# A Study on Customer Experience Management Via Chat Bots in Kalaburagi City with Special Reference to Amazon Customer Services.

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***Abstract*—Artificial Intelligence (AI) is increasingly integrated into e-commerce platforms to improve customer support. Chatbots, in particular, play a significant role in assisting users during online shopping. This study examines customer perceptions of Amazon's AI-driven chatbot, focusing on key aspects such as responsiveness, accuracy, and ease of use. Data was collected through a structured questionnaire utilizing a Likert scale. The findings show that prompt responses and accurate information increase customer satisfaction and confidence. Favorable user perceptions of chatbots encourage their ongoing adoption in e-commerce environments. The study also provides recommendations aimed at improving customer engagement and enhancing the overall effectiveness of chatbot systems.**

***Index Terms*—Artificial Intelligence (AI), Human intelligence, Chatbots, Consumer Perception, Customer experience.**

## I. INTRODUCTION

Advancements in technology have transformed the way organizations interact with their customers in today's digital landscape. With the rapid growth of e-commerce, businesses are increasingly adopting Artificial Intelligence (AI) to improve and personalize the overall customer experience. Chatbots are one of the many AI applications that have become increasingly important as a customer support tool. An AI-powered virtual assistant called a chatbot is made to communicate with clients, respond to their questions, and offer immediate assistance. One of the biggest e-commerce sites in the world, Amazon, has improved customer ease by implementing chatbots driven by artificial intelligence. These chatbots help consumers with order monitoring, return requests, payment problems, and product-related inquiries. They offer24/7support, which lessens the need for human agents to handle routine problems. Customer service has consequently improved in speed and effectiveness. From the standpoint of the customer, the efficacy of chatbot services is largely shaped by variables like responsiveness, accuracy, and ease of use. Chatbots enhance customer satisfaction and build trust when they provide timely responses and accurate information.

It is essential to comprehend how consumers view and feel about chatbots in order to evaluate their total influence. While unfavorable experiences may erode platform trust, positive attitudes and perceptions can increase user happiness and encourage return use. The evaluation of these elements in relation to Amazon's e-commerce services is the main objective of this study. The study will yield important information about customer perceptions of AI-powered chatbots and areas for improvement. It is anticipated that the results will help practitioners and scholars alike understand how chatbots influence digital retail experiences.

### 1.1 Objectives of the study.

1. To evaluate how customer satisfaction and trust are affected by chatbot accuracy.
2. To assess customer perceptions on the use of chatbots in place of human support.
3. To make recommendations on how to make Amazon's chatbot better in order to increase client loyalty and satisfaction.

1.2 Hypotheses

H01: There is no significance relation between Customer Satisfaction and Chatbot Responsiveness in Amazon E-commerce Service.

Ha1: There is a significance relation between customer satisfaction and chat bot responsiveness in Amazon E-commerce service.

H02: There is no significant relation between customer loyalty and Chatbot personalization (based on user history and preferences).

Ha2: There is a significant relation between customer loyalty and chatbot personalization (based on user history and preferences).

## II. RESEARCH METHODOLOGY

The customers who are using chatbot services are the population for the present study. The study is based on a sample size of 200 respondents. A convenience sampling technique was applied for selecting the respondents

The study is based on a descriptive research design. The research data were obtained from a combination of primary and secondary. Primary data were obtained through a structured questionnaire designed and distributed among the selected respondents. Secondary data were gathered from relevant websites.

## III. REVIEW OF LITERATURE

Gopi Battineni, Nalini Chintalapudi, and Francesco Amenta (2020) focused on prevention, updates, and lowering psychological stress. The system was constructed using Artificial Intelligence Markup Language (AIML) as part of a descriptive research technique. There was no human sample size because the study was design-based. To verify its effectiveness, analysis tools such as chatbot simulations and AI algorithms were employed. According to the study's findings, the chatbot may evaluate the severity of infections, link patients with medical professionals, and its potential for use in telemedicine integration and diagnostic improvements is still limited.

Ivan Martins De Andrade and Cleonir Tumelero (2022) investigated how AI chatbots could improve customer service effectiveness in a commercial bank in Brazil. Using content analysis using Atlas.ti on data from the bank's AIU coupled with IBM Watson, the study sought to examine how AI contributes to service innovation. Improved agility, accessibility, and shorter call center lines were observed in 2020, with181millioninteractions and 7.6 million attendances. In addition to highlighting AI's exponential scaling in process management, the paper made recommendations for further research, including larger samples and various industries.

Han et al. (2022) tested an AI chatbot program with 61 nursing students in a quasi-experimental study. The findings revealed a considerable improvement in interest in education and self-directed learning, but no discernible change in knowledge, reasoning, confidence, or feedback satisfaction. The study helped demonstrate the potential of chatbots in nursing education, with room for further research into longer-term and more extensive uses. Simeone and Scarpato's (2022) study was to investigate how consumers view and feel about insects as a sustainable food source. Although the precise sample size was not stated, the study used a questionnaire survey in Rome with primary data that was analyzed using a probit model. The results showed that even among consumers who cared about the environment, there was very little social acceptance of eating insects. The study added to the discussion on food security and sustainability and recommended that future studies concentrate on efficient communication techniques to increase consumer acceptance and understanding.

Sharma, Undheim, and Nazir (2023) set out to create and deploy an AI chatbot called "FLOKI." 18 second-year B.Sc. students studying nautical science engaged with the chatbot as part of the study's experimental technique, and the System Usability Scale (SUS) was used to gather data. According to the investigation, the chatbot promoted competency development in maritime training and offered a satisfying user experience. The study made a contribution by demonstrating the potential of AI in maritime education and offering ideas for further research on more general uses of chatbots to improve training effectiveness. Thanarat Kingchang, Pinanta Chatwattana, and Panita Wannapiroon (2024). Purposive sampling was employed in the study,

which involved 65 students who volunteered and six experts. Efficiency tests on functionalities, usability, and aptitude-based decisions were used to examine the data. With 86.15% of students basing their selections on the recommendations of the chatbot and high levels of satisfaction, the results demonstrated extremely high efficiency. The study made a contribution by demonstrating the value of AI chatbots as instruments for decision-making in higher education. Future potential included increasing its application to additional institutions and improving AI capabilities for individualized counselling.

## IV. PRIMARY AMAZON CHATBOTS & AI AGENTS

Alexa / Alexa+: Amazon's primary AI voice assistant, now featuring a generative AI-powered version known as Alexa+ for more advanced conversations.

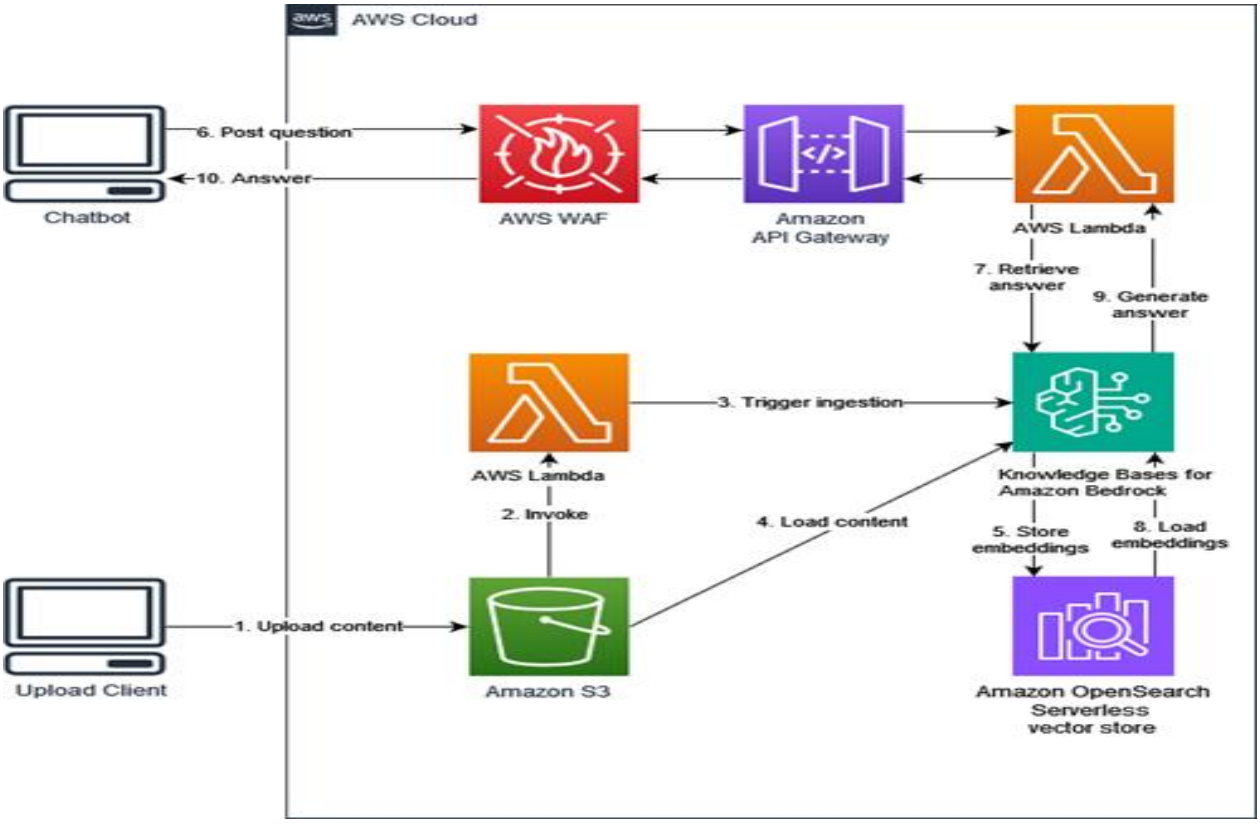
Amazon Q (formerly Amazon Q Developer/AWS Chatbot): A generative AI-powered assistant designed for businesses to help with coding, data analysis, and managing AWS resources via Slack or Microsoft Teams.

Rufus: An AI-powered shopping assistant integrated into the Amazon mobile app to help customers find products, compare items, and answer questions about products.

Amazon Lex: The AI service used to build voice and text chatbots. It is the technology powering many custom bots, including those used in call centres.

QnABot on AWS: A pre-built, open-source solution powered by Amazon Lex and Alexa to quickly deploy question-and-answer bots.

Chart 1. QnABot on AWS architecture on AWS




source: www.amazon.com

## V. ADVANTAGES OF CHATBOTS

Chatbots offer numerous benefits to enhance customer service and operational efficiency:

- 24/7 availability: Chatbots provide round-the-clock customer support, ensuring that queries are addressed promptly at any time.
- Cost-effective: By handling routine inquiries, chatbots can significantly reduce the workload on human customer service representatives. This enables businesses to manage a larger number of customer queries without increasing their human workforce.
- Scalability: Chatbots can handle multiple conversations simultaneously, making it easy for businesses to scale their customer support operations.
- Consistency: Chatbots deliver consistent responses, ensuring that every customer receives the same high-quality information.
- Personalization: AI-powered chatbots can offer personalized recommendations based on user data and interaction history.

## VI. DATA ANALYSIS

### 6.1 Hypotheses Testing Results

H01: There is no significant relationship between Customer Satisfaction and Chatbot Responsiveness in Amazon E-commerce Service.

Descriptive Statistics (N = 200)

| Variable | N | Mean | Standard deviation | Minimum | Maximum |
|---|---|---|---|---|---|
| Customer satisfaction | 200 | 3.82 | 0.74 | 2.10 | 5.00 |
| Chatbot responsiveness | 200 | 3.95 | 0.68 | 2.30 | 5.00 |

The Pearson correlation coefficient is r = 0.71.
The p-value is 0.000, indicating it is below 0.05.
Since $p < 0.05$, the null hypothesis (H01) is rejected.
There is a strong positive and statistically significant relationship between chatbot responsiveness and customer satisfaction. This means that improved responsiveness significantly increases customer satisfaction.

**H02:** There is no significant relationship between Customer Loyalty and Chatbot Personalization (based on user history and preferences).

Descriptive Statistics (N = 200)

| variable | N | Mean | Std. deviation | Minimum | Maximum |
|---|---|---|---|---|---|
| Customer loyalty | 200 | 3.88 | 0.72 | 2.00 | 5.00 |
| Chatbot responsiveness | 200 | 3.94 | 0.69 | 2.00 | 5.00 |

The Pearson correlation coefficient is r = 0.73.
The p-value is 0.000, which is less than 0.05.
Since $p < 0.05$, the null hypothesis (H02) is rejected.
There is a strong positive and statistically significant relationship between chatbot personalization and customer loyalty. This indicates that better personalization significantly enhances customer loyalty.

## VII. FINDINGS

### 7.1 Purpose of Using Amazon Chatbot

The majority of users utilize Amazon's chatbot for product-related inquiries, resolving payment or refund concerns, tracking orders, and obtaining information about offers and discounts. This suggests that chatbots are mainly valued for product inquiries and problem resolution in e-commerce

A large proportion of the respondents are undergraduate students who use the Amazon chatbot. Enhancing chatbot personalization can lead to increased customer satisfaction.

### 7.2 Suggestions and recommendations

- Enhancing chatbot customization can improve overall customer satisfaction.
- Expanding the chatbot's capabilities will allow it to address a wider range of customer queries.
- Improving response accuracy ensures users receive reliable and precise information.
- A user-friendly and intuitive interface makes the chatbot more accessible to all customers.

- Regularly monitoring user feedback helps in continuously refining chatbot performance.

## VIII. CONCLUSION

According to the study, user satisfaction with Amazon's chatbot differs depending on the user's gender, wealth, and reason for using it. Them a jority of user sinter act with the chatbot to ask questions about products and payment or refund concerns, underscoring its function in meeting important client needs. Higher purchasing power is reflected in the sample, which primarily consists of middle-class to upper-class customers. Satisfaction is strongly impacted by group participation, highlighting the significance of tailored AI interactions. All things considered, the results highlight how important chatbots are in influencing customer perception and improving the e-commerce experience.

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