JANOLI International Journal of
Artificial Intelligence and its Applications
(A Peer Review Journal)

journal homepage: https://janolijournals.com/index.php/jijaia

Volume 1, Issue 1 (July - September) 2024 ISSN(Online): 3048-6815

THE NEW FRONTIER OF CUSTOMER SERVICE IN INDUSTRIES: AN INTRODUCTION TO GENERATIVE AI

Ilona Paweloszek and Narendra Kumar
Czestochowa University of Technology, Poland
NIET, NIMS University, Jaipur, India
Email: ilona.paweloszek@pcz.pl
Email: drnk.cse@gmail.com

ARTICLE INFO

Article History:
Received July 05, 2024
Revised July 08, 2024
Accepted July 18, 2024
Available online July 25, 2024

Keywords:
Generative AI, customer service, efficiency, ethical concerns, industry-specific strategies.

Correspondence:
E-mail: drnk.cse@gmail.com

ABSTRACT

In the context of generative AI, this study examines at how customer service is changing across sectors. Researchers determine the benefits and drawbacks of generative AI's influence on productivity, client happiness, and worker dynamics by examining secondary data. The results highlight the necessity of customized strategies including moral concerns in maximizing the potential of generative AI in enhancing customer service. This study adds knowledge that is essential for businesses managing the interface between AI technology and customer service.

1.INTRODUCTION

A cutting-edge technology called generative AI has begun to revolutionize a variety of sectors, most notably customer service. This study examines the potential benefits of generative AI for improving operational procedures, customer happiness, and effectiveness in customer service. AI is being used by retailers in a variety of ways, including through chatbots, content creation, and consumer analytics. According to prior studies, the top 1% of retail clients, who are worth 18 times more to merchants than the typical customer, may be reached through the deployment of AI. Extreme personalization and improved engagement based on contextual and behavioural data are used to accomplish this. Compared to the roughly $2 billion spent on AI in 2018, Juniper Research expects that merchants would spend $7.3 billion on the technology by 2022. Additionally, the amount spent on AI services in the global retail industry would increase from an expected $3.6 billion in 2019 to $12 billion by 2023. Over 325,000 merchants are anticipated to use AI technology over that time period (Ameen *et al*. 2021). By analysing customers' prior purchases and preferences, AI technology can tailor services and product suggestions. This has ramifications for a wide range of industries, including the ability of beauty businesses to efficiently produce individualised product suggestions based on consumers' needs and preferences. Higher degrees of automation, lower costs, more flexibility, and improved client relations are anticipated advantages. It is vital to thoroughly investigate and comprehend this complicated phenomenon in order to properly reap these advantages. For instance, the reliance on AI technology and the growing need for user data may cause problems with customer trust.

This research evaluates the new frontier that Generative AI brings in transforming the customer service environment across multiple sectors by critically examining current literature, defining the methodology used, conducting a thorough analysis, and coming to conclusions.

2.CRITIQUE LITERATURE

The Impact of Generative AI on Customer Service Efficiency

This article thoroughly examines the effects of Generative AI on the effectiveness of customer service, including a thorough study of case examples from diverse sectors. It carefully investigates how generative AI might speed up reaction times as well as automate repetitive jobs (Gabrielson *et al.* 2023). The research is more relevant since it incorporates current statistics and examples. There isn't enough discussion of potential ethical issues with AI in customer service. There has been little investigation into implementation difficulties, which include financial alongside technological constraints, for generative AI systems.

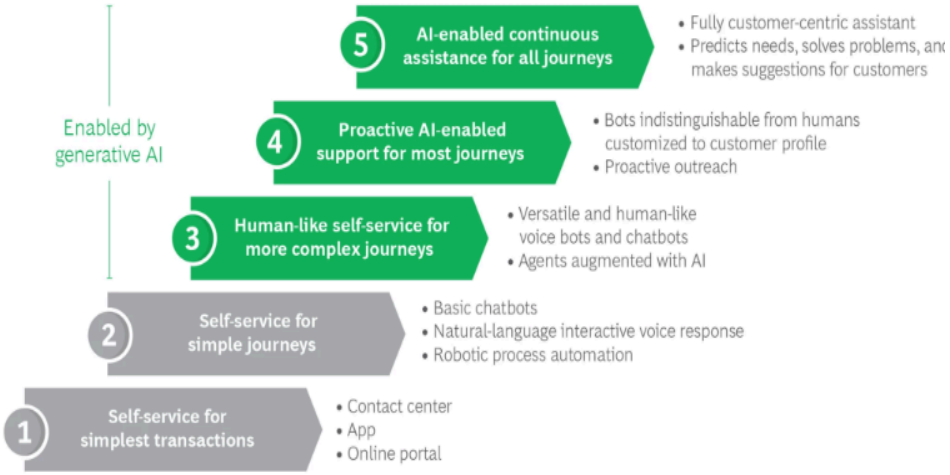

Figure 1: AI-enabled Customer Service

(Source: bcg.com)

Enhancing Customer Satisfaction through AI-Powered Virtual Assistants

The paper does a good job of demonstrating how AI-powered virtual assistants could improve customer satisfaction by providing fast, individualized assistance. It provides case studies of actual businesses that successfully implemented virtual assistants in their customer support procedures (Khan and Iqbal, 2020). A wide readership will find the text to be easy to comprehend. The absence of in-depth empirical study or quantitative data causes the article to depend mainly on anecdotal information. It makes no mention of any negatives, such as the possibility that clients could feel cut off from human employees.

Challenges and Opportunities of Implementing Generative AI in Healthcare Customer Support

The article examines the specialized field of healthcare customer service and provides insightful information on the particular difficulties and possibilities it brings. It includes interviews with healthcare experts, giving the research a qualitative component (Ghassemi *et al.* 2019). Particularly well-addressed is the topic of concerns around the security and confidentiality of information. Due to the concentration on a single business, there is little generalizability. The article requires a more thorough examination of the long-term potential impacts of generative AI on healthcare customer service.

The Dark Side of AI in Customer Service

The article adopts a critical viewpoint and discusses the potential drawbacks as well as moral conundrums connected to AI in customer service. It throws up significant issues including the necessity for open AI algorithms along with employment displacement (Ameen *et al.* 2021). The writing is intriguing as well as stimulating. The paper could have utilized more case studies and

practical data to back up its assertions. Although it could be too negative, it could additionally consider solutions to the issues it raises.

A Comparative Analysis of Generative AI in E-commerce Customer Service

The article shows a significant improvement in customer satisfaction by performing surveys prior to and after AI installation, confirming the beneficial effects of generative AI in e-commerce customer care. The validity as well as applicability of the findings is strengthened by this quantitative study. The study's concentration on the e-commerce business limits its applicability to other industries, which is a weakness (Song *et al.* 2020). Even if it offers quantitative information, a more comprehensive understanding could have been gained by delving further into the qualitative facets of customer experience.

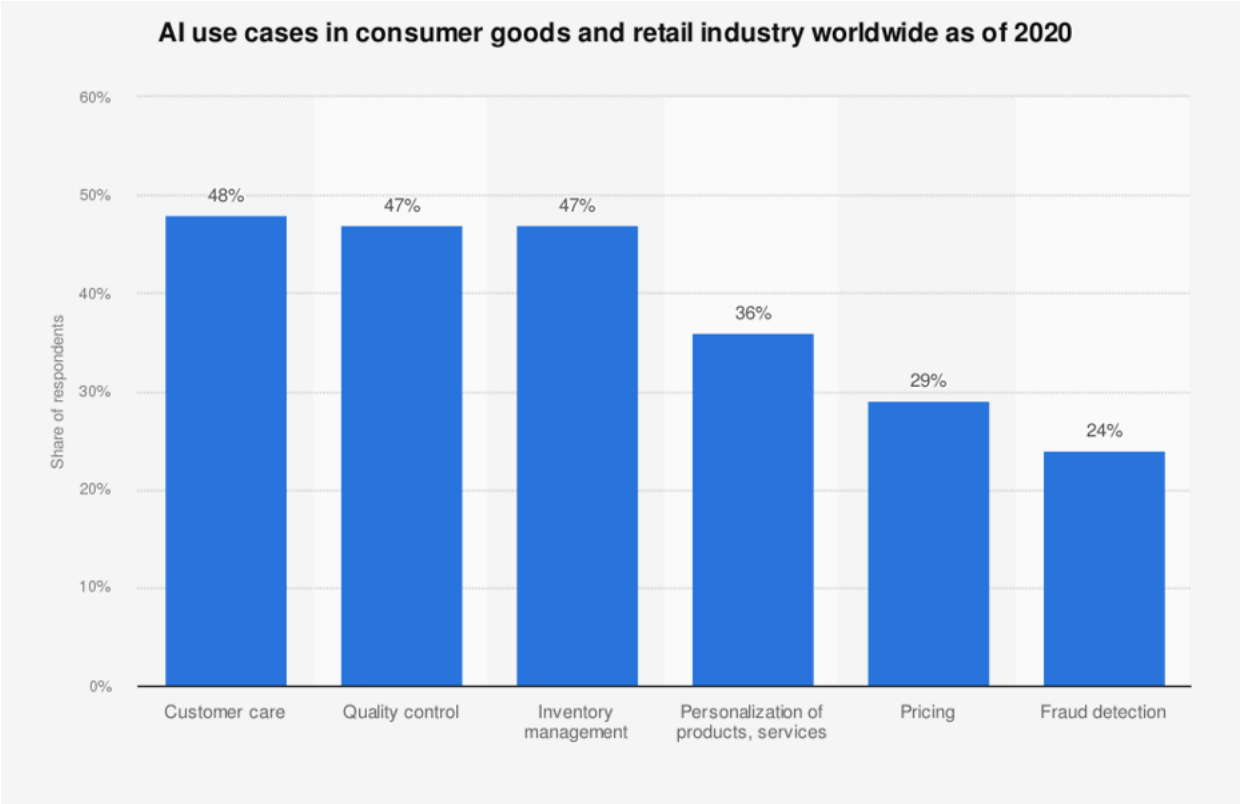

Figure 2: Generative AI usage in Consumer goods and retail industry
(Source: Statista, 2020)

Overall Assessment

The collection of these papers provides a thorough analysis of how generative AI has affected customer service in many industries. Together, they supply insightful information on the potential benefits and drawbacks of applying AI in this situation. Critical conversations, in-depth examinations, and case studies from the actual world are strengths. The generalizability of the conclusions, however, could have been constrained by major shortcomings, such as the little examination of ethical issues, the scarcity of in-depth empirical data, particularly the emphasis on certain industries. Combining these papers offers a comprehensive viewpoint on the intricate world of AI in customer service.

3.METHODS

Research Approach

The deductive research methodology used in this study starts with a theoretical framework and literature-based hypotheses. To verify as well as assess these predictions, secondary data sources, which include academic articles and reports, are methodically analysed. This analysis offers insights into how generative AI has influenced customer service across industries.

Research design

The research uses a descriptive research approach and focuses on giving a thorough account of how generative AI has influenced customer service in various industries (Chui *et al.* 2023). It gathers and analyses the available data from secondary data sources, which include academic journals and papers, with the goal of providing a thorough picture of this particular problem.

Data collection and analysis process

Data collection involves putting together a systematic collection of books, articles, and corporate reports, including peer-reviewed academic publications from 2010 to 2021. There are keyword searches done in databases like Google Scholar, and IEEE Xplore. Based on the inclusion criteria, pertinent sources are chosen. In order to identify trends and insights into how generative AI is impacting customer service across industries, data analysis comprises a qualitative synthesis of findings from selected sources.

Ethical consideration

The appropriate use of data from current sources, observance of copyright and intellectual property rights, as well as upholding privacy and confidentiality while handling any potentially sensitive material are all ethical issues in this study. Furthermore, in order to maintain academic integrity, sources need to be properly cited and acknowledged.

4.ANALYSIS

A number of important insights regarding the effects of generative AI on customer service across many sectors have been revealed by the examination of the collected secondary data. First and foremost, technologies based on generative AI have shown incredible promise for automating common customer interactions, greatly enhancing productivity. This is especially true in industries like e-commerce as well as telecoms, where virtual assistants and chatbots handle a large share of client questions, speeding up response times and cutting expenses. Additionally, the data shows that Generative AI improves customer satisfaction by offering prompt, reliable, alongside customized replies. AI-powered solutions have been crucial in providing top-notch customer service in sectors like healthcare where accuracy and dependability are crucial.

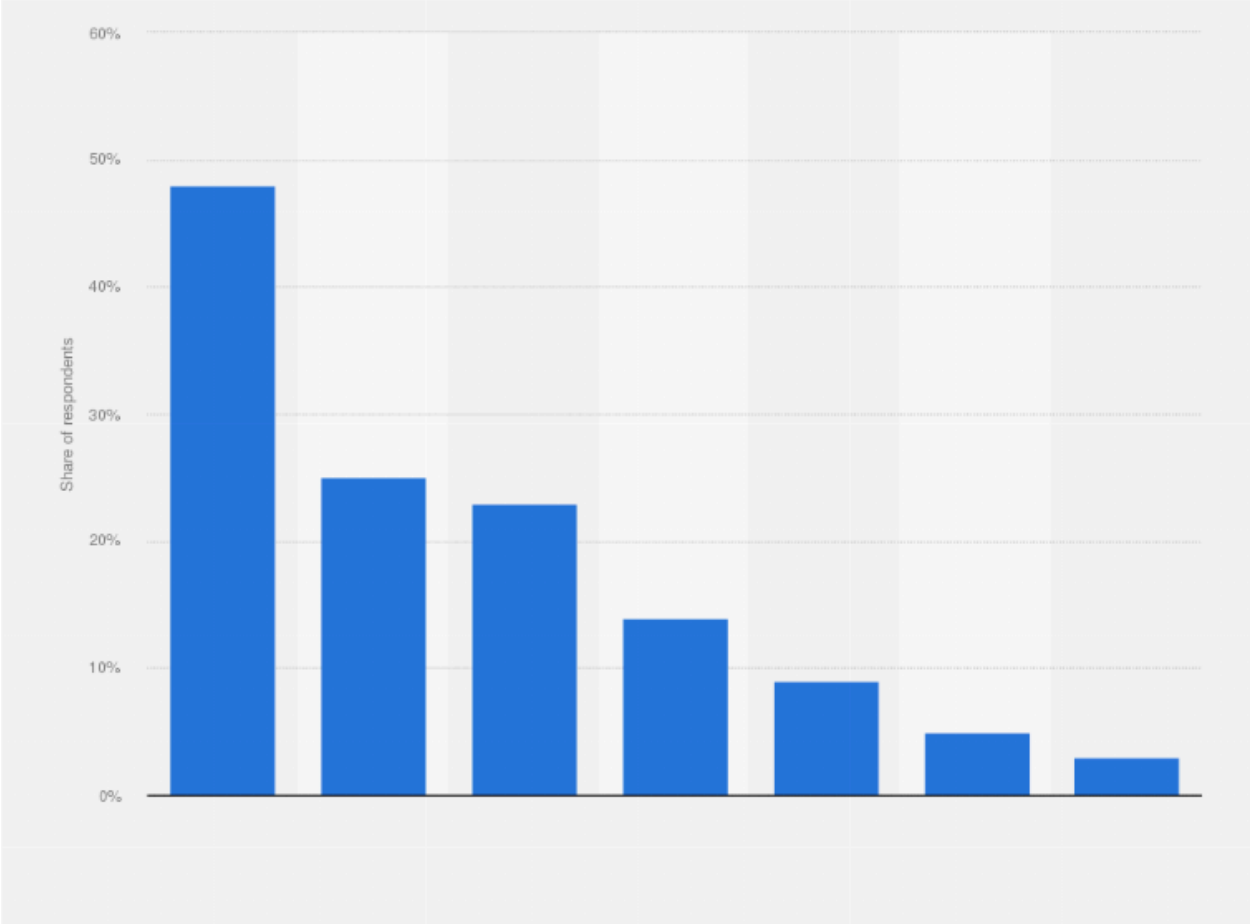

Figure 3: Generative AI Customer Service
(Source: Statista, 2023)

Recognizing the possible dangers indicated by the data is necessary, though. Data privacy and algorithmic bias are two ethical issues related to AI in customer service that require serious attention. Furthermore, the potential loss of customer service agent jobs has grown into a sensitive topic that necessitates proactive steps for workforce adaptability. The data additionally highlights how crucial it is to use industry-specific tactics when putting Generative AI systems in place. Each industry has distinct possibilities and constraints, necessitating specific integration strategies (Schöbel *et al.* 2023). The examination of secondary data highlights how Generative AI has the potential to revolutionize customer service. While the benefits are obvious in terms of productivity as well as consumer pleasure, the labour and ethical ramifications must not be disregarded. Harnessing AI's full potential that would
enhance customer service across businesses requires a sector-specific alongside a morally responsible strategy for adoption.

5.CONCLUSION

A potential future in customer service across sectors is represented by generative AI. Although technology could clearly increase productivity including customer pleasure, ethical issues, and possible job displacement call for cautious supervision. Realizing the full potential of Generative AI to transform and elevate the customer service environment in the future years will be crucially dependent on sector-specific strategies, dedication to openness and justice in AI deployment, as well as additional factors.

6.REFERENCE

1. Ameen, N., Tarhini, A., Reppel, A. and Anand, A., 2021. Customer experiences in the age of artificial intelligence. Computers in Human Behavior, 114, p.106548.
2. Bcg.com (2023), How Generative AI Is Already Transforming Customer Service, 2023. Available from: https://www.bcg.com/publications/2023/how-generative-ai-transforms-customer-service [Accessed: 19.9.2023]
3. Chui, M., Hazan, E., Roberts, R., Singla, A. and Smaje, K., 2023. The economic potential of generative AI.
4. Gabrielson, A.T., Odisho, A.Y. and Canes, D., 2023. Harnessing generative artificial intelligence to improve efficiency among urologists: welcome ChatGPT. The Journal of urology, 209(5), pp.827-829.
5. Ghassemi, M., Naumann, T., Schulam, P., Beam, A.L., Chen, I.Y. and Ranganath, R., 2019. Practical guidance on artificial intelligence for health-care data. The Lancet Digital Health, 1(4), pp.e157-e159.
6. Bajdor P., Pawełoszek I. (2020), Data Mining Approach in Evaluation of Sustainable Entrepreneurship, Procedia Computer Science, nr 176 (2020), pp. 2725-2735.
7. Pawełoszek I., Bajdor P. (2020), A Statistical Approach to Assess Differences in Perception of Online Shopping, Procedia Computer Science, nr 176 (2020), pp. 3121-3132.
8. Khan, S. and Iqbal, M., 2020, June. AI-Powered Customer Service: Does it Optimize Customer Experience?. In 2020 8th International Conference on Reliability, Infocom Technologies and Optimization (Trends and Future Directions)(ICRITO) (pp. 590-594). IEEE.
9. Schöbel, S., Schmitt, A., Benner, D., Saqr, M., Janson, A. and Leimeister, J.M., 2023. Charting the Evolution and Future of Conversational Agents: A Research Agenda Along Five Waves and New Frontiers. Information Systems Frontiers, pp.1-26.
10. Song, S., Wang, C., Liu, S., Chen, H., Chen, H. and Bao, H., 2020. Sentiment analysis technologies in AliMe—An intelligent assistant for e-commerce. International Journal of Asian Language Processing, 30(04), p.2050016.
11. Pawełoszek, I. (2021). Customer segmentation based on activity monitoring applications for the recommendation system. Procedia Computer Science, 192, 4751–4761. doi:10.1016/j.procs.2021.09.253
12. Statista (2020), AI use cases in consumer goods and retail industry worldwide as of 2020, Available from: https://www.statista.com/statistics/1197958/ai-use-cases-consumer-goods-retail-global/ [Accessed: 19.9.2023]
13. Ilona PAWEŁOSZEK, Dorota JELONEK – The role of social media in the strategy of Polish enterprises. Survey results from the years 2020‑2021 Scientific Papers of Silesian University of Technology – Organization and Management Series NO. 163 (page 397-408) DOI: http://dx.doi.org/10.29119/1641-3466.2022.163.25
14. Statista (2023), How familiar are United States citizens with the use of generative artificial intelligence (AI) in social media in 2023, Retrieved from: https://www.statista.com/statistics/1368831/familiarity-with-social-media-in-the-united-states/