

# Smart Conversational Ai Chatboat in Optimizing Customer Satisfaction Towards A Superior and Sustainable Digital Experience

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**Abstract.** The rapid development of artificial intelligence (AI), especially in the form of intelligent conversational AI such as chatbots and voice assistants, has revolutionized the way companies interact with customers. This study examines the strategic role of intelligent conversational AI in optimizing customer satisfaction and creating exceptional digital experiences as a foundation for sustainable business growth. Through a literature review, this study analyzes relevant academic journals, industry reports, and recent case studies to identify the contributions, challenges, and opportunities for implementing this technology in various industries. The study results show that implementing intelligent conversational AI can improve service response, interaction personalization, operational efficiency, and customer trust in brands. However, the successful implementation of this technology is highly dependent on strategic integration, empathy-based conversation design, and data privacy and security. The study concludes that intelligent conversational AI plays a critical role not only as a customer service tool but also as a driver of digital transformation for the competitiveness and sustainability of companies in the digital economy era.

**Keywords:** Intelligent Conversational AI, Customer Satisfaction, Digital Experience, Sustainable Business, Economy.

## Introduction

The rapid and rapid development of technology today has a significant impact on the fields implemented, one of which is economists. Technology that was created to ease the burden of activities in everyday life, and help us provide fast, precise, and accurate information One technology that represents excellent potential in the future in the world of education is artificial intelligence technology. Artificial intelligence is a branch of science from the field of computer science that seeks to impart human-like intelligence to machines (Adolph, 2016).

Artificial Intelligence is one of the innovations used in the industrial sector including e-commerce. Customers in e-commerce are one of the factors in success. Customers who have a good experience when shopping on a marketplace tend to become loyal customers, leave positive reviews, and recommend the platform to others. On the other hand, a bad experience can cause customers to move to other platforms or even leave the world of online shopping (Rosanti et al., 2025).

Marketplaces provide a variety of products from different categories and sellers are available, allowing consumers to search, compare, and purchase goods according to their needs. Marketplaces act as intermediaries that provide space for sellers to display their products, as well as provide easy access for consumers to shop easily from one place. With integrated payment and delivery systems, marketplaces also

offer a safe and efficient shopping experience.

Marketplaces play an important role in the digital economy as they allow small to large businesses to reach a wider market without having to have a physical store. In addition, marketplaces also provide various additional features such as product reviews, seller ratings, and customer service, which help consumers in making shopping decisions. Through AI, the system can evaluate users based on their demographics or previous purchase history so as to provide relevant recommendations.

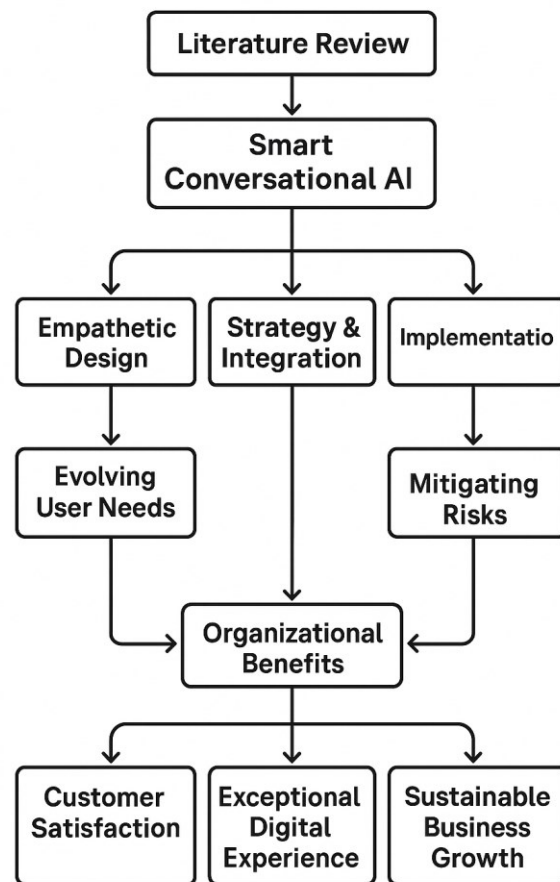
## Methods

The research method used in conducting this study is to retrieve journal references (Literature Review) in the Google Scholar database to conduct a systematic literature review and scientific data extraction. The database was then manually checked to download relevant literature. Data from the screened publications were downloaded and used in the review article. The retrieved literature was then organized based on the type of chatbot technology used, the Smart Conversational AI Revolution for Sustainable Business Growth method applied, the effectiveness of chatbots in improving customer service efficiency, and sectors or services that utilize chatbot technology based on messaging applications (Yoseppin et al., 2025).

## Review Articles

No.	Author/ Year	Source Title	Purpose of Study	Theoretical Framework	Method	Results and Discussions	Conclusion	References
1.	Fitra Ramadhan (2021)	Chatbot on Android based E-Commerce with NLP	Examining the effect of using an NLP based chatbot on user experience	Natural Language Processing (NLP)	System development study	Chatbot increase service efficiency and positive user perspectives of brands	Chatbot, NLP, E-Commerce	<a href="http://ics.ejournal.com/index.php/jcse/article/view/25">http://ics.ejournal.com/index.php/jcse/article/view/25</a>
2.	Lang et al. (2024)	Utilization of AI in Shopee Product Marketing	Analyzing the influence of AI in digital marketing on customer retention	AI Marketing & Repurchase Theory	Quantitative survey	AI increases intention to repurchase due to perceived efficiency and convenience	Chatbot, AI, Customer retention	<a href="https://doi.org/10.29408/jpek.v8i2.26724">https://doi.org/10.29408/jpek.v8i2.26724</a>
3.	Muh Ahlis Ahwan et al. (2024)	Development of WhatsApp Chatbot at UIN Walisongo Library	Designing a WhatsApp based information service chatbot for service efficiency	Integrated Chatbot System Concept	Case study/development	Chatbot improves information service quality and staff efficiency	Chatbot, WhatsApp, Information Services	[periodical of Library and Information Science, 20(1), 119-132]
4.	Murman to et al. (2024)	AI Chatbot to increase satisfaction survey response	Increase survey participation using AI chatbot	Service Feedback Loop	Quantitative study	Chatbot significantly increases survey responses in less time	Chatbot, satisfaction survey, feedback	[Vol. 12(1), 39-45]

5.	Rosanti et al. (2025)	Automated Customer Service Berbasis AI (Lazada)	Examining the effect of automated chatbots on service velocity and purchasing decisions	Automated Service Theory	Case study	Response chatbot increases repeat purchase intent on Lazada App	AI, Automated service, Lazada	[Vol. 9(5), 1–10]
6.	Satritama (2025)	Application of NLP in chatbot for Customer service	Testing NLP on a chatbot in a messaging application for interaction enhancement	Natural Language Processing (NLP)	System experiment test	NLP improves chatbot response accuracy & customer satisfaction	NLP, Chatbot, Customer Service	[Vol. 1(1), 338–345]
7.	Soetiyono et al. (2024)	Chatbot & Virtual Assistant on satisfaction & decision	Examining the influence of chatbots and virtual assistants on purchasing decisions	Integrated AI Decision Model	Quantitative survey	Chatbot plays a positive role in customer satisfaction and purchasing decision	Chatbot, Asisten Virtual, purchase decision	<a href="https://doi.org/10.32877/eb.v6i3.1169">https://doi.org/10.32877/eb.v6i3.1169</a>
8.	Yoseppin et al. (2025)	Chatbot AI as a confidential friend	Analyzing the phenomenon of chatbot as a personal relationship tool in the digital era	Digital interpersonal relationship	Phenomenological study	Chatbot AI seen as a digital friend that supplies emotional attachment	Chatbot, emotion, digital empathy	[Vol. 7, 45–53]
9.	Nisaa et al. (2025)	Patient satisfaction with AI based service	Evaluation of AI chatbot in healthcare facilities	Service Satisfaction Theory	Survey	Chatbot contributes to positive patient experience of care	Chatbot, healthcare patient satisfaction	<a href="https://doi.org/10.25047/j-remi.v6i2.5790">https://doi.org/10.25047/j-remi.v6i2.5790</a>



### Conceptual Framework

Table Summary of Physical Parameters

No.	Segments	Length (km)	Elevation (meters)
1	A-B	25	30
2	B-C	75.15	10
3	C-D	44.75	50
4	D-E	72.5	10
5	E-F	21.25	10

### Literature Study Results and Discussion

This research examines various scientific literature and recent case studies to understand the role of Smart

Conversational AI (chatbot) in improving customer satisfaction, shaping superior digital experiences, and supporting sustainable business growth. The literature review revealed several key findings: Social-Oriented Communication Style Increases Customer Satisfaction.

1. Chatbots that use a social-oriented communication style, which emphasizes warmth and empathy, significantly increase customer satisfaction.
2. The warmth perspective of the chatbot mediates the effect of social communication style on customer satisfaction.
3. Perceived Competence and Trust Influence Satisfaction.

**Chatbot as a Customer Loyalty Enhancement Tool** Effective chatbot implementation not only increases customer satisfaction but also strengthens their loyalty. A competent and trustworthy chatbot increases customers' intention to continue using the service. Effect of Chatbot on Superior Digital Experience (Soetiyono et al., 2024). A well-designed chatbot can create a superior digital experience by providing responsive, personalized, and consistent service. The importance of a social-oriented communication style in creating a more humanized and satisfying experience for customers.

#### **The Role of Communication Style in Increasing Customer Satisfaction**

According to (Lang et al., 2024) The communication style used by chatbots plays a crucial role in shaping customer perception and satisfaction. Social- oriented communication styles, which emphasize warmth, empathy, and a humane approach, have been shown to be more effective in increasing customer satisfaction than task-oriented communication styles that focus on completing tasks alone (Satritama, 2025).

#### **The Importance of Perceived Competence and Trust**

Customers' perceptions of competence and trust in chatbots greatly influence their level of satisfaction (Murmanto et al., 2024). A chatbot that is perceived as competent and trustworthy is likely to significantly increase customer satisfaction. Therefore, it is important for companies to ensure that their chatbots have the ability to provide accurate and reliable information.

#### **Chatbot as a Customer Loyalty Enhancement Tool**

In addition to increasing satisfaction, chatbots also play a role in strengthening customer loyalty. By providing consistent and satisfying services, chatbots can encourage customers to continue using the service, which ultimately increases their loyalty to the brand (Fitra Ramadhan, 2021).

#### **Creating a Superior Digital Experience**

A superior digital experience is not only determined by the efficiency of the service but also by the quality of the interaction between the customer and the chatbot. A chatbot that is able to interact empathetically and responsively can create a more satisfying experience for customers, which in turn increases their satisfaction and loyalty (NU'AENI, 2025).

#### **Implications for Sustainable Business Growth**

Effective chatbot implementation can contribute significantly to sustainable business growth. By increasing customer satisfaction and loyalty, and creating a superior digital experience, chatbots assist companies in retaining and expanding their customer base. In addition, the operational efficiency gained through customer service automation also contributes to business sustainability (Nisaa et al, 2025).

### **Conclusion**

Smart Conversational AI-based chatbots are proven to play a strategic role in improving customer satisfaction, creating superior digital experiences, and supporting sustainable business growth. Through empathetic, responsive, and consistent communication, chatbots not only serve as a service tool, but also as a brand representation in building long-term relationships with customers.

The resulting operational efficiency and the ability to process and utilize customer data make this technology one of the important foundations in the digital transformation of modern businesses. However, its successful implementation relies heavily on humanized conversation design, solid system integration, and a commitment to data security and user privacy. Therefore, companies need to adopt chatbots strategically and sustainably in order to reap the maximum benefits of this technology in the midst of increasingly dynamic digital era competition.

### **Literature Based**

### **Chatbot**

A chatbot is software that mimics human communication using text. Three important factors in the use of chatbots as a digital marketing tool are ease of use, efficiency, and reliability. These three factors affect the success of the chatbot in completing tasks effectively and consistently (Satritama, 2025)

### **Virtual Assistant**

Virtual assistants are computer programs designed to mimic human interaction and support task completion, as well as improve customer service. Sundjaja et al. (2024) state that the ability of virtual assistants is assessed based on several dimensions, such as understanding user needs, human-like communication, explanation of functionality, professional avatar appearance, developer hosting capabilities, protection of privacy and personal data, and potential failure in solving user problems.

### **Customer Service**

Customer service or customer service has a crucial role in solving problems and increasing customer satisfaction at every stage of purchase, by providing services that meet customer needs and maintaining their relationship with the company (Muh Ahlis Ahwan et al., 2034)

### **Customer Satisfaction**

Customer satisfaction or dissatisfaction is a response that arises due to the difference between customer expectations and the perceived product performance after the product is used. In this case, some experts define customer satisfaction as the result of customer evaluation of expectation

### **Purchase Decision**

The decision made by consumers to buy is a step in making a choice between two or more alternatives, which means that several choices must be available when making a decision.

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