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Influence of AI on Shopping Experience of Generation Z Customers

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Abstract: *Artificial intelligence (AI) refers to the simulation or approximation of human intelligence in machines. AI is being used today across different industries from finance to healthcare. It is also reinventing the retail landscape. Computer vision is enabling frictionless checkout and enhancing loss prevention for brick-and-mortar stores. Retailers that harness AI to connect with customers and operate more efficiently will be better positioned to thrive in today's AI powered world. The study is conducted with the sample size of 61 respondents by conducting survey through questionnaire in Palakkad district. This paper attempts to get an insight into the influence of AI technologies in the shopping experience of customers especially on generation Z. It is high time that customers become aware of different implications of AI and how it is contributing to their shopping life. This paper further talks about the trust issues of customers when it comes to AI and personal data sharing and how it can be improved by taking necessary measures by retailers like educating the consumers in a proper way about AI. Customers also agree that AI has made a positive impact on their shopping experience especially in customer support after purchase.*

Key words: *AI (artificial intelligence), generation Z, retailers, online shopping*

1. INTRODUCTION

Artificial intelligence or AI refers to computer systems that are designed to perform tasks that normally require human intelligence. This includes learning from data, recognizing patterns, decision-making, and problem-solving. Through machine learning algorithms and deep learning techniques, these systems are able to continuously improve their performance without explicit programming. AI (Artificial Intelligence) has revolutionized the retail industry in many ways, from inventory management to personalized recommendations. But one of its most significant impacts can be seen in enhancing the customer experience. In today's competitive market, providing an exceptional customer experience is crucial for businesses to thrive and stay ahead of their competitors.

AI has proven to be a game-changer in this aspect by offering various benefits that contribute to improving the overall shopping experience for customers. One of the most popular applications of AI in retail is personalized product recommendations. Using algorithms and data analysis, AI can understand a customer's preferences, purchase history, and browsing behaviour to offer tailored recommendations. This helps retailers to showcase products that are more likely to be of interest to customers, increasing the chances of conversion. While AI can provide valuable insights and recommendations based on data analysis, nothing can replace the warmth and personal touch of human interaction. Customers still crave human connection and are more likely to make repeat purchases if they feel valued and understood by the brand. This is where the importance of striking a balance between technology and human interaction comes into play.

Statement of The Problem:

Although the concept of AI has been around since 19 the century, it only became feasible to achieve in recent decades. It has been revolutionizing the industry from various sectors for quiet sometime. AI helps retailers enhance customer services and experiences. This study aims to focus on awareness of customers about the

influence of AI in their shopping experience and give suggestions about efficiently incorporating the AI technologies in their shopping life for a better future.

Scope of The Study: This study is designed to develop an understanding on influence of AI technologies on shopping experience of young customers. It covers areas like consumer's awareness about AI technologies, their attitude towards the change in present retailing formats and overall impact of AI in their shopping experience. The project mainly revolves around educated generation Z customers' current perceptions, expectations and recommendations in terms of their interactions with AI.

2. OBJECTIVES OF THE STUDY

- To assess the online shopping behaviour of young customers
- To assess the customer trust in the use of AI technologies in retail marketing
- To understand customers attitude towards the changed retail formats using AI technologies
- To examine the impact of AI in shopping experience of customers
- To study the satisfaction level of customers in services given by AI technologies

3. RESEARCH METHODOLOGY

Methodology is a way to systematically show the research problem. It deals with type of research design, source of data, and tools of data collection and analysis. Research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure. Descriptive structure is adopted for the study. Primary and secondary sources of data are collected for preparing the project. Primary data is collected through structured questionnaire. Secondary data are obtained from internet and journals. Sampling is necessary because it is impossible to examine the entire population or universe. Various factors such as time availability, cost and purpose of study etc., make it necessary for the researcher to choose a sample. It should neither be too small nor too big. It should be manageable. 61 samples were selected using convenience sampling. Sample unit of the study is young individuals from district of Palakkad. The sampling technique used for the present study is non-probability sampling. The sampling method used for present study is convenient sampling. Tools used to analyse data were simple percentage analysis and Weighted average analysis.

4. REVIEW OF LITERATURE

Ali Trawnih (2022) the engagement between customers and brand is transformed by Artificial Intelligence. This research examined how the incorporation of AI in purchasing might result in better AI powered customer experience. The result revealed that perceived sacrifice and trust both play an important role in mediating the impacts of perceived convenience; personalisation and AI powered service quality. It also poses significant implications for merchants who use AI in service provided to their customers.

Laura Abrardi (2022) the current advances in Artificial Intelligence (AI) are likely to have profound economic implications and bring about new trade-offs, thereby posing new challenges from a policymaking point of view. This study is a first attempt to survey the growing literature on the multi-faceted economic effects of the recent technological advances in AI that involve machine learning applications. It reviews research on the implications of AI on firms, focusing on its impact on labour market, productivity, skill composition and innovation.

FazlaZabbi (2021) the study says that tracking the customer journey has become more challenging because of the changing marketing environment. Customers share their desires, attitudes, and beliefs through many avenues and mediums, as the need for exceptional customer experience grows across all digital platforms. Artificial intelligence (AI) is the answer to enhancing the digital experience while delivering personalized content. Many marketers turn to AI to extract the information and use it.

5. LIMITATIONS OF THE STUDY

The study is conducted through small random sampling. So the whole population is not represented. Since AI is one of the recently popularised topics, many people have no idea on the survey which makes it difficult to select the sample. Large number of people has a lack of awareness on technicalities of AI which hinders the data collection. The study is based on the assumptions that a respondent has given correct information

6. ARTIFICIAL INTELLIGENCE (AI)

While a number of definitions of artificial intelligence (AI) have surfaced over the last few decades, John McCarthy offers the following definition in a 2004 paper ," It is the science and engineering of making intelligent machines, especially intelligent computer programs. It is related to the similar task of using computers to understand human intelligence, but AI does not have to confine itself to methods that are biologically observable."
At its simplest form, artificial intelligence is a field, which combines computer science and robust datasets, to enable problem-solving. It also encompasses sub-fields of machine learning and deep learning, which are frequently mentioned in conjunction with artificial intelligence. These disciplines are comprised of AI algorithms which seek to create expert systems which make predictions or classifications based on input data.

Artificial intelligence applications:

- Speech recognition: It is also known as automatic speech recognition (ASR), computer speech recognition, or speech-to-text, and it is a capability which uses natural language processing (NLP) to process human speech into a written format. —e.g. Siri—or provide more accessibility around texting.
- Customer service: Online virtual agents are replacing human agents along the customer journey. They answer frequently asked questions (FAQs) around topics, like shipping, or provide personalized advice, cross-selling products or suggesting sizes for users, changing the way we think about customer engagement across websites and social media platforms. Examples include messaging bots on e-commerce sites with virtual agents, messaging apps, such as Slack and Facebook Messenger, and tasks usually done by virtual assistants and voice assistants.

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Application of AI in retail markets:

Personalized Product Recommendations: AI can find patterns in customer behavior from prior purchases, demographics, preferences, etc. AI in retail helps to increase cash flow and sales, Increase in Return on marketing investment (ROMI) as well as an increase in customer engagement and conversion rate.

Pricing Optimization: AI-based price optimization models help customers and retailers to get the best rates and Price Prediction. For this, AI systems will do analyses in terms of Cost-based pricing, demand-based pricing, competition-based pricing, break-even analysis which allows them to increase demand and maximize profits.

Next Best Offer (NBO): AI-based Next best offer model analyzes the customer information and sales data and gives suggestions regarding products and services offered to the visitor. AI models will understand the sophisticated features of the product and map them with a customer persona (profile), which takes into account features such as purchasing frequency, type, and nature of customer and usage patterns and gives the best recommendations to the customer, which increases the accuracy of the sales.

Customer Service Optimization: Artificial Intelligence in Retail can automate customer service by integrating chatbots with the website that can help businesses to automate the chat process. Chatbots can resolve 60% queries automatically in less than a minute. Also, forwarding remaining conversations to the right agent.From an analytical perspective, retailers can analyze the behavior of customers interacting with a chatbot.

Product Search: AI in Retail can understand its customer needs by analyzing customer behaviour, interest, and intent and personalize the work accordingly to the person. AI-based product search systems analyze the customer based on its interest, brand preference and orders history for a particular customer. These analytical models estimate which product or service has the highest chance of being relevant for the customer.

7. DATA ANALYSIS AND INTERPRETATION

Trust in AI Algorithms: It helps to analyse how much respondents depends on AI for their shopping.The table and chart below shows the respondents' level of trust in AI algorithms while shopping online.

Table 1. Respondents' level of trust in AI algorithms while shopping online

Level of trust	Frequency	Percentage
Completely trust	9	14.8
Partially trust	23	37.7
Neutral	26	42.6
Do not trust	3	4.9
Total	61	100

Source: Primary Data

The table 1 shows that 43 percent of respondents are neutral regarding their trust in AI generated algorithms. 4 per centof the respondents do not trus tin online shopping. Data shows that majority of the respondents partially or completely trust AI generated algorithms.

Attitude Towards AI: Respondents' level of agreement towards the statements given below helps to study the attitude of customers on AI in their shopping experience.

TABLE 2. Attitude of respondents towards AI in the world of shopping and retailing

Attitudes	Sa	A	N	D	SD	WA	Rank
AI driven personalisation has enhanced my online shopping experience	100	68	60	4	2	3.83	1
AI technology has made the online shopping experience more efficient	55	116	54	4	1	3.77	2
AI technology is helpful in discovering new products and brands	50	100	69	2	2	3.65	3
There is a risk of consumer relying too much on AI recommendation	55	76	66	12	3	3.47	5
AI has diminished human touch in shopping experience	70	80	63	6	3	3.63	4

Source: Primary Data

The table 2 shows that rank one goes to the statement saying that AI driven personalisation has improved their shopping with a weighted average of 3.83 followed by respondents strongly agreeing on the statement that AI has made their shopping more efficient with a weighted average of 3.77. Respondents stay neutral regarding the statement that AI helps in discovering new products and brands with a weighted average of 3.65. Respondents less agree on statements that there is risk of consumer relying too much on AI recommendations and that of AI diminishing human touch in shopping with a weighted score of 3.47 and 3.63 respectively.

Impact of AI: The table and chart below shows the overall impact of AI in shopping experience of respondents.

TABLE 3. Impact of AI in online shopping

Level of impact	Frequency	Percentage
AI has made shopping more convenient and efficient	34	55.7
No noticeable impact on shopping experience	24	39.3
AI has made shopping less convenient	3	4.9
TOTAL	61	100

Source: Primary Data

Above table shows the overall impact of AI in the shopping experience of respondents. 56 per cent agrees that AI has made their shopping more convenient and efficient whereas 39 per cent do not find any noticeable impact. 5 per cent says that AI has made their shopping experience less convenient. Data shows that majority of the respondents says AI has made their online shopping more efficient.

Level of Satisfaction: It helps to analyse the influence of AI in customer satisfaction. The table and chart below shows the respondents' level of satisfaction with the AI driven recommendations while shopping online.

Table 4. Level of Satisfaction

Level of satisfaction	Frequency	Percentage
Highly satisfied	9	14.8
Satisfied	32	52.5
Neutral	17	27.9
Dissatisfied	2	3.3
Highly dissatisfied	1	1.6
TOTAL	61	100

Source: Primary Data

Above table shows the respondents' level of satisfaction with AI driven recommendations in online shopping. 53 per cent are satisfied whereas 28 per cent and 15 per cent are neutral and highly satisfied respectively. 3 per cent were dissatisfied. Data shows that majority of the respondents are satisfied in AI driven recommendations while shopping online.

8. FINDINGS

- Out of 61 respondents, maximum numbers were in the age group of 18-25, 67 per cent were female and 33 per cent were male, 68 per cent of respondents are employed. Out of the 61 respondents, 41 per cent has a monthly income of 20000 – 40000 and 28 per cent earn less than 20000 in a month.
- It is found that 52 per cent prefer both online shopping and offline shopping whereas 28 per cent prefer online shopping over offline shopping.
- From this study, it is found that most frequently purchased item of respondents through online is clothing and apparels followed by cosmetics.
- The study shows that 63 per cent of respondents' mostly used AI technology is Google assistant followed by 16 per cent using chatbots as an AI technology.
- From the study, it is found that 42 per cent of respondents are neutral regarding their trust in AI algorithms while shopping online and 38 per cent has a partial trust towards AI generated algorithms.
- From the study, it is found that 51 per cent has a partial trust on AI driven marketing techniques like chatbots, Big data analysis, Ad targeting etc. and 37 percent are neutral regarding their trust in AI driven marketing techniques.
- The study shows that most of the respondents strongly agree AI driven personalisation has enhanced their online shopping experience and AI technology has made their shopping experience more efficient.
- The study shows that 52 per cent of respondents are satisfied with AI generated recommendations while 27 per cent are neutral with AI recommended products while shopping online.
- The study shows that 55 per cent of respondents say AI has made their shopping more convenient and efficient.

9. SUGGESTIONS

- Most of the gen Z is aware of AI but do not have a detailed knowledge of its various implications in shopping sites. Business owners can provide a brief description about its usage in their website while designing the web page layout.
- Providing information about data privacy measures and how customer data is being used by retailers to enhance shopping experience will improve trust among online shoppers.
- Retailers should ensure that AI algorithms used for recommendations, personalisation and other tasks are accurately reliable by regularly testing and refining these algorithms to minimize errors and providing valuable insights to customers.
- Giving users control over their AI experiences by allowing them to adjust settings, provide feedback and customize their preferences empowers users to shape their own ideal shopping experiences and builds trust in AI

- Clear communication of data security policies and compliance with relevant regulations by retailers will reassure customers about the safety of their personal information making them willing to share more required data.
- Retailers can train their AI models on diverse data sets and regularly audit them to identify and mitigate any bias that may arise.
- Providing responsive customer support channels for customers who have questions or concerns about AI technologies.
- Highlighting positive feedback and reviews by other customers of online sites with AI powered features.
- Educating customers about benefits of AI and how it enhances their shopping experience using tutorials, guides and educational contents to help customers understand how AI works and how it can benefit them

10. CONCLUSION

The present study was conducted to analyse the influence of AI on shopping experience of generation Z customers. An in depth analysis is done to assess the online shopping behaviour of customers, to assess the awareness in customers about the use of AI technologies in retail marketing, to understand customers' attitude towards changed retail formats using AI technologies, to examine the influence of AI in shopping experience of customers, to study the satisfaction level of customers in services given by AI technologies. For satisfying various objectives, it is revealed that majority of respondents shop online and are highly or somewhat aware of use of AI technologies in the shopping sites. After analysis and interpretation, it is concluded that even though respondents are aware of AI and use AI generated recommendations, there still persists a lack of trust and high privacy concerns towards this technological innovation. As human beings, they prefer a proper balance of humans and technology in the shopping aspect of their life.

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