

CUSTOMER SATISFACTION WITH THE USE AI CHAT BOTS

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Abstract

Artificial Intelligence (AI) chatbots are computer programs that have been developed to mimic the interaction of a human being through text or voice conversations using AI technology like NLP and machine learning algorithms. AI chatbots have become very popular in the customer service sector to provide instant responses to users, which enhances the user experience. With the increased popularity of AI chatbots in the service industry, it is important to understand the perception of consumers towards the performance of AI chatbots.

This study aims to examine the level of consumer satisfaction with AI chatbots and to identify the challenges consumers face while interacting with them. The research focuses on key factors such as service quality, response accuracy, user comfort, privacy concerns, emotional limitations, and preference for human interaction. By analyzing consumer perceptions, the study seeks to provide insights into the strengths and limitations of AI chatbots in customer service. The findings of this study will contribute to a better understanding of customer satisfaction levels and highlight areas where AI chatbots need improvement to enhance overall service experience.

Keywords

AI (Artificial Intelligence), AI Chatbots, Consumer Satisfaction, Customer Service, Service Quality

1. Introduction

AI chatbots or Artificial intelligence chatbots, are computer programs designed to simulate conversation with human users through text or voice interactions. These chatbots use AI and Natural Language processing (NLP) algorithms to understand user input, interpret it, and generate appropriate responses. Rapid growth of AI chatbots have become an essential tool for customer service across industries such as banking, e-commerce, education, healthcare has increasingly adopted chatbot system to enhancing operational efficiency and customer engagement. AI powered chatbots provide 24/7 service availability, quick responses and personalized experiences at scale. The goal of AI chatbots is to provide users with information and assistance or perform specific tasks, all without direct human interaction.

Customer satisfaction is to the degree of contentment a customer feels after using a product or services. It shows how well the product or service exceeds the customer's expectations.

AI chatbot satisfaction depends on accuracy of response, speed of services, ease of use, personalization, problem resolution capability. Chatbots as key facilitators in enhancing the customer experience. Enhancing customer support AI powered chatbots can handle customer inquiries providing instant responses and support. This not only improves customer satisfaction but also free up your team focus on more complex issues. Chatbots are considered major contributor to the transformation of customer interactions. Their impact is evident in real time information delivery, execution of

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transactional operations, and efficient resolution of common issues. Chatbots are recognized as a valuable tool for optimising the customer journey and enhancing overall satisfaction.

In AI mediated environments, satisfaction extends beyond traditional service quality dimensions to include perceived technological competence, system reliability and interaction quality. The evaluation of chatbot services is multidimensional encompassing both functional attributes like accuracy, speed, usefulness and emotional attributes like perceived emotions. Over reliance on automation may reduce opportunities for personalized human interaction, potentially impacting relational satisfaction. Customer satisfaction with AI chatbot services has become crucial for organizations aiming to enhance service quality and maintaining competitive advantage in digital market place. Strategic shift reflect a broader transition from human centric services to technology enabled customer relationship management. This study seeks to examine the level of customer satisfaction with AI and assess the challenges faced while using AI chatbots.

2. Statement of the Problem

With the rapid development of digital technology, many businesses are using chatbots for customer service and support. Chatbots are very helpful for businesses in responding quickly to customer needs, providing information, and assisting customers at any time. Despite the benefits associated with the use of chatbots, some customers might face some problems, such as incorrect information, lack of human interaction, and lack of understanding of complex issues. The problems might influence the level of customer satisfaction concerning the use of chatbot service. Thus, there is a need to investigate the influence of the use of chatbots on customer satisfaction and the factors that influence customer satisfaction when using the chatbot service.

3. Objectives of the Study

1. To examine the level of consumer satisfaction with AI chatbots

2. To identify the challenges consumers face when interacting with AI chatbots.

4. Research Methodology

This study is conducted by using both primary and secondary data. The primary data were collected by using a structured interview questionnaire from 50 respondents from the users of AI chat bots and the secondary data were collected from various journals, travel magazines, newspapers and websites.

4.1 Tools Used for Data Collection

- Mean Score

4.2 Limitations of the Study

- The sample size is limited to 60 and may not represent the entire population

4.3 Scope of the Study

The Scope of the study lies in its contribution to understanding the role of AI chatbots in improving customer service and customer satisfaction. The study is important in the fields of Marketing and Artificial Intelligence, as it examines how chatbot technology helps organizations respond to customer needs efficiently. The findings may help businesses improve service quality and enhance customer experience by adopting AI-based communication tools.

5. Review of Literature

Nazia Batool (2025) analysed the relationship between chatbot service quality, customer satisfaction, and retention in the service sector. The study found that chatbot service quality significantly predicts customer satisfaction, which further influences customer retention. The results suggest that customer satisfaction acts as a mediating factor between service quality and long-term customer loyalty.

Jeewoo Yun and Jungkun Park (2022) investigated the effect of emotional language in chatbot interactions. Their findings revealed that assurance and reliability positively influence customer satisfaction regardless of chatbot type. However, empathy and interactivity significantly increase

satisfaction only when chatbots use emotion words. The study also found that higher satisfaction leads to repurchase intention and positive word-of-mouth.

Anita Soni and Shalini Dubey applied the Technology Acceptance Model (TAM) to study chatbot adoption in e-commerce marketing. Their research showed that perceived usefulness and perceived ease of use significantly influence user satisfaction with AI chatbots. When consumers perceive chatbots as helpful and easy to interact with, their satisfaction levels increase.

Rodriguez et al. (2023) explored customer satisfaction and loyalty in chatbot-based customer service. The study revealed that conversational quality and service recovery quality significantly affect user satisfaction. Moreover, satisfied users tend to demonstrate higher levels of loyalty toward the service provider.

Xiao et al. (2020) examined determinants of satisfaction and continuance intention toward AI service agents. Their results showed that both information quality and service quality are major factors influencing customer satisfaction. The study also found that satisfied users are more likely to continue using chatbot services in the future.

Jeewoo Yun and Jungkun Park (2021) conducted another study on chatbot service recovery using emotional expressions. They found that empathy and interactivity significantly enhance customer satisfaction when emotion words are used, while assurance and reliability influence satisfaction regardless of emotional features.

Ishar Ali et al. conducted a comparative study between AI chatbots and human agents in the financial services sector in Sri Lanka. The study found that while chatbots improve accessibility and response speed, they often struggle to handle complex or emotionally sensitive queries. As a result, customers tend to report higher satisfaction with human agents in situations requiring empathy and problem-solving capabilities.

Overall, the reviewed literature indicates that chatbot service quality, emotional interaction, information quality, and perceived usefulness play important roles in determining customer

satisfaction. At the same time, challenges such as limited emotional understanding and difficulty handling complex queries continue to affect consumer experiences with AI chatbots.

6. Overview of Topic

Customer Satisfaction

Customer satisfaction refers to the level of pleasure or disappointment a customer experiences after comparing the perceived performance of a product or service with their expectations. When the performance of the product or service meets or exceeds expectations, customers are satisfied; if it falls short, they become dissatisfied. Customer satisfaction is an important concept in marketing because satisfied customers are more likely to remain loyal, make repeat purchases, and recommend the company to others. Therefore, businesses focus on improving product quality, service efficiency, and overall customer experience to achieve higher levels of customer satisfaction (Kotler & Keller, 2016; Oliver, 1997).

AI Chat bots

AI chatbots are computer programs that use artificial intelligence techniques to simulate human-like conversation with users through text or voice interfaces. They are designed to understand user inputs, process natural language, and generate appropriate responses automatically. AI chatbots rely on technologies from fields such as Artificial Intelligence, Natural Language Processing, and Machine Learning to analyse language patterns, interpret user intent, and provide relevant responses.

7. Data Analysis and Interpretation

To measure consumer satisfaction, five variables were analysed: improvement in customer service experience, comfort in interacting with chatbots, satisfaction with solution quality, chatbot understanding of queries, and intention to continue using chatbots. A mean score analysis was conducted using a 5-point Likert scale (1 = Strongly Disagree, 5 = Strongly Agree).

Table 1. Showing Satisfaction Mean Score

<i>Satisfaction Factors</i>	<i>Mean Score</i>
AI chatbots improve overall customer service experience	4.32
Comfortable interacting with AI chatbots	3.88
Satisfied with quality of solutions	4.12
Chatbots accurately understand queries	3.38
Intention to continue using chatbots	3.67

Source- Primary Data

The overall satisfaction mean score is 3.77, indicating that consumers show a moderate to high level of satisfaction with AI chatbots. Respondents particularly agreed that chatbots improve customer service experience and provide satisfactory solutions. However, slightly lower scores were observed in chatbot ability to accurately understand user queries.

A gender-based independent sample t-test was also conducted to examine whether satisfaction

differs between male and female respondents. The result showed $t = 0.09$ and $p = 0.927$, which is greater than the significance level of 0.05. Therefore, there is no significant difference in satisfaction levels between male and female users of AI chatbots.

Five variables related to chatbot challenges were analysed: preference for human agents, difficulty handling emotional issues, privacy concerns, incomplete issue resolution, and lack of human touch.

Table 2. Showing Challenge Factors

<i>Challenge Factors</i>	<i>Mean Score</i>
Prefer human customer service over chatbots	3.35
Chatbots cannot handle emotional issues	3.93
Concern about privacy and data security	4.07
Chatbots fail to completely resolve issues	3.74
Chatbots lack a human touch	3.85

Source- Primary Data

The overall challenge mean score is 3.83, indicating that consumers still experience several challenges while using AI chatbots. The most significant issues identified are privacy and data security concerns, inability to handle emotional or sensitive issues, and the lack of a human touch in interactions.

A correlation analysis was conducted between satisfaction scores and challenge scores. The

correlation coefficient was $r = -0.33$, indicating a moderate negative relationship. This suggests that as perceived challenges increase, consumer satisfaction with AI chatbots tends to decrease.

8. Findings

- Consumers show a moderate to high level of satisfaction with AI chatbots.

- Chatbots improve customer service experience by providing quick responses and efficient support.
- Service quality and information quality significantly influence customer satisfaction.
- Users feel comfortable interacting with chatbots and show willingness to continue using them in the future.
- Perceived usefulness and ease of use play a major role in chatbot adoption and satisfaction.
- Chatbots face difficulty in handling emotional and complex queries, where users often prefer human agents.
- Privacy and data security concerns are a major issue among users.
- Despite their benefits, chatbots still lack a human touch and sometimes fail to fully resolve issues, indicating the need for improvement.

9. Suggestions

- Continuously improve chatbot performance by incorporating regular user feedback and system updates.
- Enhance response accuracy and minimize errors to ensure reliable and efficient customer service.
- Provide accurate, relevant, and up-to-date information to improve service quality.
- Maintain user-friendly interfaces and introduce personalization features to increase user engagement.
- Simplify chatbot design and navigation to ensure ease of use and accessibility.
- Integrate emotional intelligence capabilities and enable smooth transfer to human agents for complex queries.
- Strengthen data privacy and security measures and clearly communicate policies to build user trust.
- Improve conversational design and adopt hybrid support systems (AI + human) to

enhance problem resolution and overall experience.

10. Conclusion

The study shows that consumers have a moderate to high level of satisfaction with AI chatbots in customer service. Chatbots improve service efficiency by providing quick responses, easy access to information, and convenient customer support. Many users also feel comfortable interacting with chatbots and show willingness to continue using them.

However, the study also highlights certain challenges such as privacy concerns, inability to handle emotional or complex issues, and lack of human touch. These factors may reduce overall satisfaction if not properly addressed. Therefore, organizations should focus on improving chatbot accuracy, emotional understanding, and data security to enhance customer satisfaction and trust in AI-based services.

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