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The Impact of AI-Powered Chatbots on Consumer Purchase Decisions in E-commerce

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KEYWORDS

Customer satisfaction, AI-powered chatbots, E-commerce, chatbot effectiveness, Purchasing behaviour, Demand prediction, Personalisation.

ABSTRACT

This study mainly encompasses investigating "The Impact of AI-powered Chatbots on Consumer Purchase Decisions in E-Commerce" and aims to understand the ways technology based on the chatbot makes an impact on the behaviour of the user and even decision-making as well as overall satisfaction level within the digital environment in the case of the retail industry. This study aims to investigate how consumers view and use "AI chatbots" in "e-commerce", with a focus on how they influence customer choices. Having a better understanding of these effects will help "e-commerce companies" improve chatbot functionality, enhance customer satisfaction, and increase sales success through more intelligent automation. It mainly adopts the "mixed-method approach" which makes an effective combination of qualitative and even quantitative techniques to make sure about an effective understanding of the case of the "research topic". The findings evaluated that 5% of the customers have interacted with the "AI-powered chatbot", where 53% stated their experience was good. Therefore, it stated the effective practices of this technology to positively influence buying behaviours. However, at the same time, it is essential to focus on issues like privacy, functionality, data security and many more to enhance the overall satisfaction level.

1. INTRODUCTION

The experience of purchasing goods via the Internet has changed dramatically in recent years due to the incorporation of "Artificial Intelligence" (AI) into "e-commerce platforms". Among these developments, chatbots driven by AI have become an essential instrument for improving customer support, offering immediate help, and expediting the purchasing process (Mounika, 2024). These chatbots impersonate human interactions and provide assistance with everything from order monitoring and resolution of complaints to product recommendations. Understanding how chatbots affect customer behaviour is becoming more and more crucial for companies looking to stay competitive as online retail continues to grow internationally.

The integration of the new "algorithm and chatbots" in AI technologies has become more sophisticated for businesses as it involves "NLP along with Machine Learning" (Rane et al., 2024). It allows the business to understand the consumer needs from previous shopping and develop the product and service design as per the needs (Chiu et al., 2021). The prior research only examines the way advanced technologies like AI help businesses predict consumer demand. This paper fills the gap by describing the way AI chatbots and sophisticated software like NLP and ML help to impact consumer purchase decisions within e-commerce. "From USD 6.4 billion in 2023 to USD 66.6 billion by 2033", the "global AI chatbot market" is projected to develop at a "Compound Annual Growth Rate (CAGR)" of 26.4% between 2024 and 2033 (Grand View Research, 2024). The rapid growth of the chatbot market certainly allows small or large-scale businesses to increase their market demand prediction and impact consumer behaviour.

2. LITERATURE REVIEW

Impact of "AI chatbot" on the "buying behaviours" of customers

As per the statement of Rahevar and Darji (2024), the "AI chatbot" has provided product suggestions based on the preferences of the customers, where the potential advantages are provided to deliver "personalised services". It has also offered instant assistance to address queries and help the customer navigate the product options, which are required to enhance their overall expectations. In contrast, Raji et al. (2024) stated that chatbots also have limited understanding to interpret customer queries, and a "lack of human touch" might negatively influence them to make emotional connections. Nevertheless, it is one of the important ways to assist customers quickly and enhance conversion rates. An "AI-powered chatbot" can also develop trust among customers by providing essential information that can lead to increased loyalty.

Ways influencing "chatbot effectiveness"

According to Hsu et al. (2023), the design of the chatbot is one of the important ways to gain the attention of the customers, as having clear goals for the chatbot and a user-friendly interface is required. As a result, it will enhance the "conversion rate", but at the same time, "technical factors" like machine learning, algorithms and seamless integration with other systems are also essential. James and Tuong Thanh Vo (2024) stated that while the customers get effective information from the AI chatbot, it can positively influence their "purchasing behaviour" in terms of creating an urge among them to use the product, getting the necessary information about its benefits and many more. Consequently, it is required to use "high-quality data" for providing accurate responses as per customer needs and meeting their expectations.

Optimising chatbot integration

Seamless integration is required to positively influence customer satisfaction and ensure to response to their needs. In this context, Oktavia and Widiawati Arifin (2024) stated that the utilisation of cloud infrastructure for handling user interaction and implementing "robust security" measures is essential to protect their data. Various challenges are associated, like "technical issues, data security", and many more, that should be focused on during integration. However, Waghambare et al. (2024) stated that it should be aligned with the "brand identity", and using key metrics like "conversion rate" and "user engagement" is essential to further monitor them and implement the best practices as per requirements. Thereby, integrating a chatbot with various channels like "social media and websites" can ensure its use, and the responsibility of the organisation is to manage and develop a consistent user experience that will positively influence their buying behaviours.

Objectives

- To evaluate the role of "AI chatbots in enhancing the customer journey"
- To understand factors that influence "chatbot effectiveness"
- To explore the connection with variables like "purchasing behaviours" of customers and "chatbot performance"
- To optimise effective practices for optimising "chatbot integration"

Research Questions

- How does an "AI chatbot" positively influence "customer buying behaviours"?
- What are the major influencing factor which improves the effectiveness of "AI chatbots"?

- What are the strategies that should be adopted to optimise the "chatbot integration"?

3. METHODOLOGY

This study mainly focuses on investigating "The Impact of AI-powered Chatbots on Consumer Purchase Decisions in E-Commerce" and aims to understand the ways technology based on the chatbot makes an impact on the behaviour of the user and even decision-making as well as overall satisfaction level within the digital environment in the case of the retail industry. On the other hand, this research mainly adopts the "mixed-method approach" which makes an effective combination of qualitative and even quantitative techniques to make sure about an effective understanding of the case of the research topic. In this case, this type of approach provides the effective identification of the statistical trends and even deeper thematic insights that provide concerns about the effectiveness of the chatbot and even the engagement of the consumers.

Figure 1 provides the processes that adhere to the accumulation both of qualitative and even quantitative data in this research.

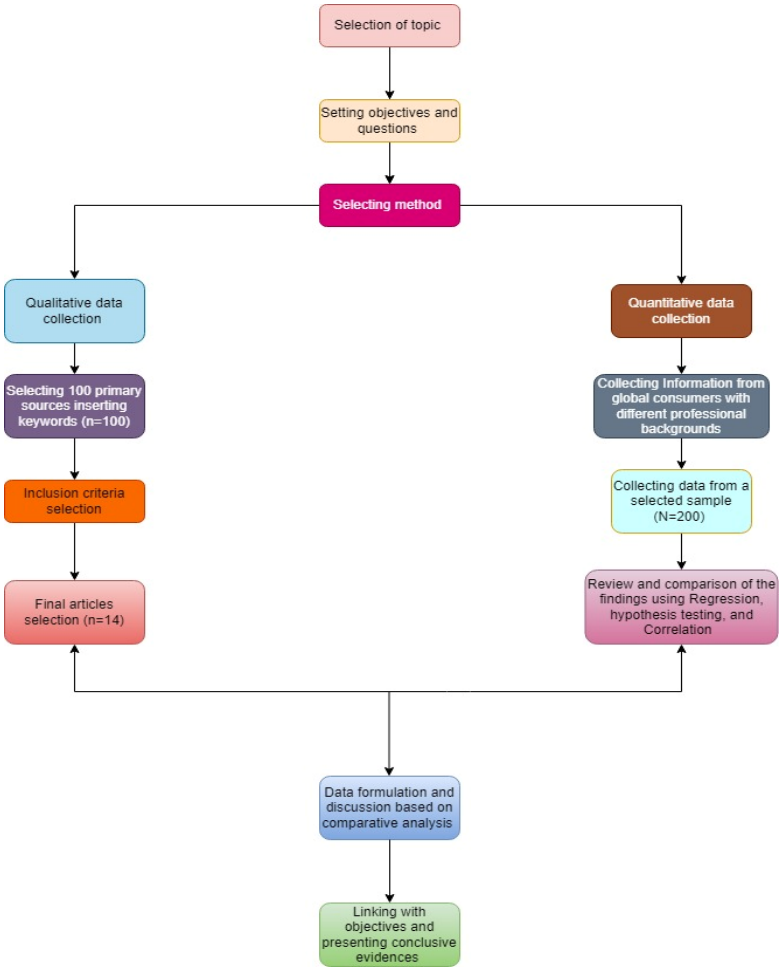

Figure 1: Data Accumulation Process, Source: Self-made

Figure 1 provides the "primary data collected" with the help of the structured surveys which are mainly distributed to the 200 global consumer who focus on increasing their interaction with the "AI-powered chatbots" on the different "e-commerce platforms". Participants are selected with the help of a random sampling with the help of professional networking tools such as LinkedIn, customer forums and even e-commerce user groups all across the platforms. On the other hand, the survey was mainly developed with Google Forms which contains 10 "close-ended questions" that are designed in terms of measuring factors such as responsiveness of the chatbots, satisfaction and even influence on the decisions for purchase and even features based on the trust building.

Figure 2 provides an illustration of the collection of the entire data and even the analysis process which includes the selection of the participant and even the compilation of the different resources.

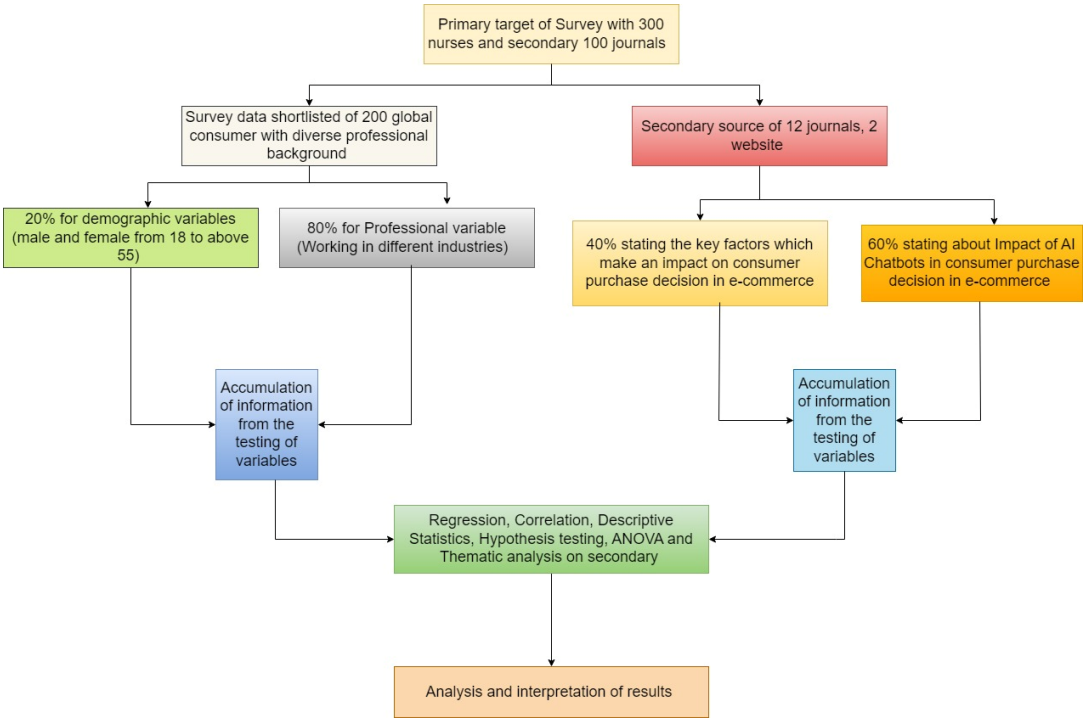

Figure 2: Methods for data collection and Analysis, Source: Self-made

Figure 2 provides the collected "primary data" from the structured survey which is analysed with the help of "SPSS statistical software". In this case, the key techniques mainly included "correlation analysis, Hypotheses testing, regression analysis and descriptive statistics". These types of statistical tools mainly help to identify the different kinds of strengths of the relationship between the usages of the chatbots and the intention of the purchase and also address the predictors based on the behavioural patterns and usage frequency of the chatbot. On the other hand, the "thematic analysis" is used in terms of interpreting various qualitative aspects derived from the selected "secondary sources". This provides support with the help of addressing the patterns such as trust, convenience and even limitations of the technologies based on the interactions of chatbots.

Figure 3 provides the different types of sources of the secondary data used in this research.

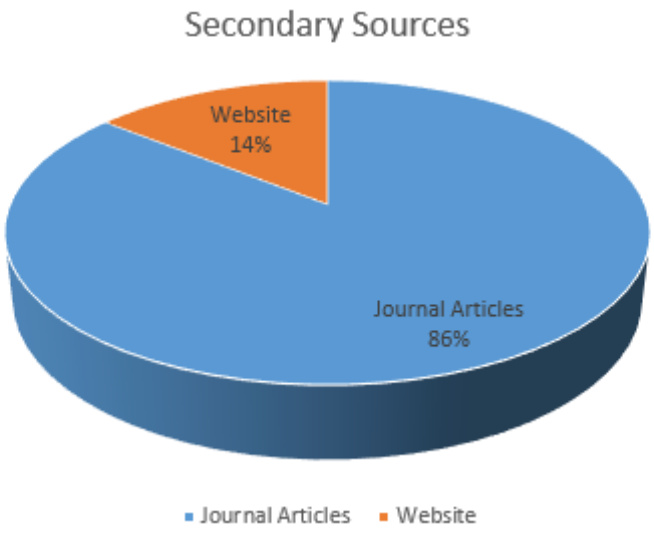

Figure 3: Different types of Secondary Sources, Source: Self-made

Figure 3 illustrates that in the case of the secondary data, 12 journal articles and 2 websites are selected in terms of providing the theoretical foundation in terms of understanding the ways AI-powered tools make an impact on the behaviour of the customer in the case of e-commerce. These types of sources are mainly accessed with the help of the different kinds of trusted

databases from academics such as “Google Scholar, ScienceDirect and JSTOR”. On the other hand, the literature mainly provides support to the formulation of both research questions and even the development of the structured survey and findings based on the frameworks of the existing theories.

Table 1 illustrates the inclusion of consumers in this research

Table 1: “Inclusion of the customers”, Source: Self-made

Demographic variables	**Categories**	**Number of Respondents**	**Total**
Gender	Male	132	200
	Female	84	
Age	18-24	22	200
	25-34	61	
	35-44	87	
	45-54	24	
	55 or older	6	

Table 1 provides 132 males and 84 females share their perspectives on the impact of “AI-powered chatbots” on consumer purchase decisions in “E-commerce”.

H0 (Null Hypothesis): “There is no impact of AI-powered chatbots on the enhancement of the customer journey by improving service responsiveness and personalisation.”

H1 (Alternative Hypothesis): “There is a potential impact of AI-powered chatbots on the enhancement of the customer journey by improving service responsiveness and personalisation.”

4. RESULTS AND DISCUSSION

Statistical Analysis

Descriptive Analysis

Q1. What is your age?

Table 2 exemplifies the “age of the consumers who participated in the survey session”

Table 2: Participant’s age, Source: Self-Made

		“Frequency”	“Percent”	“Valid Percent”	“Cumulative Percent”
Valid	18-24	22	11.0	11.0	11.0
	25-34	61	30.5	30.5	41.5
	35-44	87	43.5	43.5	85.0
	45-54	24	12.0	12.0	97.0
	55 or older	6	3.0	3.0	100.0
	Total	200	100.0	100.0	

The age distribution of the 200 respondents to the “survey on AI-powered chatbots in e-commerce” is shown in Table 2. With 43.5% of answers, the “largest age group was 35–44 years old” which reflects that the personnel have enough experience to use online shopping, followed by “25–34 years old” with 30.5%. 11% of participants belong to the age group

of "18 and 24", while 12% were the age group of 45 and 54. Just 3% of those surveyed were "55 years of age or older". This indicates that middle-aged customers have become quite involved.

Q2. "What is your gender?"

Table 3 shows the "gender representation in this survey session"

Table 3: Gender, Source: Self-made

		"Frequency"	"Percent"	"Valid Percent"	"Cumulative Percent"
Valid	**"Male"**	132	66.0	66.0	66.0
	"Female"	68	34.0	34.0	100.0
	"Total"	200	100.0	100.0	

From the survey session, it has been found that in the survey of 200 consumers, 132 consumers are male and only 68 personnel are female. So, it reflects that the online shopping trends have rapidly increased across the male gender. These statistics might impact the paper regarding the way technology interaction like the chatbot interaction and ways the purchasing nature of consumers are perceived and highlights the significance of gender-based preferences.

Q3. "How often do you shop online?"

"Table 4" shows the data on "how many times the consumers shop online."

Table 4: "Frequency of choosing online shopping", Source: self-made

		"Frequency"	"Percent"	"Valid Percent"	"Cumulative Percent"
Valid	**Daily**	24	12.0	12.0	12.0
	Weekly	83	41.5	41.5	53.5
	Monthly	76	38.0	38.0	91.5
	Rarely	17	8.5	8.5	100.0
	Total	200	100.0	100.0	

The data on the frequency of internet purchasing by customers is shown in Table 4. The "majority of respondents (41.5%)" responded that they shop online once a week, with 38% reporting monthly purchases. Just 8.5% of participants said they hardly ever purchase online, compared to 12% who said they do it every day. Given that more than 90% of customers make purchases online at least once a month, these findings imply that most consumers engage in "online shopping" on a frequent basis.

Q4. "Do you ever interact with an AI-powered chatbot while shopping online?"

Table 5 shows whether consumers interact with the "AI-powered chatbots" in online shopping or not.

Table 5: "Interact with an AI-powered chatbot", Source: Self-made.

		"Frequency"	"Percent"	"Valid Percent"	"Cumulative Percent"
Valid	**Yes**	170	85.0	85.0	85.0
	No	30	15.0	15.0	100.0
	Total	200	100.0	100.0	

From Table 5 outcomes, it has been found that the "majority of the respondents almost 85%" of the consumers agreed that they have interacted with the "AI-powered Chatbot". It mainly indicates that the "AI chatbots" are already rapidly growing in the online shopping field it become one of the common features in the "e-commerce experience".

Q5: "If yes, how would you rate your experience with AI-powered chatbots in e-commerce?"

Table 6 illustrates the overall rate of experience with "AI-powered chatbots within e-commerce"

Table 6: "Experience with AI-powered chatbots", Source: Self-made

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	**Excellent**	35	17.5	17.5	17.5
	Good	106	53.0	53.0	70.5
	Fair	52	26.0	26.0	96.5
	Poor	7	3.5	3.5	100.0
	Total	200	100.0	100.0	

From Table 6, most of the participant that is 53% of them, rate good for their experience with "AI-powered chatbots in ecommerce." 17.5% of the respondents state an excellent rating regarding the AI-powered chatbots. This illustrates that a chatbot driven by "artificial intelligence (AI)" opens up possibilities for online retail businesses which were previously dependent on significant capital and were almost impossible to grow. On the other hand, 26% of participants rated fair and 3.5% of the remaining respondents stated a poor rating for "AI-powered chatbots within e-commerce." This illustrates more development and enhancements among these bots are needed to be done to support the activities of e-commerce.

Q6: "What features do you like most about an AI-powered chatbot in e-commerce?"

Table 7 illustrates the most liked feature regarding "AI-powered chatbots within e-commerce"

Table 7: "Liked features of AI-powered chatbots", Source: Self-made

		"Frequency"	"Percent"	"Valid Percent"	"Cumulative Percent"
Valid	**Order Tracking**	46	23.0	23.0	23.0
	Product recommendations	83	41.5	41.5	64.5
	Personalised Offers	60	30.0	30.0	94.5
	Customer support	11	5.5	5.5	100.0
	Total	200	100.0	100.0	

Based on "Table 7", it has been evaluated that 41.5% of the participants stated that they like the product recommendation feature the most regarding "AI-powered chatbots in ecommerce." 30% of the "respondents stated" that the feature of personalised offers in "AI-powered chatbots" is most liked by them. 23% of the participants selected the order tracking feature as the most liked feature. The remaining 5.5% of the participants mentioned that the most likely feature is customer support. This illustrates that very few customers favour the customer support feature, which means this respective feature of the "AI-powered chatbots in ecommerce" needs more improvement.

Q7: "Have chatbots driven by AI ever affected your decision to buy something?"

Table 8 illustrates the chances where chatbots driven by AI affected the buying decision.

Table 8: "AI-driven Chatbots affected buying decisions", Source: Self-made

		"Frequency"	"Percent"	"Valid Percent"	"Cumulative Percent"
Valid	**"Yes, frequently"**	46	23.0	23.0	23.0
	"Yes, occasionally"	87	43.5	43.5	66.5
	"Rarely"	59	29.5	29.5	96.0
	"Never"	8	4.0	4.0	100.0
	"Total"	200	100.0	100.0	

As per Table 8, the "majority of respondents" that is 43.5% of the participants, stated that occasionally "AI-powered chatbots" have influenced their buying decisions. This illustrates that by evaluating data and providing customized recommendations that make you feel like perhaps the most valuable customer in the universe, AI chatbots may mimic a personalized shopping experience. 23% of the participants stated frequently and 29.5% of the participants claimed that rarely "AI-powered chatbots" have influenced their buying decisions. The remaining 4% of the respondents stated never, which means that "AI-powered chatbots" might have less influence on some customers regarding their buying decisions.

Q8: "When employing AI chatbots, which of the following best sums up your primary concerns?"

Table 9 illustrates the primary concerns associated when employing "AI-powered chatbots"

Table 9: "Concerns associated when employing "AI-powered chatbots", Source: Self-made

		"Frequency"	"Percent"	"Valid Percent"	"Cumulative Percent"
Valid	Lack of human touch	31	15.5	15.5	15.5
	Inaccurate or irrelevant responses	67	33.5	33.5	49.0
	Privacy and data security	67	33.5	33.5	82.5
	Limited functionality	32	16.0	16.0	98.5
	No concerns	3	1.5	1.5	100.0
	Total	200	100.0	100.0	

In accordance with the data provided in the above table, it is identified that the majority of the participants (33.5%) are concerned regarding privacy and security issues and inaccurate and irrelevant responses from "AI-powered chatbots." This illustrates that the concerns regarding this may impact the overall adoption and implementation of AI-powered chatbots in ecommerce." In contrast, 16% and 15.5% of the participants are concerned regarding limited functionality and lack of human touch issues respectively of the remaining participants 1.5% stated that they did not have any concerns.

Q9: "How crucial do you think having an AI chatbot on an e-commerce website is?"

Table 10 illustrates the cruciality of having "AI-powered chatbots" within an "e-commerce website".

Table 10: "Cruciality of "AI-powered chatbots" for e-commerce website", Source: Self-made

		"Frequency"	"Percent"	"Valid Percent"	"Cumulative Percent"
Valid	Very important	46	23.0	23.0	23.0
	Somewhat important	64	32.0	32.0	55.0
	Neutral	58	29.0	29.0	84.0
	Not very important	31	15.5	15.5	99.5
	Not important at all	1	.5	.5	100.0
	Total	200	100.0	100.0	

Based on Table 10, it can be analysed that 32% of the participants think having "AI-powered chatbots" within e-commerce websites is somewhat important. 29% of the respondents are neutral about this and 23% of the participants feel it is very important to have "AI-powered chatbots" within e-commerce websites. 15.5% and 0.5% of participants stated that not very important and not important at all to have "AI-powered chatbots"

Q10: "When you shop online, would you rather speak with a human agent or an AI chatbot?"

Table 11 illustrates the time when customers chose to shop from online platforms and during that time they chose to speak with a "human agent" or an "AI-Chatbot".

Table 11: "Time of online shopping and speaking with a human agent or AI Chatbot", Source: Self-made.

		"Frequency"	"Percent"	"Valid Percent"	"Cumulative Percent"
Valid	**AI chatbot**	47	23.5	23.5	23.5
	Human representative	85	42.5	42.5	66.0
	Depends on the situation	61	30.5	30.5	96.5
	No preference	7	3.5	3.5	100.0
	Total	200	100.0	100.0	

"Table 11" shows that when shopping on online platforms, the majority of the respondents such as 42.5% stated that they focus on speaking with the human representative which provides an indication of a stronger level of trust in the human interaction for the effective service to the customer. On the other hand, 23.5% are mainly comfortable in terms of increased engagement with the AI chatbots and provide suggestions about the increment in acceptance of the solutions related to automation. 30.5% of the respondent stated that their preference depends on the different kinds of situations which reflect that the case plays an important role in terms of choosing various kinds of supporting channels.

Correlation Analysis

The correlation analysis is important for this study because it provides the effective identification of the strength and even direction of the "relationships between" the features of the chatbot and even the behaviours of the customers. It also helps to address whether improvements in the case of the performance of the chatbots are associated with the enhancing satisfaction level of customers, engagement and even intention for purchase and provides support to the insights of the data for the optimisation of chatbots.

Table 12 provides the results from the correlation analysis.

Table 12: Correlations, Source: Self-made

		"When you shop online, would you rather speak with a human agent or an AI chatbot?"
"Do you ever interact with an AI-powered chatbot while shopping online?"	Pearson Correlation	.169*
	Sig. (2-tailed)	.017
	N	200
"If yes, how would you rate your experience with AI-powered chatbots in e-commerce?"	Pearson Correlation	.544**
	Sig. (2-tailed)	.000
	N	200
"What features do you like most about an AI-powered chatbot in e-commerce?"	Pearson Correlation	.486**
	Sig. (2-tailed)	.000
	N	200
"Have chatbots driven by AI ever affected your decision to buy something?"	Pearson Correlation	.589**
	Sig. (2-tailed)	.000
	N	200
	Pearson Correlation	.580**
	Sig. (2-tailed)	.000

"When employing AI chatbots, which of the following best sums up your primary concerns?"	N	200
"How crucial do you think having an AI chatbot on an e-commerce website is?"	Pearson Correlation	.648**
	Sig. (2-tailed)	.000
	N	200
"When you shop online, would you rather speak with a human agent or an AI chatbot?"	Pearson Correlation	1
	Sig. (2-tailed)	
	N	200

**. "Correlation is significant at the 0.01 level" (2-tailed).

*. "Correlation is significant at the 0.05 level" (2-tailed).

The correlation analysis provides effective positive relationships between the experiences of the chatbot and even the features and behaviour of the customer (Table 12). In this case, a stronger level of correlation ($r > 0.5$) provides an indication of the interactions of the positive chatbot which is linked to the "higher level" of influence in the purchase and even increases the importance and preferences of the user. This mainly provides confirmation about the performance of the chatbot, which shapes the decisions of customers and even satisfaction in the case of e-commerce.

Regression Analysis

The "regression analysis" is important for this study because it helps to address and even quantify the effective "relationship between" the performance of the "chatbot" and even the purchasing behaviour of the customer. On the other hand, it mainly helps to enable the prediction of the different kinds of responses from the customers on the features of the chatbot and even offers insights into the ways the effective chatbot makes an "impact on decision-making" and increases the overall journey of the customers.

Table 13 illustrates the results, which are based on the "model summary".

Table 13: "Result based on Model Summary, Source: Self-made"

"Model Summary"				
Model	R	"R Square"	"Adjusted R Square"	"Std. Error of the Estimate"
1	.725[a]	.526	.519	.56676

a. "Predictors: (Constant), When employing AI chatbots, which of the following best sums up your primary concerns?, If yes, how would you rate your experience with AI-powered chatbots in e-commerce? What features do you like most about an AI-powered chatbot in e-commerce?"

Table 13 provides the model which provides the stronger level of correlation about $R = 0.725$ and explains that 52.6% of the variances such as $R^2 = 0.526$ in the case of the dependent variables. On the other hand, the adjusted R^2 of 0.519 provides confirmation of the effectiveness of the model with the standard error of about 0.56676 providing an indication of the accuracy of the reasonable prediction in the case of the selected predictors.

Table 14 provides the results of the ANOVA test.

Table 14: "ANOVA Test, Source: Self-made"

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	69.837	3	23.279	72.472	.000[b]

	Residual	62.958	196	.321		
	Total	132.795	199			

a. "Dependent Variable: Have chatbots driven by AI ever affected your decision to buy something?"

b. "Predictors: (Constant), When employing AI chatbots, which of the following best sums up your primary concerns?, If yes, how would you rate your experience with AI-powered chatbots in e-commerce?, What features do you like most about an AI-powered chatbot in e-commerce?"

As per Table 14, the results from the ANOVA test provide the regression model which is significant statistically such as F = 72.472, p = .000 which means the explanation about the reliability variations in the case of the dependent variables whether the AI chatbots mainly make an impact on the decisions for purchasing. On the other hand, the lower level of residual variances provides suggestions about the fit of a good model with the different types of independent variables that make an effective contribution to the outcome.

Table 15 provides the results of the coefficients

Table 15: Coefficients, Source: Self-made

Model		Sig.	"95.0% Confidence Interval for B"	
			Lower Bound	Upper Bound
1	(Constant)	.179	-.088	.467
	If yes, "how would you rate your experience with AI-powered chatbots in e-commerce?"	.000	.176	.423
	"What features do you like most about an AI-powered chatbot in e-commerce?"	.000	.183	.416
	"When employing AI chatbots, which of the following best sums up your primary concerns?"	.000	.159	.357

a. "Dependent Variable: Have chatbots driven by AI ever affected your decision to buy something?"

From Table 15, all of the predictors are statistically significant at p = .000, which provides an indication of the stronger level of relationships with the dependent variables and even the "AI-chatbots" make an impact on the purchasing decision. On the other hand, the intervals in the case of the positive intervals for each variable provide a suggestion that a better level of experiences and even the desirable features and even different kinds of manageable concerns with the "AI chatbots" increase the likelihood of the impact on the behaviour of customer buying in the case of e-commerce.

Hypothesis Test

H0 (Null Hypothesis): "There is no impact of AI-powered chatbots on the enhancement of the customer journey by improving service responsiveness and personalisation."

H1 (Alternative Hypothesis): "There is a potential impact of AI-powered chatbots on the enhancement of the customer journey by improving service responsiveness and personalisation."

Table 16 states "Hypothesis Test Results", which is described below

Table 16: "Hypothesis Test", Source: Self-made

One-Sample Test

	"Test Value = 0"				
	t	df	Sig. (2-tailed)	"Mean Difference"	"95% Confidence Interval of the Difference" Lower
"If yes, how would you rate your experience with AI-powered chatbots in e-commerce?"	40.955	199	.000	2.15500	2.0512
"What features do you like most about an AI-powered chatbot in e-commerce?"	36.303	199	.000	2.18000	2.0616
"When employing AI chatbots, which of the following best sums up your primary concerns?"	36.491	199	.000	2.54500	2.4075

Table 16 depicts the relationship between the "independent and dependent variables", where it is identified that the significant total value is 0.00, which is less than the P value and "statistical significance". Participants who shared a "positive experience" while using the "AI-powered chatbot" noticeably value the features of this platform that can positively influence their buying behaviours.

Thematic Analysis

Theme 1: Enhancing Customer Experience

It is identified that chatbots have provided opportunities to deliver personalised services to customers. An "AI-powered chatbot" can enhance the overall satisfaction of the customer by fulfilling their requirements and addressing their queries, which is required to adopt effective services. Besides that, it can foster their engagement and loyalty and drive business growth which is essential to enhance overall retention (Hsu et al., 2023). However, while using this strategy, it is required to incorporate the design elements with innovation and highlight the benefits of the products that will gain the attention of the customer and create opportunities to positively influence their buying behaviours.

Theme 2: Benefits of AI chatbots

"AI chatbot" not only offers ant support to the customers but also leads to developing seamless shopping experiences. It is able to analyse the customer data and provide product suggestions, promotions, and other offers to increase the likelihood of buying behaviours (Raji et al., 2024). On the other hand, the conventional marketing by using the "AI chatbot" will help to deliver valuable insights regarding their preferences and allow the organisation to define its strategies as per the customer's requirements. As a result, it will help to enhance overall engagement and focus on streamlining the operations.

Theme 3: Customer Interaction Strategies

There is a high growth of "AI chatbots" in e-commerce where the organisations are able to collect customers' data, develop personalised services and increase their retention. Hence, it builds a relationship with the customers and, by fulfilling their requirements, also drives loyalty (Rahevar and Darji, 2024). But at the same time, the changing algorithm can influence the business operation that should be managed by the companies while using this technology and focus on factors like data security and privacy that can positively influence its impact on the business in future.

Discussion

From the primary data analysis, it has been found that consumers have knowledge that companies are using AI chatbots, and the sense of improvement of the product design by understanding the demand, mainly impacts their purchasing behavior. According to consumer preferences, an AI chatbot has suggested products with the potential benefit of providing individualized services. In order to improve the customer's overall expectations, it has also provided immediate support for answering questions and guiding them through the product selections. In addition to providing customer service, AI chatbots also contribute to the creation of smooth shopping experiences. In order to boost the possibility of purchasing behaviors, it can analyze consumer data and give promotions, product recommendations, and other deals. Conversely, traditional marketing through the use of AI chatbots will assist in providing insightful information about their preferences and enable the company to tailor its tactics to the needs of its clients. From both primary and secondary analysis and from the perspective of the consumer and businesses, it has been found that the integration of AI chatbots significantly impacts the consumer's decision to buy goods through e-commerce.

5. CONCLUSION AND RECOMMENDATION

Conclusion

This study concluded that “AI-powered chatbots” mainly make an impact purchase decisions of the customer with the increase in the responsiveness of the service, personalisation and even trust. Stronger levels of positive correlations and even the regression analysis mainly confirm that the features of the chatbot and even the user experience make an impact on the satisfaction level and even buying behaviour. On the other hand, chatbots are important tools in terms of making an improvement in the customer journey in the case of e-commerce platforms.

Recommendation

E-commerce platforms need to make an investment in the refinement of the functionalities such as personalisation, processing of the natural language and even issue resolution in a real-time manner. On the other hand, continuous user feedback and even the monitoring of the performance are important for effective optimisation. Incorporating emotional intelligence and even the different kinds of multilingual capabilities mainly increase customer engagement, rate of satisfaction and even conversion rates.

6. FUTURE SCOPE OF STUDY

The “Future scope of the study” is to integrate the longitudinal studies which will allow the researcher to assess the AI chatbots and other technologies collaboration will impact the consumers purchasing decisions along with specifying the region. On the other hand, the researcher also has the scope to conduct the “semi-structured interview” with marketing managers and operational managers of the e-commerce companies to gain in-depth knowledge on the way Chatbots are integrated to impact decisions.

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