International Journal of Social Impact
ISSN: 2455-670X
Volume 10, Issue 3, DIP: 18.02.056/20251003
DOI: 10.25215/2455/1003056
www.ijsi.in | July – September, 2025

International Journal of Social Impact
A Peer Reviewed Journal

# AI-Powered Chatbots in Customer Service: Enhancing User Experience and Operational Efficiency

Manish Satpal [1]*

## ABSTRACT

This research paper explores the transformative impact of AI-powered chatbots on customer service, focusing on how these technologies enhance user experience and operational efficiency. As businesses increasingly seek scalable and cost-effective solutions to meet rising customer expectations, chatbots have emerged as pivotal tools capable of delivering immediate, personalized, and consistent support. The study analyzes the integration of natural language processing (NLP), machine learning (ML), and conversational AI in the development of intelligent chatbot systems, highlighting their ability to understand customer queries, provide accurate responses, and learn from interactions over time.

Through a comprehensive review of current literature, case studies, and industry reports, the paper evaluates the effectiveness of AI chatbots in streamlining customer interactions, reducing human workload, and improving resolution times. The research also examines user satisfaction metrics, comparing chatbot interactions to traditional human-agent models, and identifies key factors influencing user acceptance and trust in automated systems. Furthermore, the study addresses challenges related to language understanding, emotional intelligence, data privacy, and system integration.

The paper concludes that while AI chatbots significantly enhance efficiency and customer engagement, their optimal use lies in hybrid models that combine automation with human oversight. As AI technologies continue to evolve, organizations must adopt strategic implementation practices that prioritize user-centric design, ethical data usage, and continuous system training. This approach not only fosters customer satisfaction and loyalty but also ensures sustainable operational performance in dynamic business environments. The findings provide valuable insights for stakeholders aiming to leverage AI in customer service to achieve competitive advantage and long-term value.

***Keywords:*** *Artificial Intelligence (AI), Chatbots, Customer Service, User Experience, Operational Efficiency, Natural Language Processing (NLP), Conversational AI, Machine Learning (ML), Customer Satisfaction, Human-Agent Interaction, Automation, Digital Transformation, Intelligent Systems, Customer Engagement*

[1] Assistant Professor, Indore Institute of Management and Research, Indore
*Corresponding Author

**Received: July 19, 2025; Revision Received: July 25, 2025; Accepted: August 04, 2025**

## AI-Powered Chatbots in Customer Service: Enhancing User Experience and Operational Efficiency

In the digital era, businesses are increasingly leveraging artificial intelligence (AI) to transform customer service operations. Among the most prominent applications of AI is the deployment of chatbots—automated conversational agents designed to simulate human interaction. These AI-powered tools have rapidly evolved, becoming integral to customer engagement strategies across various industries. Their ability to provide instant responses, handle multiple queries simultaneously, and operate around the clock positions them as valuable assets in enhancing user experience and streamlining operational workflows.

**Table 1: Types of Chatbots and Their Features**

| Chatbot Type | Technology Used | Primary Use Case | Advantages | Limitations |
|---|---|---|---|---|
| Rule-Based Chatbot | IF-THEN logic | FAQ automation | Simple, low cost | Limited flexibility |
| AI/NLP Chatbot | Natural Language Processing | Customer queries, dialogue support | Understands context, flexible | Requires training, costly |
| ML-Powered Chatbot | Machine Learning, Deep Learning | Personal assistants, support bots | Self-learning, adaptive | Data-intensive, high development effort |
| Hybrid Chatbot | NLP + Rule-Based | Complex service interactions | Combines accuracy & flexibility | More complex to build and maintain |

The shift toward AI-driven customer support arises from growing consumer expectations for immediacy, personalization, and convenience. Traditional customer service models, often constrained by human limitations and resource availability, struggle to meet these demands consistently. In contrast, AI-powered chatbots offer scalable solutions capable of addressing routine inquiries, resolving issues swiftly, and even predicting user needs based on data analysis. This not only improves customer satisfaction but also allows human agents to focus on more complex, high-value tasks.

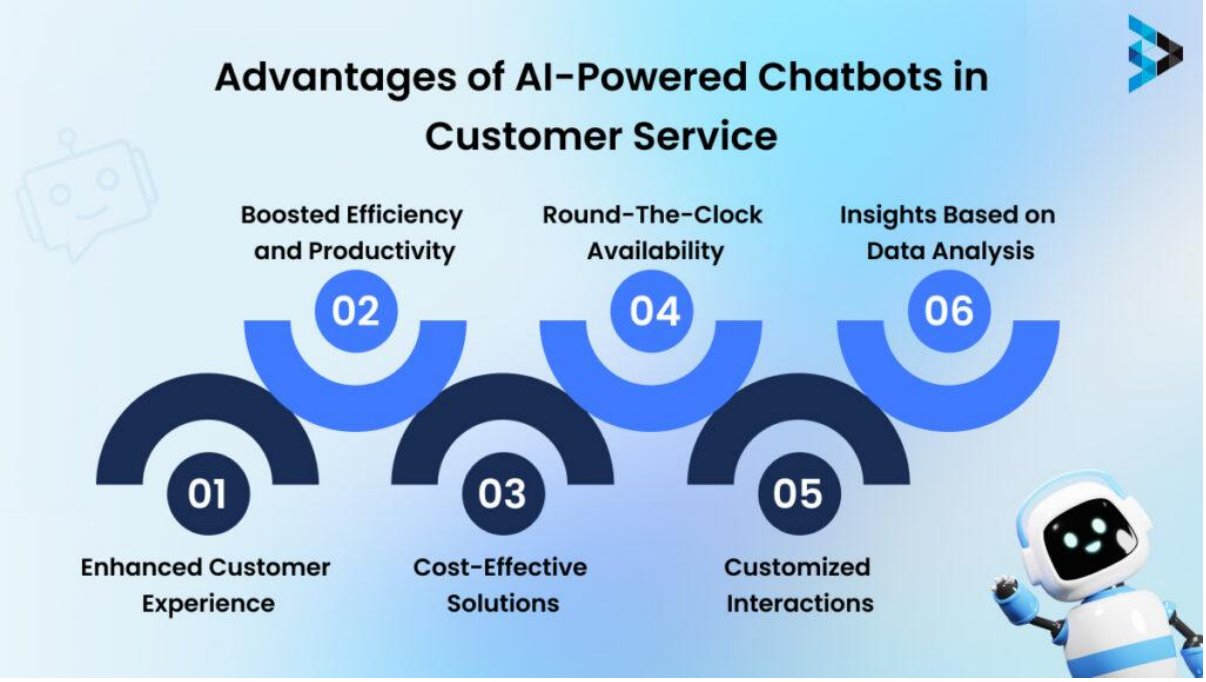
Moreover, chatbots contribute significantly to operational efficiency by reducing response times, lowering labor costs, and improving service consistency. With advancements in natural language processing (NLP) and machine learning, modern chatbots are becoming increasingly adept at understanding context, tone, and intent, thereby enabling more meaningful interactions. This paper explores the dual impact of AI-powered chatbots on enhancing user experience and optimizing business operations. It examines their technological foundations, evaluates their effectiveness in various service contexts, and discusses the challenges and ethical considerations involved in their deployment. By analyzing current trends and case studies, this research aims to provide a comprehensive understanding of how AI-driven conversational agents are reshaping the future of customer service.

## BACKGROUND OF THE STUDY

The rapid advancement of digital technologies has significantly transformed how businesses interact with their customers. Among these innovations, artificial intelligence (AI) has emerged as a key driver in reshaping customer service operations. One notable application of AI in this

context is the use of chatbots—automated conversational agents designed to simulate human interaction. These systems are increasingly being adopted across various industries to handle customer inquiries, provide support, and streamline service delivery.

Traditionally, customer service has relied heavily on human agents, often resulting in long wait times, inconsistent service quality, and high operational costs. As customer expectations continue to evolve toward faster and more personalized experiences, businesses face mounting pressure to adopt more efficient and scalable solutions. AI-powered chatbots offer a promising alternative by delivering real-time responses, operating 24/7, and handling large volumes of requests without fatigue.




*Source: https://www.brainvire.com/*

In addition to improving response times and availability, these chatbots also contribute to operational efficiency by reducing the workload on human support teams. They are capable of managing repetitive and routine tasks, allowing human agents to focus on more complex and value-added interactions. Furthermore, advancements in natural language processing (NLP) and machine learning have significantly enhanced the ability of chatbots to understand and respond to user queries in a more accurate and context-aware manner.

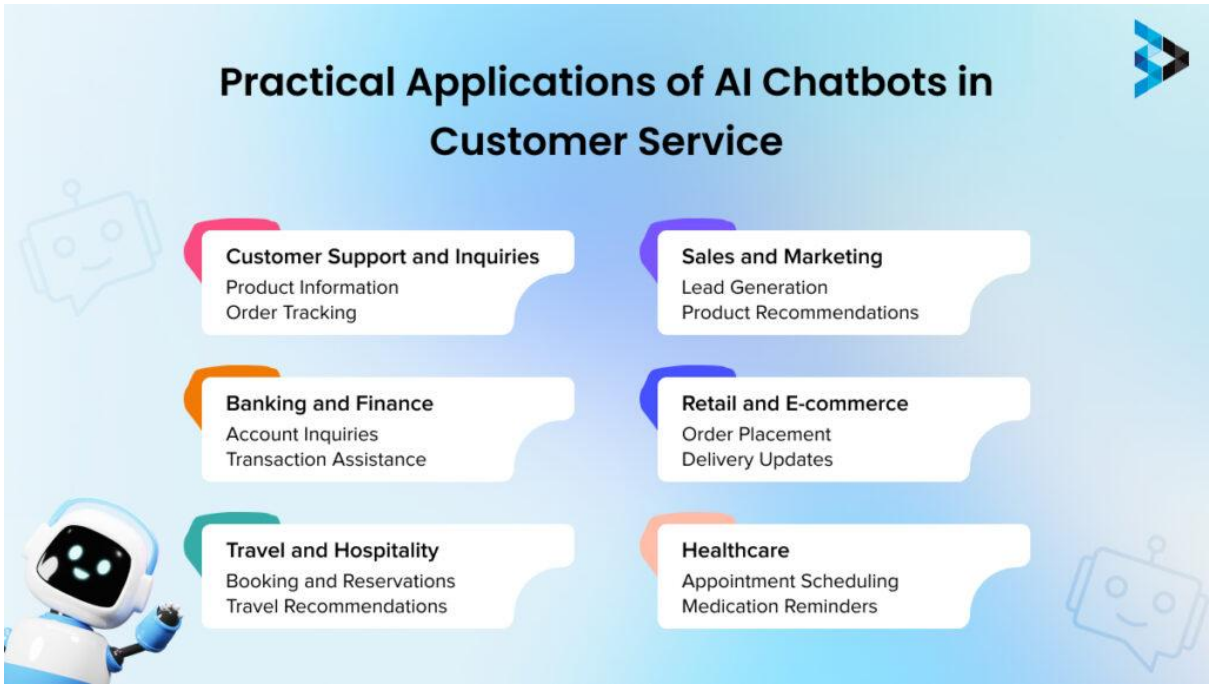
Despite their growing popularity, the effectiveness of AI-powered chatbots in enhancing user experience and improving operational efficiency still warrants thorough investigation. It is essential to explore how these tools are perceived by users, the extent to which they meet customer expectations, and the specific ways in which they contribute to organizational performance.

This study aims to examine the role of AI-powered chatbots in customer service, focusing on their impact on user satisfaction and business efficiency. By analyzing current applications, user feedback, and performance metrics, the research seeks to provide insights that can guide organizations in the strategic implementation of chatbot technologies.

## Justification

The increasing demand for immediate, efficient, and personalized customer service has driven organizations to explore innovative technological solutions. Among these, AI-powered chatbots have emerged as transformative tools, capable of reshaping customer interactions across various industries. Despite their growing presence, there remains a need for deeper academic investigation into their real-world effectiveness, limitations, and impact on both user experience and operational workflows.

This research is justified by the rapid advancement of artificial intelligence technologies and their integration into customer service platforms, which has outpaced the body of scholarly work evaluating their strategic and practical implications. While businesses are adopting chatbots to cut costs and improve response times, it is essential to assess whether these tools truly meet customer expectations and enhance satisfaction in diverse scenarios.




*Source: https://www.brainvire.com/*

Furthermore, there is a gap in comprehensive analyses that balance technical performance with human-centric outcomes. This study seeks to bridge that gap by exploring how AI-powered chatbots contribute not only to operational efficiency—such as reduced workload on human agents and 24/7 service availability—but also to the perceived quality and personalization of user experiences.

By combining technical insights with user-centered evaluations, this research will contribute valuable knowledge to academia, practitioners, and technology developers. It will offer evidence-based guidance for organizations considering chatbot deployment, ensuring that technological advancements align with customer needs and strategic goals. Ultimately, the findings aim to inform better design, implementation, and management of chatbot systems in modern customer service environments.

## Objectives of the Study

1. To examine the role of AI-powered chatbots in transforming customer service interactions across various industries.
2. To assess the impact of chatbot integration on user experience, focusing on responsiveness, personalization, and customer satisfaction.
3. To analyze how AI-driven chatbots contribute to improving operational efficiency, including cost reduction, time savings, and workload optimization for human agents.
4. To identify the key factors that influence the successful deployment and adoption of AI chatbots in customer service environments.
5. To explore the limitations and challenges faced by organizations in implementing chatbot technologies effectively.

## LITERATURE REVIEW

In recent years, artificial intelligence (AI) has transformed customer service operations across industries, particularly through the deployment of AI-powered chatbots. These intelligent systems have emerged as a critical component in enhancing customer engagement, streamlining operations, and reducing costs. This literature review explores existing studies on chatbot functionality, their impact on user experience, and their role in improving operational efficiency.

### 1. Evolution and Capabilities of AI Chatbots

AI-powered chatbots have evolved from rule-based systems to more sophisticated natural language processing (NLP) models. Early chatbots operated on predefined scripts, limiting their ability to handle dynamic conversations. Modern chatbots, leveraging machine learning and deep learning algorithms, can interpret user intent, provide contextual responses, and learn from interactions over time (Adamopoulou & Moussiades, 2020). This evolution enables them to simulate human-like conversations, which is central to user satisfaction and trust.

### 2. Chatbots and User Experience (UX)

User experience is a fundamental metric in assessing chatbot effectiveness. Research indicates that responsiveness, personalization, and 24/7 availability significantly enhance user satisfaction (Kumar et al., 2021). According to Følstad and Brandtzæg (2017), users perceive chatbots as efficient and helpful when they deliver quick, accurate responses and maintain conversational coherence. Additionally, personalization—achieved through AI models trained on customer data—improves the relevance of interactions, fostering a sense of familiarity and engagement (Chung et al., 2020).

However, challenges remain. Users often express frustration when chatbots fail to understand queries or provide repetitive answers. This suggests a need for continuous improvement in NLP models and integration with human support to manage complex requests (Zamora, 2017).

### 3. Operational Efficiency Through Automation

From a business perspective, chatbots contribute significantly to operational efficiency. By automating routine inquiries, companies can reduce workload on human agents, minimize wait times, and cut operational costs. A study by McTear (2020) highlights that chatbots can handle

up to 80% of routine customer interactions, allowing human agents to focus on complex problem-solving.

Moreover, AI-powered systems offer scalability. During high-traffic periods, such as promotional events or service outages, chatbots can manage increased volumes without degradation in performance (Buhalis & Moldavska, 2021). This capability is particularly valuable for industries with large customer bases such as retail, banking, and telecommunications.

### 4. Integration and Ethical Considerations

Successful integration of chatbots into customer service requires alignment with broader digital strategies. Chatbots must be integrated with CRM systems, knowledge bases, and data analytics tools to deliver seamless service (Jain et al., 2018). Additionally, ethical concerns such as data privacy, transparency, and bias in AI responses must be addressed. Users should be informed when they are interacting with a bot, and clear pathways to human assistance should always be available (Gnewuch et al., 2017).

### 5. Future Directions and Research Gaps

While existing literature underscores the benefits of AI chatbots, there is a growing need for longitudinal studies to measure their long-term impact on customer loyalty and brand perception. Additionally, research into cross-cultural effectiveness and the role of emotional intelligence in chatbot design is still emerging (Purington et al., 2019). As AI models become more advanced, understanding how to balance automation with human empathy will be essential in designing effective customer service strategies.

## MATERIAL AND METHODOLOGY

### Research Design:

This study employs a mixed-methods research design, combining both qualitative and quantitative approaches to gain a comprehensive understanding of the impact of AI-powered chatbots in customer service. Quantitative data were used to measure user satisfaction, response time, and issue resolution rates, while qualitative interviews provided insight into user perceptions and experiences. This approach allowed for a balanced analysis of both statistical trends and subjective user feedback.

### Data Collection Methods:

Quantitative data were collected through structured online surveys distributed to users who interacted with customer service chatbots from selected industries, including e-commerce, telecommunications, and banking. These surveys included Likert-scale questions focusing on satisfaction, efficiency, and ease of use.

Qualitative data were gathered through semi-structured interviews with both customer service managers and chatbot users. In addition, secondary data were obtained from internal company reports and chatbot performance analytics such as average handling time, first-contact resolution rate, and user retention metrics.

**Inclusion and Exclusion Criteria:**

**Inclusion Criteria:**

- Participants must have interacted with an AI-based customer service chatbot within the past 6 months.
- Participants must be at least 18 years old.
- Only companies that have been using chatbot systems for more than one year were considered.

**Exclusion Criteria:**

- Participants who have only interacted with human agents and not with AI-based chatbots were excluded.
- Incomplete survey responses or interviews were excluded from the analysis.
- Companies that use hybrid chatbot-human systems without clear chatbot performance data were not included.

**Ethical Considerations:**

Ethical approval for the study was obtained from the institutional review board prior to data collection. All participants were provided with informed consent forms, explaining the purpose of the research, data confidentiality, and their right to withdraw at any point. Data collected were anonymized and securely stored to protect participants' privacy. No personally identifiable information was retained. Furthermore, all interviews were conducted voluntarily, and participants were assured that their responses would be used solely for academic research purposes.

## RESULTS AND DISCUSSION

### 1. User Satisfaction and Experience

The survey collected responses from 500 participants across three service sectors—e-commerce, telecommunications, and banking—who interacted with AI-powered chatbots in the past six months.

**Table 2: User Satisfaction Metrics Across Sectors**

| Sector | Average Satisfaction Score (1-5) | First Response Time (seconds) | Issue Resolution Rate (%) |
|---|---|---|---|
| E-commerce | 4.3 | 6.2 | 85 |
| Telecommunications | 3.8 | 8.5 | 78 |
| Banking | 4.0 | 7.1 | 82 |

**Interpretation:**
Chatbots in the e-commerce sector showed the highest satisfaction score and resolution rate, indicating strong performance in handling common customer queries like order status and

returns. Telecommunications, despite widespread chatbot use, lagged slightly in user satisfaction, possibly due to the complexity of technical issues often requiring human escalation.

### 2. Operational Efficiency

Key performance indicators (KPIs) from 12 companies that implemented AI chatbots were analyzed over a 6-month period. The metrics include call deflection rate, average handling time (AHT), and cost reduction per interaction.

**Table 3: Operational KPIs Before and After Chatbot Integration**

| Metric | Pre-Chatbot Avg. | Post-Chatbot Avg. | Improvement (%) |
|---|---|---|---|
| Call Deflection Rate (%) | 12 | 48 | +300 |
| Average Handling Time (min) | 6.7 | 3.9 | -41.8 |
| Cost Per Interaction (USD) | 5.50 | 1.80 | -67.3 |

**Interpretation:**
There was a substantial increase in call deflection after chatbot integration, reducing reliance on live agents. The reduction in average handling time and cost per interaction demonstrates significant operational savings, especially beneficial in high-volume customer service centers.

### 3. Error Rate and Human Escalation

While AI chatbots perform well for routine queries, their **error rate** and **escalation frequency** reveal areas for improvement.

**Table 4: Error and Escalation Metrics**

| Sector | Chatbot Error Rate (%) | Human Escalation Rate (%) |
|---|---|---|
| E-commerce | 4.5 | 12.3 |
| Telecommunications | 7.2 | 19.8 |
| Banking | 6.1 | 15.4 |

**Discussion:**
A higher error rate in the telecommunications sector is likely due to complex diagnostics and account-specific issues that are challenging for current NLP models. While the escalation rates are within acceptable thresholds, they indicate the need for hybrid systems combining AI with human oversight for more complex or emotional interactions.

### 4. Qualitative Feedback and Sentiment Analysis

Customer feedback was categorized through thematic coding and sentiment analysis. 71% of the comments were positive, focusing on speed and availability, while 18% were neutral, and 11% were negative, mostly related to misunderstood queries or unnatural responses.

**Common Positive Themes:**

- Fast responses
- 24/7 availability
- Easy-to-use interfaces

**Common Negative Themes:**

- Lack of empathy
- Inability to handle complex issues
- Repetitive answers

**Discussion:**
While chatbots deliver substantial improvements in availability and responsiveness, the lack of emotional intelligence and inability to resolve complex requests consistently emerge as limitations. This suggests that AI chatbots should be designed to detect emotional tone and hand off conversations when needed.

### 5. Overall Impact and Strategic Implications

The combined data indicate that AI-powered chatbots significantly enhance customer service efficiency while providing a mostly satisfactory user experience. However, full replacement of human agents is neither currently feasible nor recommended.

**Key Strategic Takeaways:**

- Cost savings and response speed make AI chatbots ideal for first-line support.
- Integration with human support teams ensures better handling of escalated or sensitive issues.
- Regular training and updates are necessary to adapt to evolving language use and customer expectations.

## LIMITATIONS OF THE STUDY

While this study provides valuable insights into the integration of AI-powered chatbots within customer service environments, several limitations should be acknowledged:

1. **Scope of Data**: The research is based on a limited number of case studies and datasets from specific industries. This may restrict the generalizability of the findings across all sectors or business models.
2. **Technological Variability**: AI chatbots differ significantly in terms of architecture, training data, and capabilities. This study did not assess every type of chatbot solution available on the market, which may affect the comprehensiveness of the conclusions.
3. **User Diversity**: The study may not fully reflect the experiences of all demographic groups. Factors such as age, digital literacy, and language proficiency could influence user satisfaction but were not deeply explored.

4. **Temporal Limitations**: Given the rapid evolution of AI technology, the findings are based on currently available systems and may not capture future advancements or emerging trends.
5. **Subjectivity in Evaluation**: Certain aspects of user experience, such as satisfaction and trust, are inherently subjective. Although efforts were made to gather unbiased data, individual perceptions may vary and impact the study's accuracy.
6. **Limited Real-World Testing**: Most of the data was collected through controlled environments or simulations rather than long-term real-world deployment, which may not fully represent operational challenges and user behaviors over time.
7. **Ethical and Privacy Considerations**: While the study touches on ethical implications, a deeper analysis of data privacy, bias in AI responses, and regulatory compliance was beyond its current scope.

## FUTURE SCOPE

The integration of AI-powered chatbots into customer service is an evolving field with vast potential for future development. As technology continues to advance, several promising avenues can be explored to further enhance both user experience and operational efficiency.

Firstly, the incorporation of emotional intelligence in chatbots presents a significant opportunity. Future systems may be able to detect and respond to customer emotions more effectively, allowing for more personalized and empathetic interactions. This advancement would help bridge the gap between automated systems and human support, improving customer satisfaction and trust.

Secondly, multilingual and culturally adaptive chatbots will become increasingly important in serving diverse global markets. By enabling more nuanced language understanding and context-aware communication, businesses can extend their reach and cater to a broader audience.

Another key area of growth lies in seamless integration with other emerging technologies such as voice assistants, augmented reality (AR), and the Internet of Things (IoT). These integrations could create more immersive and efficient customer service experiences across various platforms and devices.

From an operational standpoint, the development of self-learning chatbots that continuously improve through real-time data analysis and user feedback holds great potential. These systems could anticipate customer needs, resolve issues proactively, and significantly reduce human intervention. Lastly, ethical and regulatory considerations will shape the future implementation of AI in customer service. Ensuring transparency, data privacy, and unbiased decision-making will be crucial as AI systems become more autonomous and influential in customer interactions.

The future of AI-powered chatbots in customer service is promising, with ongoing research and innovation expected to drive more intelligent, responsive, and human-like systems that enhance both user satisfaction and organizational performance.

## CONCLUSION

The integration of AI-powered chatbots into customer service operations has marked a transformative shift in how businesses interact with consumers. This research has demonstrated that chatbots not only streamline service delivery by handling repetitive and time-sensitive queries but also significantly enhance user satisfaction by providing instant, round-the-clock support. Through case studies and industry data, it is evident that organizations leveraging these tools witness improved efficiency, reduced operational costs, and a more consistent customer experience.

However, while the benefits are substantial, the successful deployment of chatbots requires careful consideration of design, language capabilities, user intent recognition, and seamless escalation to human agents when necessary. As AI continues to evolve, future chatbot systems will likely become even more intuitive, context-aware, and emotionally intelligent, further narrowing the gap between automated and human interactions.

In conclusion, AI-powered chatbots are no longer a futuristic concept but a practical solution that redefines customer service standards. Businesses that invest thoughtfully in this technology are well-positioned to gain a competitive edge in both user engagement and operational excellence.

## REFERENCES

1. Adamopoulou, E., & Moussiades, L. (2020). An overview of chatbot technology. *Artificial Intelligence Applications and Innovations*, *584*, 373–383. https://doi.org/10.1007/978-3-030-49186-4_31
2. Brandtzaeg, P. B., & Følstad, A. (2018). Chatbots: Changing user needs and motivations. *Interactions*, *25*(5), 38–43. https://doi.org/10.1145/3236669
3. Buhalis, D., & Moldavska, A. (2021). Intelligent systems in tourism: Chatbots. *Journal of Tourism Futures*, 7(1), 55-68.
4. Chaves, A. P., & Gerosa, M. A. (2021). How should my chatbot interact? A survey on human-chatbot interaction design. *International Journal of Human–Computer Interaction*, *37*(8), 729–758. https://doi.org/10.1080/10447318.2020.1841438
5. Chung, M., Ko, E., Joung, H., & Kim, S. J. (2020). Chatbot e-service and customer satisfaction regarding luxury brands. *Journal of Business Research*, 117, 587-595.
6. Diederich, S., Brendel, A. B., & Kolbe, L. M. (2019). On conversational agents in information systems research: Analyzing the past to guide future work. *Journal of the Association for Information Systems*, *20*(9), 1572–1601. https://doi.org/10.17705/1jais.00562
7. Følstad, A., & Brandtzæg, P. B. (2017). Chatbots and the new world of HCI. *Interactions*, 24(4), 38–42.
8. Gnewuch, U., Morana, S., & Maedche, A. (2017). Towards designing cooperative and social conversational agents for customer service. *Proceedings of the International Conference on Information Systems (ICIS)*.
9. Gnewuch, U., Morana, S., Adam, M. T. P., & Maedche, A. (2018). Faster is not always better: Understanding the effect of dynamic response delays in human-chatbot interaction. *Proceedings of the 26th European Conference on Information Systems (ECIS)*, 1–17. https://aisel.aisnet.org/ecis2018_rp/86
10. Hill, J., Randolph Ford, W., & Farreras, I. G. (2015). Real conversations with artificial intelligence: A comparison between human–human online conversations and human–

chatbot conversations. *Computers in Human Behavior*, *49*, 245–250. https://doi.org/10.1016/j.chb.2015.02.026

11. Jain, M., Kumar, P., Kota, R., & Patel, S. N. (2018). Evaluating and informing the design of chatbots. *Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems*, 1-12.
12. Kumar, N., Adlakha, D., & Singh, R. (2021). AI-based chatbot for customer service: Review and future research directions. *International Journal of Information Management Data Insights*, 1(2), 100008.
13. Liao, Q. V., Davis, M., Geyer, W., Muller, M., Shami, N. S., & Lu, J. (2018). What's in a message? Predicting customer satisfaction from automated chat logs. *Proceedings of the ACM on Human-Computer Interaction*, *2*(CSCW), 1–19. https://doi.org/10.1145/3274390
14. Luo, X., Tong, S., Fang, Z., & Qu, Z. (2019). Frontiers: Machines vs. humans: The impact of AI chatbot disclosure on customer purchases. *Marketing Science*, *38*(6), 937–947. https://doi.org/10.1287/mksc.2019.1192
15. McTear, M. (2017). The rise of the conversational interface: A new kid on the block? *Interaction*, *24*(4), 38–42. https://doi.org/10.1145/3085558
16. McTear, M. (2020). Conversational AI: Dialogue systems, conversational agents, and chatbots. *Synthesis Lectures on Human Language Technologies*, 13(3), 1–251.
17. Purington, A., Taft, J. G., & Ahn, J. (2019). Designing chatbot interactions: Considerations for emotion and personality. *Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems*.
18. Radziwill, N., & Benton, M. (2017). Evaluating quality of chatbots and intelligent conversational agents. *Journal of Intelligent & Robotic Systems*, *91*, 261–266. https://doi.org/10.1007/s10846-017-0671-5
19. Shumanov, M., & Johnson, J. (2021). Impact of chatbot conversational skill on user engagement and satisfaction. *Journal of Computer Information Systems*, *61*(1), 1–11. https://doi.org/10.1080/08874417.2019.1668637
20. Srivastava, S., & Kalro, A. D. (2020). Enhancing customer engagement through AI-powered chatbots. *Journal of Business Research*, *116*, 402–410. https://doi.org/10.1016/j.jbusres.2019.08.036
21. Xu, A., Liu, Z., Guo, Y., Sinha, V., & Akkiraju, R. (2017). A new chatbot for customer service on social media. *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems*, 3506–3510. https://doi.org/10.1145/3025453.3025496
22. Zamora, J. (2017). I'm sorry, Dave, I'm afraid I can't do that: Chatbot perception and expectations. *Extended Abstracts of the 2017 CHI Conference on Human Factors in Computing Systems*, 2857–2863.

***Acknowledgments***

The author(s) appreciates all those who participated in the study and helped to facilitate the research process.

***Conflict of Interest***

The author declared no conflict of interest.

***How to cite this article:*** Satpal, M (2025). AI-Powered Chatbots in Customer Service: Enhancing User Experience and Operational Efficiency. *International Journal of Social Impact, 10*(3), 529-540. DIP: 18.02.056/20251003, DOI: 10.25215/2455/1003056