International Journal of Sales & Marketing Management (IJSMM)
ISSN (P): 2319–4898; ISSN (E): 2319–4901
Vol. 14, Issue 2, Jan – Jun 2025; 7–10

International Academy of Science, Engineering and Technology
Connecting Researchers; Nurturing Innovations

THE ROLE OF AI AND CHATBOTS IN ENHANCING ONLINE CUSTOMER EXPERIENCE

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ABSTRACT

Over the past decade, Artificial Intelligence (AI) and chatbots have steadily changed how companies handle customer service online. Rather than being a gimmick, these tools now let firms respond to customers faster, with more consistency and a degree of personalisation that used to be impossible. This paper looks at how AI-driven chatbots shape online customer experience. It draws on published studies, case examples, and industry reports to examine their effects on satisfaction, operational efficiency, and business performance. The discussion shows that chatbots usually increase engagement, cut response times, and deliver cheaper service. Yet some difficulties remain – complex queries, limited emotional awareness, and privacy risks in particular. With progress in natural language processing (NLP), machine learning, and links to other technologies such as augmented reality (AR) and the Internet of Things (IoT), the potential for richer customer experiences is likely to grow.

KEYWORDS: *Artificial Intelligence (AI), Chatbots, Online Customer Experience, Customer Satisfaction, Personalisation, Natural Language Processing (NLP), Data Privacy, E-commerce*

Article History

Received: *11 Sep 2025* | ***Revised:*** *15 Sep 2025* | ***Accepted:*** *20 Sep 2025*

INTRODUCTION

Digital transformation is no longer an abstract idea; it has altered business models across almost every sector. As customers' expectations shift, organisations have been pushed to adopt new tools. One visible example is the widespread use of AI-powered chatbots. These conversational agents mimic certain aspects of human interaction so they can answer questions, provide information or guide users through a process. Their uptake has accelerated because they work round the clock, offer some personalisation and handle several queries at once (Gnewuch, Morana & Maedche, 2017).

In competitive markets, online experience now acts as a key differentiator. People want quick responses and seamless, tailored solutions. Traditional service models based on human agents alone struggle to meet this demand at scale (Følstad & Skjuve, 2019).

Chatbots help bridge this gap. They automate routine requests, shorten waiting times and enable more individualised interactions. Examples range from Amazon's chatbots, which support order tracking and product questions, to HDFC Bank's tools for handling routine banking enquiries (Accenture, 2020).

This paper asks how AI chatbots contribute to better online customer experiences by looking at their benefits, their shortcomings, and where the technology might be heading.

LITERATURE REVIEW

From Rule-Based to AI-Driven

Early chatbots were simple, rule-based programs responding to preset commands. ELIZA is the textbook example (Shawar & Atwell, 2007). Modern versions use NLP, sentiment analysis, and machine learning, enabling them to understand context and adapt responses (McTear, Callejas & Griol, 2016). This shift has made chatbots far more useful in customer service. They can infer intent, pick up on emotional cues, and even make proactive suggestions (Chattaraman et al., 2019).

Customer Satisfaction

A range of studies indicate that AI chatbots improve satisfaction. They provide instant, reasonably accurate, and sometimes personalised responses. Gnewuch et al. (2017) found that around 70 % of customer queries could be handled by chatbots, reducing wait times dramatically. People often interpret fast and accurate replies as a sign of competence, which in turn builds loyalty (Følstad & Skjuve, 2019).

Personalisation matters as well. By analysing data, chatbots can tailor recommendations. Sephora, for instance, uses AI chatbots to suggest products, book appointments, and offer beauty tips, which increases customer engagement (Accenture, 2020).

Operational Efficiency

Automation of routine tasks eases pressure on human agents, freeing them to focus on complex or sensitive matters requiring empathy and judgment (Chattaraman et al., 2019). HDFC Bank reports lower workloads for its staff after implementing chatbots for basic banking enquiries (Accenture, 2020). Chatbots also scale easily – they can handle large spikes in demand without matching increases in cost.

Personalisation and Engagement

Using NLP and machine learning, chatbots learn from behaviour and past interactions to deliver more personalised support (Brandtzaeg & Følstad, 2017). Online travel agencies such as Expedia now use them to propose itineraries and give real-time help, making the customer journey more interactive.

METHODOLOGY

This research takes a qualitative approach using secondary data from academic articles, white papers, and industry reports.

- **Scope:** Several sectors, including e-commerce, banking, healthcare, and travel.
- **Analysis:** Synthesising findings to identify benefits, limitations, and future trends.

This method gives a broad yet grounded view of how AI chatbots enhance customer experience.

FINDINGS AND DISCUSSION

Main Benefits

- **Always on:** 24/7 support across time zones.
- **Scalable:** Can serve thousands of customers at once.
- **Cost-effective:** Cuts routine staffing costs without hurting quality.
- **Consistent:** Gives standardised answers, reducing variability.
- **Insightful:** Collects data that can improve business decisions.

Ongoing Challenges

- **Complex questions:** Still need human back-up for ambiguous or layered issues.
- **Empathy limits:** Lack of genuine emotional understanding may harm sensitive interactions.
- **Data privacy:** Handling of personal information raises security concerns.
- **User preferences:** Some customers simply prefer speaking to a person.

Illustrative Cases

- **Amazon:** Chatbots handle order tracking, refunds, and recommendations.
- **HDFC Bank:** Routine banking enquiries automated, freeing call-centre staff.
- **Sephora**: Personalised product tips and scheduling enhance loyalty.
- **Expedia:** Real-time travel planning and booking assistance.

FUTURE PROSPECTS

Future chatbots are likely to link with AR, VR, and IoT for richer, more immersive experiences. Better natural language understanding and sentiment analysis should help them tackle more nuanced conversations (Chattaraman et al., 2019). There is also scope for proactive service, where chatbots anticipate needs before customers ask.

CONCLUSION

AI chatbots are now a core part of online service strategies. They deliver faster, more scalable, and increasingly personalised interactions. Benefits include higher satisfaction, lower costs, and deeper engagement. Nevertheless, weaknesses such as limited empathy and privacy concerns still need attention. Ongoing advances in AI and NLP promise to address many of these gaps. Organisations that use chatbots thoughtfully stand to meet customer expectations more effectively and gain a competitive edge.

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