Artificial Intelligence in E-commerce: A Case Study of Albanian Customers

Eda Tabaku

Department of Computer Science,
University "Aleksandër Moisiu" Durrës,
Durres, Albania

Abstract

The rapid expansion of the digital realm is profoundly impacting the trajectory of e-commerce, a trend further accelerated by the ongoing pandemic and evolving consumer behaviors. Consequently, businesses are increasingly turning to artificial intelligence (AI) as a vital tool to boost efficiency and adaptability. This paper aims to delve into the transformative influence of AI on e-commerce, particularly in addressing Albanian customers experience challenges. It asserts that AI presents a compelling opportunity for shaping the future landscape of commerce. Employing a blend of qualitative and quantitative methodologies, including online surveys and secondary sources like literature reviews, the research offers a comprehensive analysis. The findings highlight the effectiveness of integrating AI in e-commerce operations, emphasizing its capacity to enhance customer satisfaction, expand customer base, and drive business growth. Furthermore, the study underscores AI's potential to revolutionize various industries, underscoring its pivotal role in shaping the future trajectory of global sectors.

Keywords: *Artificial Intelligence, AI, E-commerce, Customer Experience, Online Shopping, Albanian Market*

1. Introduction

Artificial intelligence has permeated various facets of modern life, from healthcare to business, demonstrating its growing significance. Our daily routines now feature frequent interactions with AI-driven systems across multiple domains, including healthcare, biology, IT, and commerce.[1]

At its core, AI comprises algorithms designed to emulate human-like thinking and problem-solving abilities, while also enabling communication through language comprehension, learning, and adaptation. In the realm of business, AI's applications are manifold, with a primary focus on fostering growth. Its integration holds numerous benefits for enterprises, including heightened productivity, refined customer decision-making processes, and enhanced overall customer experience.[2]

The COVID-19 pandemic catalyzed significant shifts in consumer behavior, particularly in the retail and e-commerce sectors.[3] With the widespread adoption of online shopping due to social distancing measures, businesses faced the imperative to adapt swiftly. Embracing emerging technologies, notably AI, emerged as a viable solution to

---

[1] *The role of artificial intelligence in ecommerce, https://sendbird.com/blog/the-role-of-artificial-intelligence-in-ecommerce*

[2] *Ways AI Can Improve the Customer Experience, https://www.forbes.com/sites/forbesbooksauthors/2024/04/01/6-ways-ai-can-improve-the-customer-experience/?sh=69bc9f346842*

[3] *The Effect of Covid-19 on E-commerce: Evidence from Albanian Firms, https://www.researchgate.net/publication/379227125_The_Effect_of_Covid-19_on_E-commerce_Evidence_from_Albanian_Firms*

address these challenges, fostering customer connections and streamlining the shopping experience.[4]

This paper delves into the extent of AI integration in business, particularly within the e-commerce landscape. It aims to underscore the pivotal role of AI implementations in online platforms, emphasizing their crucial contribution to delivering exceptional customer experiences.[5]

2. Objectives

The primary aim of this research is to demystify artificial intelligence, offering a balanced perspective rather than idealizing it, and to explore how AI can elevate the customer experience within e-commerce. Furthermore, it serves as a resource for businesses, ranging from small to large, which prioritize enhancing the shopping journey for customers. This paper aids in assessing the feasibility of investing in AI applications to revolutionize customer experiences. Given the pivotal role of customer experience, particularly in e-commerce where face-to-face interactions are limited, this study delves into the significance of leveraging AI. Additionally, it sheds light on notable AI applications in online business platforms, showcasing the immense potential of this technology within today's global landscape.

3. Research Methodologies and Data Collection

This paper employs a mixed-method approach, integrating both qualitative and quantitative methodologies. The research methodology encompasses a literature review and web-based qualitative research. Quantitative analysis involves conducting a survey to gauge individuals' comprehension of AI and its broader implementation, with a specific focus on its potential within e-commerce. The survey findings will subsequently undergo qualitative analysis.

4. AI Applications in E-commerce

Artificial intelligence has undergone significant advancement and integration within the realm of business, notably in e-commerce. Its evolution has captivated audiences, shining a spotlight on the e-commerce sector. [6]This section will delve into the utilization of AI in e-commerce, examining the advantages it offers to both businesses and consumers.

Some powerful ways in which AI applications are going to dominate the e-Commerce industry in 2023 are:[7]
Personalized Services
- Chatbots and voice assistants in customer service
- Website personalization
- Recommendation systems
- Personalized search

Improving products and services
- Pricing Optimization
- Image tagging/recognition
- Auto-generated product descriptions
- Conversion rate optimization testing
- Retail Analytics
- Self check out Systems

Website performance improvements
- Review and forum moderation
- Marketplace moderation

Supply Chain Applications

---

[4] *Impact of Artificial Intelligence on E-Commerce Development, https://www.researchgate.net/publication/350015978_Impact_of_Artificial _Intelligence_on_E-Commerce_Development*

[5] *Albania E-Commerce Market OverView, https://www.reportlinker.com/market-report/E-Commerce/510738/E-Commerce?term=e-commerce%20trends&matchtype=b&loc_interest=&loc_physical=9069994&utm_group=standard&utm_term=e-commerce%20trends&utm_campaign=ppc&utm_source=google_ads&utm_medium=paid_ads&utm_content=transactionnel-1&gad_source=1&gclid=EAIaIQobChMIr9bE17qjhgMVhUCRBR28GAbHEAMYASAAEgLBovD_BwE*

[6] *Artificial Intelligence And its applications in E-COMMERCE https://www.researchgate.net/publication/377231196_Artificial_Int elligence_And_its_applications_in_E-COMMERCE*

[7] *The Impact of Artificial Intelligence on Ecommerce in 2023, https://www.ghostretail.com/post/ai-in-ecommerce*

- Inventory Planning
- Automated Warehouses
Marketing & Sales Applications
- Lead generation
- Lead scoring (for B2B)
- Detailed analysis of campaigns
- Dentifying prospective customers
Cybersecurity Applications
- Using AI to improve cybersecurity

4.1   AI Assistants and Chatbots

Numerous businesses are integrating AI and Machine Learning into their workflows. Through the adoption of chatbots or AI-driven virtual assistants, businesses not only boost revenue but also achieve cost savings while delivering exceptional customer service. Gartner reports that chatbots saved $11 billion Annual Cost for Retail, Banking & Healthcare Sectors by 2023, underscoring their significant impact. Consequently, the rising popularity of virtual assistants and chatbots comes as no surprise.[8]

The integration of AI-powered virtual assistants and chatbots offers numerous benefits to both businesses and customers:

- Enhanced Customer Service Efficiency: These tools provide quick and tailored responses to customer inquiries, reducing wait times and streamlining the customer service process.
- 24/7 Availability: Customers can access support and information round the clock, ensuring assistance whenever needed.
- Convenience and User-Friendliness: Virtual assistants and chatbots offer a user-friendly interface, simplifying tasks such as product searches, order placements, and shipment tracking for customers.
- Enhanced Customer Loyalty: By delivering seamless and personalized shopping experiences, these tools foster higher levels of customer satisfaction and loyalty, encouraging repeat business and positive referrals.
- Improved Accuracy: AI-powered systems are less prone to errors compared to human representatives, ensuring greater accuracy in responses and enhancing overall customer satisfaction.[9]

In summary, AI-powered virtual assistants and chatbots contribute to superior customer experiences, thereby driving business growth and success.

4.2   Customer Behavior and Sales forecasting

AI empowers businesses with the ability to predict their clients' behaviors in real-time. For instance, AI algorithms can monitor a customer's prolonged engagement with a particular product page, indicating their readiness to make a purchase. Armed with this insight, AI technology can take proactive measures, such as sending compelling emails or website notifications to encourage the customer to complete the purchase.

Furthermore, AI algorithms excel at segmenting customers based on gathered data, including the likelihood of their returning for additional orders. Additionally, AI has the capacity to furnish managers with valuable insights into customers who may be at risk of churn, leveraging its capability to calculate the potential customer lifetime value.

Moreover, AI serves as a valuable tool for trend and product forecasting. By scrutinizing historical data on past trends and consumer behavior, AI algorithms can identify emerging trends and forecast which products are poised for success in the future.[10]

In summary, AI facilitates businesses in analyzing customer behavior, predicting sales, and making informed decisions about future operations by discerning patterns and trends in real-time. This enables businesses to craft

---

[8] *Chatbots to Deliver $11bn in Annual Cost Savings for Retail, Banking & Healthcare Sectors by 2023, https://www.juniperresearch.com/press/chatbots-to-deliver-11bn-cost-savings-2023*
[9] *Research on the impact of artificial intelligence-based e-commerce personalization on traditional accounting methods, https://www.sciencedirect.com/science/article/pii/S2666603023000192*
[10] *Consumer behaviour and sales forecast accuracy: What's going on and how should revenue managers respond? https://www.researchgate.net/publication/45064219_Consumer_behaviour_and_sales_forecast_accuracy_What's_going_on_and_how_ should_revenue_managers_respond*

targeted marketing strategies, optimize sales endeavors, and mitigate the risk of inventory shortages, ultimately leading to enhanced revenue and profitability. AI stands to benefit both businesses and customers alike.

4.3   Virtual Searching

Consumers can now streamline their product search process through mobile applications or web browsers, reducing both cognitive and physical effort. Visual search allows customers to kickstart the search by simply uploading an image of the desired product. For example, a customer running low on facial cream can opt to replenish their stock online.

Moreover, alongside image-based searches, voice-enabled shopping has emerged as a novel method. Voice shopping in e-commerce involves using voice-activated devices to make online purchases. With advancements in voice recognition technology, consumers can utilize assistants like Amazon's Alexa, Google Assistant, and Apple's Siri to place orders. Voice shopping offers a hands-free and convenient experience, particularly beneficial for those unable to use traditional input methods.[11]

In essence, the advent of AI-powered solutions like voice and visual searching has expanded the array of options available to customers. These technologies provide a more efficient and personalized shopping experience, enabling customers to discover products that may not be easily found through conventional search methods. By broadening search capabilities, AI enhances the overall shopping journey, allowing customers to find products that resonate with their preferences and thinking patterns.[12]

4.4   Privacy and Cybersecurity

AI presents e-commerce entrepreneurs with a promising avenue to enhance the cybersecurity of their websites. By harnessing AI capabilities, websites can swiftly detect instances of fraudulent activity, thereby mitigating the risks of data breaches that could jeopardize the sensitive information of businesses and their clientele. Furthermore, AI can reinforce the encryption protocols of websites and applications, establishing a secure online payment ecosystem for customers.

AI contributes to fraud prevention by employing predictive analytics to spot anomalies in customer behavior. For instance, sudden large purchases with a new credit card or from an unfamiliar location can trigger alerts for potential fraud. Additionally, AI can analyze customer data to uncover common fraud patterns and behaviors, such as transactions occurring at odd hours or from unconventional locations.

However, it's imperative to acknowledge that AI itself presents privacy and security challenges, particularly if not developed and implemented with due diligence. Hence, conducting comprehensive risk assessments and ensuring proper governance and oversight of AI systems are crucial. This entails adopting best practices for data management, regularly monitoring AI systems, and fostering transparency and accountability in their utilization within privacy and cybersecurity frameworks.[13]

5.   Empirical Research and Data Analysis

5.1   Data Collection

Data collection for this study commenced in January 2024, followed by the distribution of a universal invitation in March to encourage participation in an online survey. The survey, structured with twenty questions, was designed to be completed in 3-5 minutes. It comprised three main sections: the first two aimed at gathering basic participant information, while the second section included multiple-choice questions and a brief open-ended query about attitudes toward artificial intelligence in daily scenarios. The final part delved deeper into AI's relationship with e-commerce, prompting participants for examples of AI-related e-commerce features and their opinions on their efficacy in meeting their needs.

---

[11] *Impact of Artificial Intelligence on E-Commerce Development, https://www.researchgate.net/publication/350015978_Impact_of_Artificial_Intelligence_on_E-Commerce_Development*

[12] *Artificial Intelligence And its applications in E-COMMERCE   https://www.researchgate.net/publication/377231196_Artificial_Intelligence_And_its_applications_in_E-COMMERCE*

[13] *Online privacy and security concerns of consumers https://www.researchgate.net/publication/309298680_Online_privacy_and_security_concerns_of_consumers*

5.2   Data Analysis

Ninety-three valid responses were gathered from a comprehensive 20-question survey, successfully capturing individuals' attitudes, satisfaction levels, and overall perceptions of AI in both everyday life and e-commerce settings. These findings, coupled with the underlying theoretical framework, serve as a basis for generating innovative ideas and conceptual insights.

Section 1: Participant Details

The study amassed a total of 93 responses, with the majority coming from female participants, constituting 56% of the sample. Additionally, a small portion, 6%, opted not to disclose their gender identity. Regarding age distribution, 56% of respondents fell within the 18 to 25 age bracket, predominantly representing Gen Z and Millennials. Meanwhile, 28% belonged to the 26 to 35 age group. Respondents aged 45 and above comprised a smaller proportion, only 4% of the sample. The survey findings are presented through 19 graphical representations, each thoroughly elucidated in the appendix section.

Section 2: Understanding AI's Presence in Everyday Life

How frequently do you hear AI mentioned in your daily life?

The survey aimed to scrutinize individuals' overall attitudes and comprehension of artificial intelligence (AI). Results revealed that a substantial portion of respondents (58%) frequently encountered mentions of AI, while approximately one-third (32%) acknowledged occasional encounters with this topic in their media consumption and daily conversations. These findings indicate that AI has garnered notable visibility across various media platforms and has become a prevalent subject of discussion beyond its traditional spheres.

Are you interested in AI?

The research examined participants' levels of interest in the field of AI, revealing that 18% of respondents did not find AI more captivating than other subjects. Conversely, the majority, comprising 69% of respondents, exhibited varying degrees of interest in AI, ranging from moderate to very high levels.

A minority of participants, totaling 13%, showed either no interest or only slight curiosity in AI. These findings suggest that as AI continues to evolve, it attracts increasing attention, with more individuals considering it a compelling topic for discussion and study. While most participants demonstrated some level of interest in AI, there were also those who showed less enthusiasm or remained indifferent to the field. Furthermore, the results indirectly indicate that the survey participants possess a degree of awareness and knowledge about AI.

In your opinion, what industries or areas do you think AI is currently used in? (choose all possible answers)

Survey participants were tasked with identifying industries or sectors they believed were presently employing AI technology. According to Figure 1, "Agriculture" received the fewest responses, totaling only 41 votes, whereas "Education" emerged as the most frequently chosen option, garnering 80 votes. The second most commonly selected application of AI was within the business domain, encompassing e-commerce and marketing, which accrued 76 votes. Healthcare and Information Technology also garnered significant attention, each receiving 76 votes.
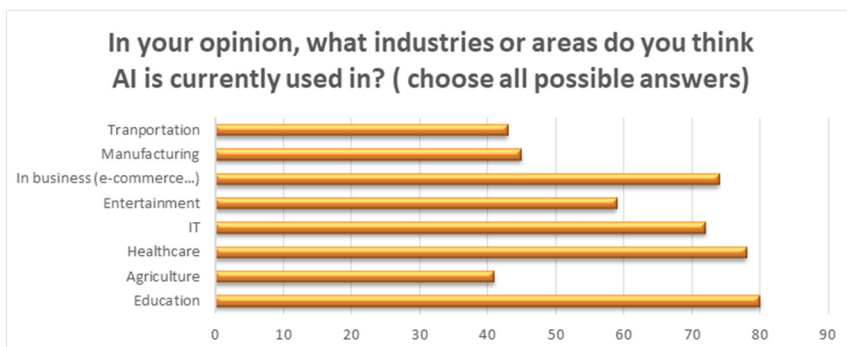

Figure 1. AI implementation industries

The responses to this question reflect a notable level of awareness among participants regarding the integration of AI across different facets of life, including everyday routines. It is clear from the answers that participants predominantly

link AI with education, while also recognizing its significance in business applications.

Can you recognize AI in your daily life?

Despite knowing the extensive usage of AI, Figure 6 indicates that a majority of individuals, 58.9%, lack confidence in their ability to identify AI in practical settings. Nevertheless, there is a positive outcome as almost a third of the participants profess to be able to recognize AI, in contrast to the 7.4% who admit they cannot do so.
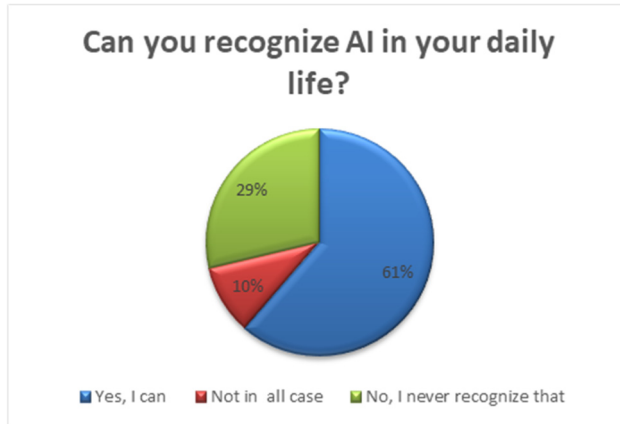

Figure 2. AI recognition level in life

Next, two stereotypical questions collected data on the attitude of participants toward AI.

Would you be comfortable with AI making a decision that could significantly impact your life?

Figure 2 implies that a notable segment of respondents (40%) express discomfort with the idea of AI making critical decisions that could profoundly influence their lives. This highlights a level of apprehension or unease among individuals regarding the potential implications of entrusting such significant decisions to machines. Conversely, a smaller faction of respondents (33%) indicated comfort with AI assuming decision-making roles. This suggests confidence in AI systems' capability to render impartial and precise decisions rooted in data and algorithms. A considerable percentage of respondents (27%) opted to remain neutral on the matter, signaling a lack of strong convictions or uncertainty surrounding the issue.
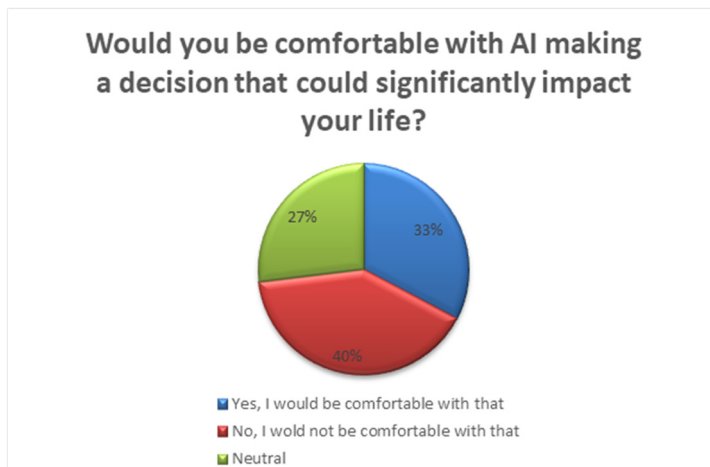

Figure 3. AI's decision-making

In your opinion, can AI endanger humanity in the future?

The following question is about the attitude of everyone toward the dangers AI can bring to humanity. Based on the responses shown in figure 4, Based on the responses, it seems that there is a significant level of concern about the potential risks and dangers of AI. Almost half of the respondents believe that AI has the potential to endanger humanity, while only a fifth believe that it cannot. This suggests that people are generally aware of the possible negative consequences of AI and are taking the issue seriously. However, the fact that a significant percentage of respondents are uncertain about the potential risks indicates that there is still much uncertainty and debate surrounding the topic, and more education and discussion may be necessary to raise awareness and understanding.
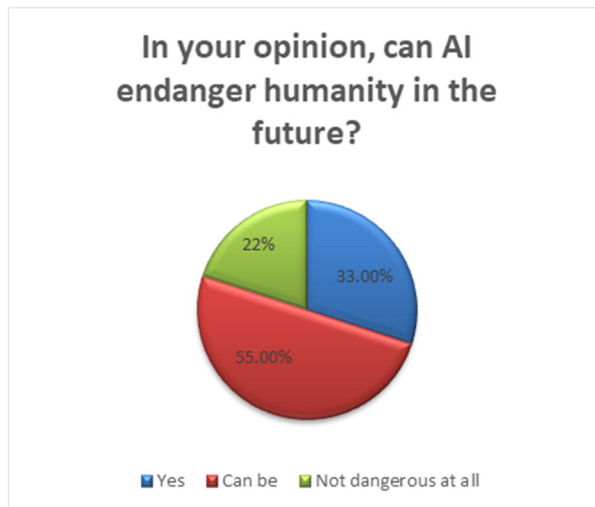

Figure 4: The attitude toward the dangers AI can bring to humanity

Do you think, it's important for people to learn about AI and its implementation? Why?

Do you believe it's crucial for individuals to grasp AI and its applications? Why?

The final inquiry in section 2 solicits brief responses to gather impartial viewpoints from participants. Here, participants were prompted to share their perspectives on the significance of broadening understanding about AI. The responses were categorized into two main streams of opinions. The predominant stream advocates for the importance of AI education, with participants affirming that everyone should indeed learn about it. Here are some noteworthy responses:

"Yes, because AI represents the forefront of technological advancements. Being well-versed in this field equips us with the ability to engage with the latest technological innovations."

"I strongly believe it's essential to learn about AI, or at least grasp some fundamental concepts, especially given its increasing integration into our daily lives. Its pervasive presence necessitates a basic understanding from us."

"Yes, we ought to understand the processes involved in AI and how it impacts our lives. AI operates independently, employing logical reasoning to solve problems, which introduces certain risks. Hence, it's crucial for everyone to comprehend its workings."

"Yes, I think it's paramount in today's digital era, where technological advancements are rapidly unfolding. People need to acquire the skills to navigate and harness AI to enhance their daily lives."

However, there exists a smaller contingent of participants who express reservations about the necessity for widespread AI education. Here are some responses from this minority:

"In my view, NO! Not everyone has access to advanced technologies like AI. Furthermore, AI is still relatively new, and

only a fraction of the global population is familiar with it. Additionally, its applicability is limited to certain professions or domains, as AI lacks emotional intelligence and operates in a rigid, mechanistic manner."

"How does that work? and what think we need from AI??"

In conclusion, our survey's results reveal that a considerable portion of the population, particularly young adults aged 18 to 35, possesses a limited comprehension of artificial intelligence (AI), perceiving their knowledge on the subject as unreliable and imprecise. Specifically, they exhibit skepticism regarding their ability to recognize AI in everyday situations. Consequently, many express apprehensions regarding the potential threats posed by AI to human life. Nonetheless, respondents acknowledge the beneficial impact of modern technology on their daily routines. As per the survey findings, a significant number of individuals express interest in the topic of AI technology and desire to enhance their understanding of it. Consequently, AI is poised to become a prominent subject for discussion in the year 2024.

Section 3: The applications of AI in e-commerce and customer satisfaction

The final phase of the study was crafted to delve deeply into the intricate relationship between artificial intelligence (AI) and e-commerce. Specifically, participants were tasked with identifying instances of e-commerce features leveraging AI applications. They were further prompted to assess their satisfaction levels based on their interactions with these features, utilizing a rating scale ranging from 0 to 5, with corresponding responses spanning from "never used AI for this as far as I know" to "strongly agree." Additionally, a series of business-oriented inquiries were included to gauge participants' perceptions of AI's universal applicability in the e-commerce sector and to evaluate whether investments in AI applications were deemed worthwhile for companies.

According to the findings from the second section, business emerged as the second most popular domain for AI implementation. The initial question of this section aimed to gauge participants' familiarity with AI applications in business, particularly within e-commerce. Participants were asked to provide examples of e-commerce features potentially enhanced by AI, with responses presented in multiple-choice format. The option "Personalization" garnered the highest number of responses, totaling 82 votes, indicating that many participants view personalization as a pivotal feature augmentable by AI in the realm of e-commerce. This result is unsurprising, as AI can facilitate the collection and analysis of customer data, enabling e-commerce businesses to deliver tailored product recommendations, targeted marketing messages, and enhanced customer service. The second most popular choice, "Supply Chain and Logistics," received 75 votes, suggesting that many participants recognize AI's potential to optimize and streamline e-commerce supply chains. "Business Operation Feature" secured 56 votes as the third most popular choice, while "Business-Customer Interaction" received the least number of responses, tallying only 50 votes.

Furthermore, participants acknowledged the pivotal role of customer experience in business development, particularly in the realm of online commerce (95.8%). Despite recognizing the myriad benefits AI offers to businesses, some participants remained uncertain about AI's capacity to enhance customer experience. Figure 5 illustrates that 43% of participants are confident in AI's ability to bolster customer experience, with 34.7% expressing varying degrees of certainty, ranging from "most in all cases" to "a little of the case" at 20%. A small minority remained uncertain about their comprehension of AI applications in this domain, opting for "Maybe" (5%), while none chose "No" in response to this question.
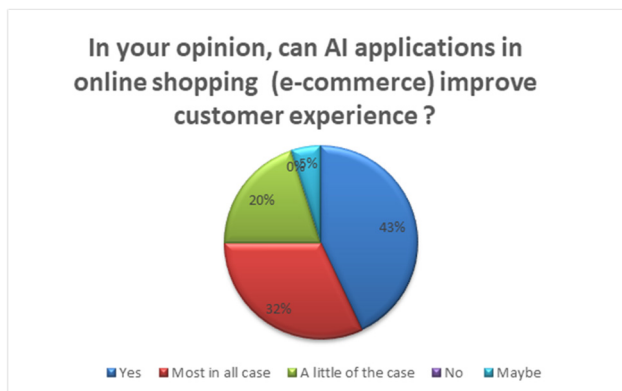

Figure 5. Participants' opinions about AI can improve CX

Six questions were crafted to gather data on the effectiveness of AI support in serving consumers within e-commerce, as well as to gauge their satisfaction levels with the online business platform services they've utilized. These questions pinpoint specific instances of AI applications in e-commerce, such as recommendation systems, delivering exceptional customer service, and employing AI-based virtual assistants (chatbots). The objective is to evaluate how efficiently AI enhances the e-commerce experience for customers. Remarkably, survey results surpassed expectations, with between 70% to 80% of respondents either responding positively or strongly agreeing with statements related to the aforementioned topics. Consistent with prior research, companies leveraging AI are better positioned to make informed decisions and elevate the caliber of their customer service. Leveraging AI as a competitive advantage has proven successful in the e-commerce sector, propelling businesses toward success.

Based on participants' encounters with AI applications, nearly all expressed satisfaction with the overall performance of its features on the online shopping platform. Towards the survey's conclusion, the majority of participants (81.1%) deemed investing in AI applications for online business platforms to be either entirely or mostly worthwhile in certain scenarios. This indicates that everyday consumers perceive potential benefits if companies invest in AI applications for their businesses.

In summary, transparency regarding the use of AI and sharing AI use cases with customers proves advantageous for companies. Customers hold a positive view of AI and regard it as a worthwhile investment. Integrating AI technology into business operations can enhance the company's image as customer-centric. Moreover, openly discussing AI projects can assuage concerns among hesitant customers. Skeptical customers can be persuaded of AI's benefits by showcasing its utility and offering clear explanations of its applications. Many customers are swayed by the potential advantages. To drive innovation on a global scale with the next wave of technology, continued investment in artificial intelligence is imperative, and customers express interest in further understanding AI technologies.

6. Results and Conclusions

6.1 Answer the Research Questions

Sub-question 1: What are the advantages and disadvantages of integrating AI into e-commerce for businesses and their clientele?

Integrating AI into e-commerce offers numerous advantages for both businesses and customers, including enhanced customer service, cost reduction, and improved supply chain management. AI-driven tools can analyze customer data to deliver personalized recommendations and promotions, as well as optimize inventory management, thereby enhancing the overall customer experience. However, the utilization of AI in e-commerce also raises concerns such as privacy issues and substantial investment costs. Hence, businesses need to carefully weigh the potential benefits and drawbacks of AI implementation in e-commerce, ensuring that it is executed prudently to maintain customer trust and loyalty.

Sub-question 2: What are the prominent real-world applications of AI in e-commerce?

The integration of AI in e-commerce offers a myriad of applications that significantly elevate the customer experience and foster business expansion.

Primarily, personalized solutions stand out as a vital category of AI applications in e-commerce. These solutions empower businesses to enhance customer experiences by delivering tailored marketing messages, personalized content, and customized products and services. Leveraging customer data, AI technologies like machine learning and natural language processing analyze customer behaviors and preferences, enabling businesses to provide personalized recommendations and experiences. Virtual assistants, recommendation engines, and chatbots exemplify how personalized tools can revolutionize e-commerce. By harnessing these AI-powered tools, e-commerce enterprises can cultivate stronger customer relationships, boost satisfaction levels, and ultimately drive sales and revenue growth.

Secondly, businesses grapple with forecasting customer behavior and predicting trend impacts. However, AI technology aids in analyzing user engagement and staying abreast of evolving trends via social media platforms, simplifying these tasks.

Thirdly, the adoption of virtual search capabilities empowers users to conduct intricate searches through voice or image inputs. Moreover, recognition software finds versatile applications across various e-commerce functions.

Lastly, privacy and cybersecurity emerge as critical concerns for businesses and their customers. With the escalating volumes of data and sophisticated cyber threats, AI facilitates the detection and response to security breaches with heightened efficiency and efficacy. A robust cybersecurity framework not only safeguards businesses but also

fosters customer trust.

Sub-question 3: How do customers perceive the use of AI in their daily lives and in e-commerce?

The survey findings indicate that customers hold generally positive views regarding the integration of AI technologies both in their everyday activities and within e-commerce platforms. The survey collected data concerning customers' perceptions of AI in various contexts, including its broader applications and specifically within the realm of e-commerce. The results revealed that although customers exhibit a satisfactory level of awareness regarding AI, many still lack a comprehensive understanding of its functionalities and its real-world applications. However, customers tend to possess a clearer understanding of AI's role in e-commerce compared to its broader implications. Overall, customers display a favorable perception of AI applications, suggesting their potential effectiveness as tools for businesses, particularly within the online business sphere. Furthermore, customers express a belief that investing in AI could enhance customer experiences, showing a willingness to further explore and understand its capabilities.

Main question: How businesses can use AI to improve the customer experience in Ecommerce?

After exploring three sub-research inquiries, it is evident that businesses have numerous avenues for employing AI to enhance the e-commerce customer experience. As AI progresses with a focus on customer-centricity, businesses aiming to deliver top-tier shopping experiences on their e-commerce platforms should weigh the advantages of artificial intelligence and machine learning. Through this, they can utilize consumer and enterprise data more efficiently, paving the way for the development of a robust future strategy.

6.2 Validity and Reliability

Based on the authors' original data, it can be affirmed that the research data is both authentic and reliable. The author created a series of inquiries for an online survey distributed to participants spanning various age groups, from under 18 to over 45 years old, through diverse digital platforms such as Facebook, WhatsApp, and E-mail. The selection of these survey distribution channels was deliberate for several reasons. Firstly, these platforms boast extensive user bases, ensuring broad and diverse participation. Secondly, they offer convenient and straightforward mechanisms for sharing survey links and gathering responses.

Moreover, the survey was conducted anonymously, with the author refraining from collecting personal information or offering any incentives to respondents, thereby eliminating any potential influence on responses. The survey questions, presented in Albanian, were grounded in reputable research.

Furthermore, the author supplemented their research with secondary sources, including books, journals, news articles, and other credible references, to bolster their findings. The reference list encompasses various theoretical explanations.

The principal objective of this paper was to address the research questions and sub questions, a goal achieved through the utilization of both primary and secondary data, as evidenced by the results and conclusions outlined in the research. Consequently, the primary research question was effectively tackled.

6.3 Global Trend

AI-driven personalization is set to revolutionize marketing and user experience, tailoring ads and content uniquely to each user, customizing prices based on individual data, and advancing AI chatbot capabilities. This innovation holds the potential to significantly boost customer engagement and eCommerce revenue by up to 15%. McKinsey research suggests it could also cut costs by as much as 30% while increasing customer acquisition by up to 5%.[14]

As search engines improve their ability to interpret user intent and deliver precise results, the relative significance of SEO may diminish compared to other advertising channels. This transformation has the potential to reshape how customers discover and interact with products, thereby influencing the overall efficacy of eCommerce sales strategies.

AI's predictive capabilities are poised to redefine eCommerce by leveraging first-party data to enhance user experiences, efficiently guiding customers to their intended destinations while reducing unnecessary distractions. The increasing emphasis on predictive analytics, particularly those utilizing first-party data, indicates a promising trajectory for 2024. This

---

[14] *Artificial Intelligence (AI) Trends in eCommerce 2024: Images, Pricing & Chatbots https://ecommercedb.com/insights/artificial-intelligence-ai-trends-in-ecommerce-2024/4720*

shift is driven by the necessity to replace outdated methods reliant on intrusive tracking practices.[15]

The adoption of predictive analytics offers substantial potential for retailers, empowering them to anticipate and comprehend customer behavior more effectively. This foresight enables businesses to optimize online store management and implement personalized strategies, such as targeted promotions and recommendations, thereby enhancing the overall customer experience.

6.4 Recommendations for Future Studies

The study has specifically examined the utilization of AI in Albania within e-commerce platforms, primarily concentrating on enhancing the customer experience. However, as AI continually evolves, new applications emerge, necessitating ongoing updates. It is recommended that future research ventures explore additional AI applications, such as AR, VR, and ChatGPT.

Furthermore, AI technologies find application across various industries and domains, offering a plethora of intriguing research avenues beyond e-commerce. Exploring these alternative industries presents captivating research opportunities.

Additionally, as previously highlighted, one significant drawback of integrating AI technologies into business operations is the initial high investment cost. This poses a notable challenge in Albania, particularly for small and medium-sized enterprises (SMEs) with limited capital resources seeking to adopt AI in their online platforms. Hence, further investigations within the same domain should incorporate detailed calculations regarding investment, including ROI analysis and expenses over specific timeframes. Such insights would provide valuable guidance for SMEs navigating the adoption of AI in their online business ventures.

References

A Core of E-Commerce Customer Experience based on Conversational Data using Network Text Methodology https://www.researchgate.net/publication/349423967_A_Core_of_E-Commerce_Customer_Experience_based_on_Conversational_Data_using_Network_Text_Methodology

Ai in E-Commerce, https://research.aimultiple.com/ai-e-commerce/

Albania E-Commerce Market OverView, https://www.reportlinker.com/market-report/E-Commerce/510738/E-Commerce?term=e-commerce%20trends&matchtype=b&loc_interest=&loc_physical=9069994&utm_group=standard&utm_term=e-commerce%20trends&utm_campaign=ppc&utm_source=google_ads&utm_medium=paid_ads&utm_content=transactionnel-1&gad_source=1&gclid=EAIaIQobChMIr9bE17qjhgMVhUCRBR28GAbHEAMYASAAEgLBovD_BwE

Artificial Intelligence (AI) Trends in eCommerce 2024: Images, Pricing & Chatbots https://ecommercedb.com/insights/artificial-intelligence-ai-trends-in-ecommerce-2024/4720

Artificial intelligence and e-commerce https://www.researchgate.net/publication/379566725_ARTIFICIAL_INTELLIGENCE_AND_E-COMMERCE

Artificial Intelligence And its applications in E-COMMERCE https://www.researchgate.net/publication/377231196_Artificial_Intelligence_And_its_applications_in_E-COMMERCE

Artificial Intelligence And its applications in E-COMMERCE https://www.researchgate.net/publication/377231196_Artificial_Intelligence_And_its_applications_in_E-COMMERCE

Artificial Intelligence is Becoming the Future of Ecommerce, https://www.bigcommerce.com/articles/ecommerce/ecommerce-ai/

Chatbots to Deliver $11bn in Annual Cost Savings for Retail, Banking & Healthcare Sectors by 2023, https://www.juniperresearch.com/press/chatbots-to-deliver-11bn-cost-savings-2023

Consumer behaviour and sales forecast accuracy: What's going on and how should revenue managers respond? https://www.researchgate.net/publication/45064219_Consumer_behaviour_and_sales_forecast_accuracy_What's_going_on_and_how_should_revenue_managers_respond

E-commerce regulation in Albania, https://www.tribunajuridica.eu/arhiva/An13v3/7.%20Aliaj,%20Tiri.pdf

Evolving Landscape Of E-Commerce, Marketing, and Customer Service: the Impact of Ai Integration https://www.researchgate.net/publication/379842954_Evolving_Landscape_Of_E-Commerce_Marketing_and_Customer_Service_the_Impact_of_Ai_Integration

IMPACT OF ARTIFICIAL INTELLIGENCE IN ECOMMERCE https://jusst.org/wp-content/uploads/2022/08/IMPACT-OF-ARTIFICIAL-INTELLIGENCE-IN-E-COMMERCE.pdf

Impact of artificial intelligence in ecommerce, https://jusst.org/wp-content/uploads/2022/08/IMPACT-OF-ARTIFICIAL-INTELLIGENCE-IN-E-COMMERCE.pdf

---

[15] *Evolving Landscape Of E-Commerce, Marketing, and Customer Service: the Impact of Ai Integration https://www.researchgate.net /publication/379842954_Evolving_Landscape_Of_E-Commerce_Marketing_and_Customer_Service_the_Impact_of_Ai_Integration*

Impact of Artificial Intelligence on E-Commerce Development, https://www.researchgate.net/publication/350015978_Impact_of_Artificial_Intelligence_on_E-Commerce_Development

Integration of artificial intelligence marketing to get brand recognition for social business https://www.semanticscholar.org/paper/INTEGRATION-OF-ARTIFICIAL-INTELLIGENCE-MARKETING-TO-Shaily-Emma/9b470c9d6262612028e4342525d905274b664708

Online privacy and security concerns of consumers https://www.researchgate.net/publication/309298680_Online_privacy_and_security_concerns_of_consumers

Research on the impact of artificial intelligence-based e-commerce personalization on traditional accounting methods, https://www.sciencedirect.com/science/article/pii/S2666603023000192

Reshaping E-Commerce: The Influence Of AI-Generated Content, https://www.forbes.com/sites/shoplazza/2023/08/02/reshaping-e-commerce-the-influence-of-ai-generated-content/?sh=73eea85b273e

The Application of Artificial Intelligence in Electronic Commerce https://www.researchgate.net/publication/335580087_The_Application_of_Artificial_Intelligence_in_Electronic_Commerce

The Effect of Covid-19 on E-commerce: Evidence from Albanian Firms, https://www.researchgate.net/publication /379227125_The_Effect_of_Covid-19_on_E-commerce_Evidence_from_Albanian_Firms
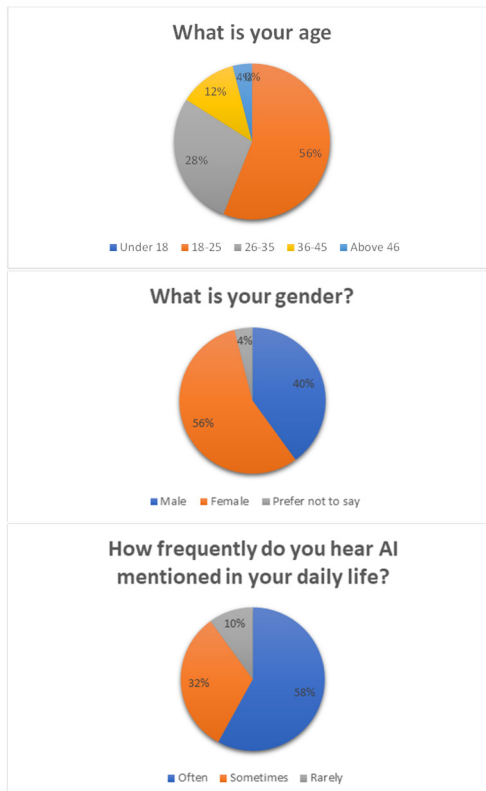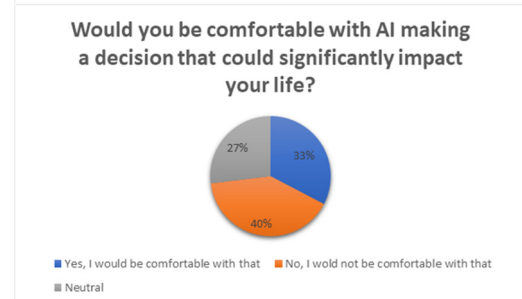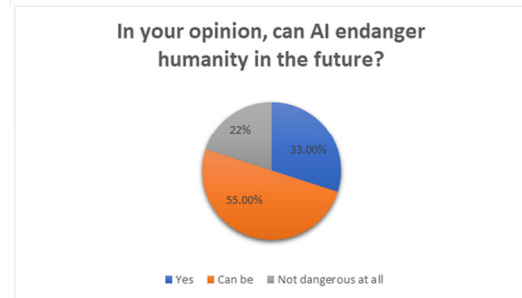
The Future of Shopping, https://hbr.org/2011/12/the-future-of-shopping

The Impact of Artificial Intelligence on Ecommerce in 2023, https://www.ghostretail.com/post/ai-in-ecommerce

The role of artificial intelligence in ecommerce, https://sendbird.com/blog/the-role-of-artificial-intelligence-in-ecommerce

Ways AI Can Improve the Customer Experience, https://www.forbes.com/sites/forbesbooksauthors/2024/04/01/6-ways-ai-can-improve-the-customer-experience/?sh=69bc9f346842

Appendix: Survey Results

What is your age

- Under 18: 0%
- 18-25: 56%
- 26-35: 28%
- 36-45: 12%
- Above 46: 4%

What is your gender?

- Male: 40%
- Female: 56%
- Prefer not to say: 4%

How frequently do you hear AI mentioned in your daily life?

- Often: 58%
- Sometimes: 32%
- Rarely: 10%

Are you interested in AI ?

In your opinion, what industries or areas do you think AI is currently used in? (choose all possible answers)

Can you recognize AI in your daily life?

In your opinion, can AI endanger humanity in the future?

Would you be comfortable with AI making a decision that could significantly impact your life?

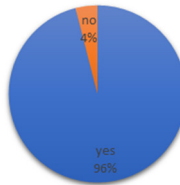**In your opinion, can AI applications in online shopping (e-commerce) improve customer experience ?**

- 43% Yes
- 32% Most in all case
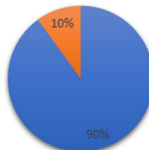- 20% A little of the case
- 0% No
- 5% Maybe
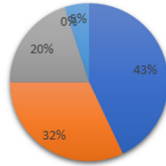
Legend: Yes | Most in all case | A little of the case | No | Maybe

Do you think customer experience has a significant role in the success or failure of the business, especially in online business?

- yes 96%
- no 4%

Legend: yes | no

From you experiences with Ai in online shopping, were you satisfied with the overall performance of the Ai-powered features in the online shopping platform?

- yes 90%
- no 10%

Legend: yes | no

Do you think it is worthy for companies to invest to Ai applications in their online shopping platforms?

- yes 40%
- In mos of the cases 41%
- In a little of the cases 18%
- No 1%
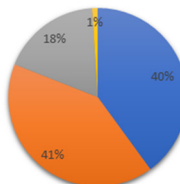
Legend: yes | In mos of the cases | In a little of the cases | No

AI will have an influence on how online businesses and their customers interact:

When shoppong online, the AI-powered visual search (voice and image searching) helped me discover new products that I was interested in.

AI helps he supply chain optimization to ensure fast and reliable delivery

AI-powered customer service automation is very helpful and responsive for my purchase.

When I purchase online, the chatbot provides satisfactory assistance in answering my question.

When shopping online, AI-powered product recommendation systems are accurate and helpful to purchase

Some examples of E-commerce features that relate to AI application. (Choose all possible answers)