes generative AI a low-risk investment for ecommerce businesses and commerce media professionals.²⁷

Conclusion



The aim of the paper was to describe the essence of e-commerce and artificial intelligence and their benefits. The paper also provides insight into the evaluation of the importance of artificial intelligence and its future use in the context of e-commerce based on available studies on this issue. In today's world of commerce and digital technology, e-commerce plays an important role. Today, people use the Internet on a daily basis; they are willing to try new products and brands, but they are also critical and demanding. In this case, e-commerce appears to be a suitable option to meet their requirements. The application of artificial intelligence in e-commerce has become the subject of interest of many business scientists and experts. Previous research has highlighted the need for further research that would contribute to the development of knowledge and strategies in the application of artificial intelligence in e-commerce. It is possible to expect that artificial intelligence in the conditions of electronic commerce will be used more and more often and will become an integral part of all companies of this type.

²⁷ Duan Y, Edwards JS, Dwivedi YK (2019) Artificial intelligence for decision making in the era of big data—evolution, challenges and research agenda. *Int J Inf Manage* 48:63–71



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