

CONSUMER PERCEPTION OF AI BASED CUSTOMER SUPPORT SERVICES

Mr. Ankit Bandal

RSET's Ladhidevi Ramdhar Maheshwari Night College of Commerce

Abstract

I customer service is rapidly growing in popularity, majority of online shoppers having encountered it. This raises the question: how do consumers perceive AI customer service? A survey of 120 randomly selected consumers were taken from Mumbai suburban region majority of the consumer are accepting the AI in customer service but still there are various disadvantages which is needed to overcome. This study also provides remedies that organisation can implement for overcoming with those disadvantages.

Keywords- AI Chatbot, online shoppers, consumer service.

1. INTRODUCTION

As science and technology advance, numerous new technologies are progressively making their way into the industrial production stage. Artificial intelligence, the 21st century's top technology, has slowly made its way into a variety of industries and shown signs of replacing more labour-intensive ones. Customer support over the phone and online has always been a labour-intensive field. There is a high demand for workers in this sector because consultants and clients must communicate one-on-one. A significant amount of human resources have been wasted as a result of this industry's disproportionate input and output due to the low transaction rate. However, the industry's conflict can be resolved by using artificial intelligence-based virtual robot customer support.

AI and chatbots help businesses cut costs by managing multiple customer inquiries simultaneously, reducing the need for extensive customer service staff. This not only saves money but also enhances customer service quality. Additionally, chatbots provide consistent responses by following predefined scripts and guidelines, ensuring a uniform brand experience. This reliability builds customer trust and sets clear expectations for interactions with the brand.

2. LITERATURE REVIEW

Huong, Hanh, Trang, and Chi (2023) found that chatbot customizations, perceived control, and interactive speed significantly influence cognitive experiential states, while chatbots alone affect affective states. This highlights the critical role of chatbots in boosting customer satisfaction and driving repurchase behavior, as both cognitive and emotional states play a major role in online satisfaction. Similarly, **Pillarisetty and Mishra (2022)** provide an overview of technological advancements that enhance the e-commerce experience, emphasizing e-commerce satisfaction and its impact on customer purchase intentions. Their review serves as a valuable resource for companies and researchers exploring AI and technology-driven retail through empirical studies. **Arya, Joshi, Mahdawi, and Alkhayat (2023)** concluded that chatbots significantly impact customer experience and offer organizations insights into adopting efficient chatbot solutions to maximize customer satisfaction. The study also examines customer perceptions of chatbot interactions during the COVID-19 pandemic in India.

3. OBJECTIVE

- To study the perception of the consumer on various stated advantages of AI-Based Customer Support Services
- To study the perception of the consumer on various stated disadvantages of AI-Based Customer Support Services
- Provide Recommendations for Improvement

4. RESEARCH METHODOLOGY

The primary data has been collected from 120 customer from Mumbai suburbans.

5. DATA ANALYSIS

Table 1 - Age of the respondent

Age	Count	Percentage
Below 20	16	13%
21-30	44	37%
31-40	37	31%
41-60	12	10%
Above 60	11	9%
Total	120	100%

The majority of respondents fall within the 21-30 age group, accounting for 44 individuals (37%). The 31-40 age group is the second-largest category, comprising 37 respondents (31%). Together, the 21-30 and 31-40 age groups represent 68%.

Table 2 - Gender of the respondent

Gender	Count	Percentage
Male	56	47%
Female	64	53%
Total	120	100%

Females constitute 64 respondents (53%), making up the majority of the sample population. Males account for 56 respondents (47%), slightly less than half of the sample population.

Table 3 - Frequency of utilisation AI for customer service

Frequently of utilise AI for customer service	Count	Percentage
Daily	15	13%
Weekly	58	48%
Monthly	32	27%
Rarely	11	9%
Never	4	3%
Total	120	100%

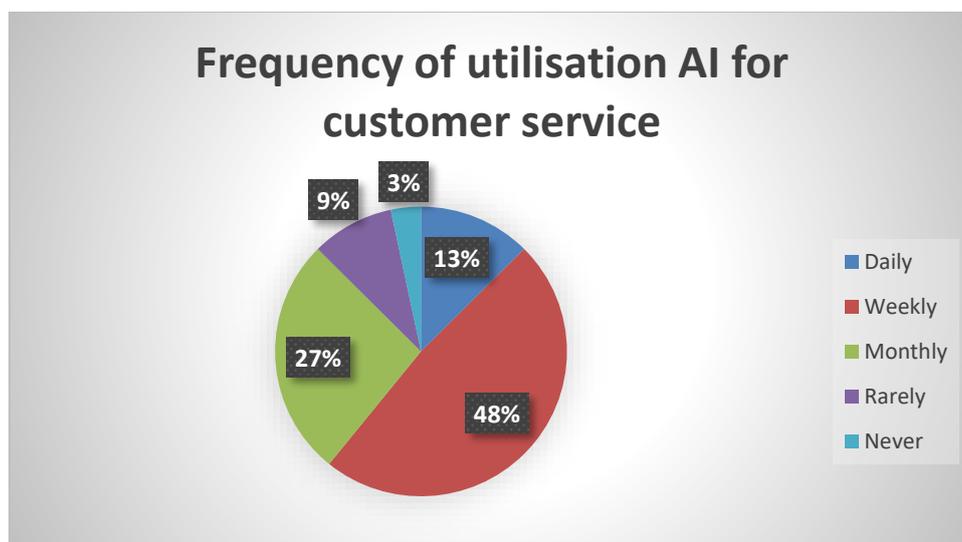


Figure 1 - Frequency of utilisation AI for customer service

Table 3 - Consumer agreeability of the advantages of AI-Based Customer Support Services

Responses	Strongly agree		Agree		Neutral		Disagree		Strongly Disagree	
	No	%	No	%	No	%	No	%	No	%

24/7 Availability	88	73%	8	7%	6	5%	7	6%	11	9%
Quick Response Time	58	48%	28	23%	21	18%	7	6%	6	5%
Consistency	31	26%	21	18%	33	28%	22	18%	13	11%
Personalised assistance	27	23%	19	16%	33	28%	24	20%	17	14%
Accuracy of information	21	18%	22	18%	35	29%	26	22%	16	13%
Personalization	29	24%	31	26%	29	24%	24	20%	7	6%

24/7 Availability

AI-powered customer support services are available round the clock, ensuring that customers receive assistance at any time of the day, regardless of time zones or holidays. This enhances customer satisfaction and reduces delays in resolving queries.

Quick Response Time

AI-driven chatbots and virtual assistants provide instant responses to customer inquiries, eliminating long wait times. This improves efficiency and ensures that customers get the help they need without unnecessary delays.

Consistency

Unlike human agents, AI does not suffer from fatigue or mood variations, ensuring consistent responses to customer queries. This helps maintain a standardized level of service and avoids discrepancies in information provided to different customers.

Personalized Assistance

AI can analyze customer data and preferences to provide tailored recommendations and responses. By understanding customer history and behavior, AI ensures a more personalized and engaging support experience.

Accuracy of Information

AI-driven support systems rely on vast databases and machine learning algorithms to provide precise and up-to-date information. This reduces the chances of human error and enhances the reliability of customer support interactions.

Personalization

AI can customize interactions based on customer preferences, previous interactions, and browsing history. This makes the support experience more relevant and effective, leading to higher customer satisfaction and brand loyalty.

AI-based customer support services enhance efficiency, improve user experience, and streamline business operations, making them a valuable asset for companies looking to improve their customer service.

The table showcases respondents' perceptions of various aspects of a service or system, with responses categorized into five levels: Strongly Agree, Agree, Neutral, Disagree, and Strongly Disagree, along with corresponding counts and percentages. 24/7 availability received the highest positive response, with 73% strongly agreeing and 7% agreeing, indicating widespread appreciation for this feature, while only 15% disagreed or strongly disagreed. Quick response time was also well-received, with 48% strongly agreeing and 23% agreeing, though 18% were neutral, and a small portion (11%) expressed dissatisfaction. Consistency saw mixed reactions, as only 26% strongly agreed and 18% agreed, while 28% remained neutral, and a notable 29% disagreed or strongly disagreed, suggesting room for improvement. Similarly, personalized assistance garnered moderate support, with 23% strongly agreeing and 16% agreeing, but a higher proportion (34%) disagreed or strongly disagreed, reflecting dissatisfaction among some respondents. The accuracy of information had the lowest positive responses, with just 18% strongly agreeing and 18% agreeing, while a significant portion (35%) were neutral, and a combined 35% disagreed or strongly disagreed, highlighting concerns about reliability. Lastly, personalization received relatively balanced feedback, with 24% strongly agreeing and 26% agreeing, but a similar 24% were neutral, and 26% disagreed or strongly disagreed, indicating a divide in opinions. Overall, while respondents highly value features like availability and quick responses, there is noticeable dissatisfaction with personalization, consistency, and information accuracy, emphasizing the need for targeted improvements in these areas to enhance overall satisfaction.

Table 4 - Consumer agreeability of the disadvantages of AI-Based Customer Support Services

	Strongly agree		Agree		Neutral		Disagree		Strongly Disagree	
	No	%	No	%	No	%	No	%	No	%
Lack of Emotional Intelligence	42	35%	31	26%	22	18%	8	7%	7	6%
Limited Understanding of Complex Queries	93	78%	5	4%	2	2%	6	5%	14	12%

Impersonal Interactions	41	34%	39	33%	21	18%	7	6%	12	10%
Dependence on Predefined Scripts	52	43%	41	34%	7	6%	11	9%	9	8%
Technical Challenges	31	26%	36	30%	27	23%	11	9%	15	13%
Privacy Concerns	74	62%	31	26%	7	6%	4	3%	4	3%
<p>Lack of Emotional Intelligence AI lacks human emotions, making it difficult to empathize with customers facing stressful or sensitive situations. Unlike human agents, AI cannot provide emotional support or reassurance, which can lead to frustration for customers seeking a compassionate response.</p>										
<p>Limited Understanding of Complex Queries While AI excels at handling simple and repetitive inquiries, it may struggle with complex or ambiguous queries that require human judgment. AI systems may misinterpret questions, leading to incorrect or irrelevant responses, requiring human intervention.</p>										
<p>Impersonal Interactions AI-driven customer support can feel robotic and impersonal, lacking the human touch that many customers appreciate. This can lead to dissatisfaction, especially for those who prefer engaging with a real person for their queries.</p>										
<p>Dependence on Predefined Scripts Most AI chatbots operate based on predefined scripts and databases. If a customer asks something outside of its programmed responses, the AI may struggle to provide a meaningful answer or redirect the customer to a human agent, causing inconvenience.</p>										
<p>Technical Challenges AI-based customer support systems require continuous updates and maintenance to function effectively. Technical glitches, software malfunctions, or integration issues with other systems can disrupt service and negatively impact customer experience.</p>										
<p>Privacy Concerns AI systems collect and analyze large amounts of customer data to provide personalized support. However, this raises concerns about data security and privacy breaches. If not properly managed, sensitive customer information could be at risk of misuse or cyberattacks.</p>										

The table illustrates respondents' perceptions of various limitations of AI-based customer support, categorized into five levels: Strongly Agree, Agree, Neutral, Disagree, and Strongly Disagree, with corresponding counts and percentages. Limited understanding of complex queries emerged as the most significant concern, with a dominant 78% strongly agreeing and 4% agreeing, highlighting a widespread acknowledgment of this limitation, while only 17% expressed neutral or negative views. Privacy concerns followed closely, with 62% strongly agreeing and 26% agreeing, indicating significant apprehension regarding data security, while only 6% disagreed or strongly disagreed. Dependence on predefined scripts also garnered strong responses, with 43% strongly agreeing and 34% agreeing, though 6% were neutral and 17% expressed dissent, reflecting a mixed perception. Lack of emotional intelligence was moderately recognized, with 35% strongly agreeing and 26% agreeing, while 18% were neutral and only 13% disagreed or strongly disagreed, indicating a concern but not as prominent as other issues. Impersonal interactions evoked diverse opinions, with 34% strongly agreeing and 33% agreeing, while 18% were neutral and 16% disagreed or strongly disagreed, showcasing divided sentiments. Technical challenges had the most balanced responses, with 26% strongly agreeing and 30% agreeing, but a significant 23% were neutral, and 22% expressed disagreement, indicating varied experiences. Overall, the results suggest that respondents perceive limited understanding of complex queries and privacy concerns as the most pressing issues, followed by challenges like predefined scripts and impersonal interactions, while technical challenges and emotional intelligence evoke more mixed responses. These findings underscore the need for advancements in AI capabilities and personalization to address these concerns and enhance user satisfaction.

6. REMEDIES FOR THE DISADVANTAGES OF AI-BASED CUSTOMER SUPPORT SERVICES

6.1 Lack of Emotional Intelligence

- **Integration with Human Support:** Implement a hybrid model where complex or sensitive queries are escalated to human representatives.
- **Sentiment Analysis Tools:** Enhance AI with sentiment analysis capabilities to better understand customer emotions and respond empathetically.

6.2 Limited Understanding of Complex Queries

- **Continuous Learning:** Use machine learning to improve AI systems over time by analyzing past interactions.
- **Knowledge Base Expansion:** Regularly update the AI's database with diverse and comprehensive information to handle nuanced queries.

6.3 Impersonal Interactions

- **Personalization Features:** Use AI to analyze customer data and provide tailored responses, making interactions feel more personal.
- **Human-like Interaction Design:** Enhance natural language processing to make AI responses more conversational and relatable.

6.4 Dependence on Predefined Scripts

- **Dynamic Algorithms:** Implement AI systems that can adapt responses dynamically rather than relying solely on predefined scripts.
- **Feedback Mechanism:** Allow customers to provide real-time feedback on AI responses to improve system adaptability.

6.5 Technical Challenges

- **Regular Maintenance:** Ensure frequent updates and testing of AI systems to minimize errors and downtimes.
- **Failover Mechanisms:** Design systems with fallback options, such as redirecting to human agents when the AI encounters difficulties.

6.6 Privacy Concerns

- **Data Encryption:** Use advanced encryption methods to secure customer data during storage and transmission.
- **Transparency:** Clearly inform customers about data usage policies and obtain consent before collecting personal information.
- **Compliance:** Ensure adherence to privacy laws like GDPR or CCPA to build customer trust.

7 CONCLUSION

The research highlights the transformative potential of AI-based customer support systems in addressing the traditional inefficiencies of human-driven customer service models. With advancements in artificial intelligence, chatbots have emerged as cost-effective, scalable, and efficient solutions capable of handling large volumes of inquiries with consistent quality. The study, conducted among 120 respondents in the Mumbai suburbs, sheds light on user adoption, preferences, and perceived advantages and challenges of AI-based customer support services.

Respondents highly value features such as 24/7 availability and quick response times, with a majority expressing satisfaction with these aspects. These findings underscore the operational efficiency of AI in ensuring round-the-clock service and rapid query resolution, which are critical for enhancing customer satisfaction. However, certain features, such as the accuracy of information, personalization, and consistency, received more mixed feedback, reflecting areas where AI systems still require significant improvement. The study also highlights user concerns about privacy and the emotional disconnect inherent in AI interactions, emphasizing the limitations of current AI models in replicating human-like empathy and understanding.

Key challenges identified include a lack of emotional intelligence, limited understanding of complex queries, impersonal interactions, over-reliance on predefined scripts, technical challenges, and privacy concerns. Addressing these issues requires targeted solutions, such as integrating hybrid AI-human models, employing advanced sentiment analysis tools, expanding AI knowledge bases, and incorporating personalization features. Additionally, technical improvements like regular maintenance, dynamic algorithm design, and robust data encryption methods are crucial for mitigating these drawbacks. Transparency in data usage and adherence to privacy regulations can further enhance user trust.

Ultimately, while AI-based customer support systems offer significant advantages in cost reduction, scalability, and consistency, addressing the identified shortcomings is imperative for ensuring widespread acceptance and maximizing customer satisfaction. With continuous technological evolution and strategic implementation of remedies, AI has the potential to revolutionize customer service, bridging the gap between efficiency and personalization in the digital age.

REFERENCE

- [1] Adam, Wessel & Benlian (2021): AI-based chatbots in customer service and their effects on user compliance. *Electronic Markets*, 31(2), 427-445.
- [2] Huong , Hanh , Trang & Chi (2023): The impact of AI chatbots on customer experience in online retailing in an emerging economy. *International Journal of Process Management and Benchmarking*, 15(2), 182-197.
- [3] Pillarisetty & Mishra (2022): A review of AI (Artificial Intelligence) tools and customer experience in online fashion retail. *International Journal of E-Business Research (IJEBR)*, 18(2), 1-12.
- [4] Arya, Joshi ,Mahdawi & Alkhayyat (2023, September): The impacts of chatbots on customer experience during the Covid-19 pandemic in India. In *AIP Conference Proceedings* (Vol. 2736, No. 1). AIP Publishing.
- [5] Chenzhuoer Li , Runjie Pan , Huiyu Xin and Zhiwen Deng (2020), “Research on Artificial Intelligence Customer Service on Consumer Attitude and Its Impact during Online Shopping”, *Journal of Physics: Conference Series* 1575 (2020) 012192 IOP Publishing doi:10.1088/1742-6596/1575/1/012192
- [6] Kurachi, Y. , Narukawa, S. , & Hara, H. . (2018). Ai chatbot to realize sophistication of customer contact points. *Fujitsu Scientific & Technical Journal*, 54(3), 2-8