



INNOVATIVE: Journal Of Social Science Research

Volume 3 Nomor 2 Tahun 2023 Page 653-664

E-ISSN 2807-4238 and P-ISSN 2807-4246

Website: <https://j-innovative.org/index.php/Innovative>

Exploring the Potential of ChatGPT to Improve Customer Service in MSMEs

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Abstrak

UMKM memiliki peran yang penting dalam perekonomian suatu negara. Dalam era digital seperti sekarang, chatbot menjadi salah satu solusi yang populer digunakan oleh UMKM untuk meningkatkan layanan pelanggan mereka. Namun, chatbot tradisional masih memiliki keterbatasan dalam memahami bahasa manusia. Penelitian ini bertujuan untuk mengeksplorasi potensi ChatGPT, yaitu model bahasa alami berbasis deep learning, untuk meningkatkan layanan pelanggan pada UMKM. Fokus dari penelitian ini adalah kualitatif. Metode untuk mengumpulkan informasi termasuk memperhatikan dengan seksama dan membuat catatan rinci, dengan analisis selanjutnya termasuk reduksi data, visualisasi, dan kesimpulan. Hasil studi menunjukkan bahwa eksplorasi potensi ChatGPT dalam meningkatkan layanan pelanggan pada UMKM sangat menjanjikan dan memiliki banyak manfaat. Dalam bisnis UMKM, memperhatikan kualitas layanan pelanggan adalah hal yang sangat penting. ChatGPT dapat membantu UMKM meningkatkan efisiensi dan kualitas layanan pelanggan, serta memberikan pengalaman yang lebih baik bagi pelanggan.

Kata Kunci: *ChatGPT, Pelayanan, Pelanggan, UMKM*

Abstract

MSMEs have an important role in a country's economy. In the digital era like now, chatbot becomes one of the popular solutions used by MSMEs to improve their customer service. However, traditional chatbots still have limitations in understanding human language. This research aims to explore the potential of ChatGPT, a deep learning-based natural language model, to improve customer service in MSMEs. The focus of this study is primarily qualitative. Methods for gathering information included paying close attention and taking detailed notes, with subsequent analysis included data reduction, visualization, and inference. The study results show that exploring the potential of ChatGPT in improving customer service in MSMEs is promising and has many benefits. In MSME businesses, paying attention to the quality of customer service is of paramount importance. ChatGPT can help MSMEs improve the efficiency and quality of customer service, and provide a better experience for customers.

Keyword: *ChatGPT, Service, Customer, MSME.*

INTRODUCTION

Micro, small, and medium-sized businesses, also known as MSMEs, contribute significantly to the economy of a country (Ausat, Widayani, et al., 2022). Around 99 percent of all businesses currently in operation in Indonesia are considered to be micro, small, and medium-sized enterprises (MSMEs), which make a significant contribution to the economy of the country. Improving the quality of customer service is one of the problems that micro, small, and medium-sized enterprises (MSMEs) must address in order to strengthen their competitive position in the market, grow their market share, and gain the trust of their customers (Rijal et al., 2023); (Harahap, Sutrisno, et al., 2023) and (Harahap, Ausat, et al., 2023).

Chatbots have emerged as one of the most popular ways for small and medium-sized businesses (MSMEs) to improve their customer service in this digital era. Traditional chatbots, on the other hand, continue to have difficulties understanding human language (Kasneci et al., 2023); (Adamopoulou & Moussiades, 2020) and (Caldarini et al., 2022). As a result, they frequently offer responses to clients that are irrelevant or unsatisfying.

Therefore, the purpose of this research is to investigate the capabilities of ChatGPT, a model of natural language that is based on deep learning, to enhance

customer service in MSMEs. ChatGPT is a generative model that has improved capabilities for understanding human language, allowing it to provide clients with replies that are more pertinent to their needs and more satisfying.

It is hoped that the findings of this research would assist micro, small, and medium-sized enterprises (MSMEs) in enhancing the level of customer service they provide and enhancing their position as market competitors. Additionally, the findings of this research have the potential to make a contribution to the advancement of ChatGPT technology in Indonesia.

RESEARCH METHOD

This research utilises a methodology known as a desk study, where researchers do not collect primary data by conducting direct field research. To guarantee that this research would run smoothly, the researcher consulted a number of different reference materials. The research conducted for this study used keywords related to the topic at hand, specifically the exploration of ChatGPT's potential to improve customer service in MSMEs, to search for relevant material in digital media and scientific archives. The research approach used by the authors was adaptive, which paved the way for the selection of relevant reference material without requiring the authors to limit the search to specific journals or digital platforms. The rationale we present is supported by multiple sources, including the journal sites Emerald Insight, ResearchGate, and Elsevier. The main focus of this academic article is on exploring the potential of ChatGPT to improve customer service in MSMEs. The focus the authors place on certain keywords helps to limit the scope of the discussion and promote logical coherence. Academic journals, essays, and publications that have been published between 2020 and the present are the main focus of this research. During the search, we used keywords to conduct searches across different publishing platforms. It is important to note that the only papers, journals, and publications that were deemed highly relevant to the topic of ChatGPT's potential and its relationship with increased MSME servicing were those specific papers, journals, and publications. Other papers, journals and publications were not considered relevant. This scientific paper consists of a total of 28 sources that are quite thorough.

The investigation that is now taking place was categorized as a type of

qualitative study. The process of collecting data included the application of a number of different approaches, such as attentive listening and the detailed documentation of all pertinent information. The aforementioned approaches were utilized as a means of facilitating the inspection of the data, which was carried out by way of a process that involved the reduction of the data, the presentation of the data, and the drawing of conclusions. The primary objective of this study was to achieve a more in-depth comprehension of the literature review that was carried out as a component of this research endeavor. During the phase known as "data reduction," the obtained information was methodically organized, categorized, and culled in order to simplify the process of coming to meaningful conclusions and make the development of significant results more manageable. Because the data were so complex and varied, conducting an analysis of them was required even during the phase where they were being reduced. The purpose of the reduction phase was to ascertain whether or not the information was pertinent to the ultimate objective. At the outset, a total of 35 different sources were collected. The initial method resulted in the value of the numerical variable being changed to 28. In addition to that, the data will be provided via graphical illustrations. The current stage is the next step in the process of data reduction, and it is the stage in which the data set is carefully organized in a structured manner in order to promote comprehension and simplify the process of drawing conclusions. Written discourse, more especially in the form of field notes, is the kind of data representation that is utilized in this particular setting. Utilizing this approach to the presentation of data can result in increased productivity when it comes to organizing and arranging data in relational patterns. The process is not complete until the final stage, which is the development of conclusions based on the data acquired. This step marks the completion of the technique that we applied to the analysis of qualitative data. During this stage, we checked the outcomes of data reduction and data presentation to ensure that they were consistent with the intended goal of the research. The objective of this stage is to derive meaning from the obtained data by identifying correlations, similarities, or dissimilarities, in order to build solutions to pre-existing problems that have been identified. The results that were drawn from the sources that were used are deemed to be reliable. The objective of this endeavor is to collect facts that are trustworthy and accurate, with the goal of enhancing comprehension as a result.

RESULTS AND DISCUSSION

MSMEs or Micro, Small, and Medium Enterprises are a very important sector for the Indonesian economy (Ausat & Suherlan, 2021); (Subagja, 2023); (Ausat & Peirisal, 2021); (Sutrisno et al., 2022); (Supatmin et al., 2022). According to data from the Ministry of Cooperatives and SMEs, MSMEs accounted for 60.3% of Indonesia's GDP in 2020. However, in reality, many MSMEs in Indonesia still face various challenges, especially when it comes to improving their customer service (Subagja et al., 2022) and (Ausat, Siti Astuti, et al., 2022). One way to improve customer service is by utilising chatbot technology. ChatGPT is a chatbot technology developed by OpenAI using the latest Natural Language Processing (NLP) technology (Ausat, Suherlan, et al., 2023). By using ChatGPT, MSMEs can improve their customer service by providing quick and accurate solutions to any customer queries and concerns. One of the main advantages of ChatGPT is its ability to understand natural human language and provide relevant answers in a short time (Fauzi et al., 2023) and (Kraugusteeliana et al., 2023). ChatGPT can also learn from customer interactions, so the more interactions that occur, the smarter ChatGPT gets at providing the right answers.

The utilisation of ChatGPT in MSMEs can also help save operational costs. In the long run, the use of chatbot technology can reduce the need to have multiple employees to handle customer queries and issues (Jenneboer et al., 2022); (Adam et al., 2021); (Li & Wang, 2023); (Andrade & Tumelero, 2022) and (Chen et al., 2021). In addition, the use of ChatGPT can also improve time efficiency, as customers can get solutions in a faster time and without having to wait for customer service which sometimes takes a long time. However, the use of ChatGPT in MSMEs also has some challenges. One of the main challenges is in developing algorithms and conversation scenarios that can fulfil customer needs well. In addition, since ChatGPT is still in the development stage, it requires a fairly high cost to develop and implement this technology in MSMEs (Dwivedi et al., 2023).

Despite the challenges, the potential for using ChatGPT in MSMEs is still huge. By utilising this technology, MSMEs can increase customer service efficiency, improve service quality, and save operational costs (Ausat, Al Bana, et al., 2023); (Kamar et al., 2022); (Ausat, 2023) and (Kraugusteeliana et al., 2022). In the long run, the use of ChatGPT can help MSMEs to grow and develop into bigger and more

successful businesses. In addition, the use of ChatGPT in MSMEs can also help in improving the quality of customer data. By using chatbot technology, MSMEs can obtain more accurate and structured customer data. This data can help MSMEs develop more effective marketing strategies and improve the quality of their products and services (Sutrisno et al., 2023).

In its application, ChatGPT can be used in various customer service areas, such as ordering services, customer support, sales, and more. For example, MSMEs engaged in services or e-commerce can utilise ChatGPT to assist customers in selecting products, completing payments, and providing customer support. The use of ChatGPT in MSMEs can also help increase customer loyalty. By providing faster and more efficient customer service, customers will feel more valued and have a better experience when interacting with the business. This can help strengthen the relationship between the customer and the business and increase the likelihood that the customer will return to purchase products or services in the future.

However, as a new technology, the use of ChatGPT in MSMEs also requires close supervision and continuous evaluation. This is important to ensure that ChatGPT provides accurate and relevant solutions for customers and does not cause problems or confusion. In addition, MSMEs also need to ensure that the use of ChatGPT does not reduce the overall quality of customer service.

The main point is that exploring the potential of ChatGPT to improve customer service in MSMEs is a very important step in the effort to improve the efficiency and quality of customer service. The use of chatbot technology such as ChatGPT can help MSMEs to compete with other businesses, reduce operational costs, increase time efficiency, and improve customer data quality. However, like any new technology, the use of ChatGPT also requires close supervision and continuous evaluation to ensure that it provides optimal benefits to customers and businesses.

To start implementing ChatGPT in MSMEs, some steps that can be taken are as follows:

1. Identify customer and business needs: Before starting the implementation of ChatGPT, MSMEs need to identify customer and business needs. This can be done through surveys, customer data analysis, and direct interaction with customers. By understanding customer and business needs, MSMEs

can determine the most appropriate ChatGPT features and functions to implement.

2. Choose the ChatGPT platform: After identifying the needs, MSMEs need to choose the most suitable ChatGPT platform to use. There are many ChatGPT platforms available in the market, such as Dialogflow, IBM Watson, and Microsoft Bot Framework. MSMEs need to choose the platform that is most suitable for their business needs, such as natural language capabilities, integration with platforms already in use, and cost.
3. Create a good conversation flow: After choosing a platform, MSMEs need to create a good and effective conversation flow. The conversation flow should be designed with business goals, customer preferences, and a good user experience in mind. The conversation flow should include common scenarios faced by customers and the answers that ChatGPT can provide.
4. Conduct a trial: Before introducing ChatGPT to customers, MSMEs need to conduct trials to ensure that ChatGPT works well and provides accurate and relevant solutions for customers. Trialling can be done by engaging a group of customers in a conversation with ChatGPT.
5. Maintenance and development: Once ChatGPT had been introduced, MSMEs need to maintain and develop ChatGPT to ensure that this technology remains appropriate for customer and business needs. Maintenance includes monitoring the performance of ChatGPT, updating the conversation flow, and making improvements where necessary. Development involves adding new features and enhancing the capabilities of ChatGPT.

In running an MSME business, the implementation of ChatGPT cannot be underestimated. ChatGPT can assist MSMEs in improving the efficiency and quality of customer service, thereby increasing customer satisfaction and maintaining business continuity. However, the use of ChatGPT technology must be done with caution and close supervision to ensure optimal benefits for customers and businesses.

CONCLUSION

In conclusion, exploring the potential of ChatGPT in improving customer service in MSMEs is very promising and has many benefits. In MSME businesses, paying attention to the quality of customer service is very important. ChatGPT can help MSMEs improve the efficiency and quality of customer service, and provide a better experience for customers.

However, to optimally utilise the potential of ChatGPT, MSMEs must ensure that the use of this technology is done with care and close supervision. The use of ChatGPT should always consider customer needs and provide accurate and relevant solutions. MSMEs should also continue to monitor the performance of ChatGPT and carry out the necessary maintenance and development to ensure that this technology remains in line with customer and business needs.

The advice for MSMEs looking to implement ChatGPT is to start by identifying customer and business needs, selecting the most suitable ChatGPT platform, creating a good conversation flow, conducting trials, and maintaining and developing the technology. MSMEs can also take steps to improve overall customer service quality, such as providing training to employees and improving operational processes. By implementing ChatGPT and improving customer service quality, MSMEs can strengthen their business image and increase customer loyalty. In addition, the use of ChatGPT can help MSMEs compete with larger companies and expand their market reach.

REFERENCES

- Adam, M., Wessel, M., & Benlian, A. (2021). AI-based chatbots in customer service and their effects on user compliance. *Electronic Markets*, 31(2), 427–445. <https://doi.org/10.1007/s12525-020-00414-7>
- Adamopoulou, E., & Moussiades, L. (2020). Chatbots: History, technology, and applications. *Machine Learning with Applications*, 2, 100006. <https://doi.org/10.1016/j.mlwa.2020.100006>
- Andrade, I. M. De, & Tumelero, C. (2022). Increasing customer service efficiency through artificial intelligence chatbot. *Revista de Gestão*, 29(3), 238–251. <https://doi.org/10.1108/REG-07-2021-0120>

- Ausat, A. M. A. (2023). The Application of Technology in the Age of Covid-19 and Its Effects on Performance. *Apollo: Journal of Tourism and Business*, 1(1), 14–22. <https://doi.org/10.58905/apollo.v1i1.8>
- Ausat, A. M. A., Al Bana, T., & Gadzali, S. S. (2023). Basic Capital of Creative Economy: The Role of Intellectual, Social, Cultural, and Institutional Capital. *Apollo: Journal of Tourism and Business*, 1(2), 42–54. <https://doi.org/10.58905/apollo.v1i2.21>
- Ausat, A. M. A., & Peirisal, T. (2021). Determinants of E-commerce Adoption on Business Performance : A Study of MSMEs in Malang City , Indonesia. *Journal On Optimizations Of Systems At Industries*, 20(2), 104–114. <https://doi.org/10.25077/josi.v20.n2.p104-114.2021>
- Ausat, A. M. A., Siti Astuti, E., & Wilopo. (2022). Analisis Faktor Yang Berpengaruh Pada Adopsi E-commerce Dan Dampaknya Bagi Kinerja UKM Di Kabupaten Subang. *Jurnal Teknologi Informasi Dan Ilmu Komputer (JTIK)*, 9(2), 333–346. <https://doi.org/10.25126/jtiik.202295422>
- Ausat, A. M. A., & Suherlan, S. (2021). Obstacles and Solutions of MSMEs in Electronic Commerce during Covid-19 Pandemic: Evidence from Indonesia. *BASKARA: Journal of Business and Entrepreneurship*, 4(1), 11–19. <https://doi.org/10.54268/BASKARA.4.1.11-19>
- Ausat, A. M. A., Suherlan, S., & Azzaakiyyah, H. K. (2023). Is ChatGPT Dangerous for Lecturer Profession? An In-depth Analysis. *Jurnal Pendidikan Dan Konseling (JPDK)*, 5(2), 3226–3229. <http://journal.universitaspahlawan.ac.id/index.php/jpdk/article/view/13878>
- Ausat, A. M. A., Widayani, A., Rachmawati, I., Latifah, N., & Suherlan, S. (2022). The Effect of Intellectual Capital and Innovative Work Behavior on Business Performance. *Journal of Economics, Business, & Accountancy Ventura*, 24(3), 363–378. <https://doi.org/10.14414/jebav.v24i3.2809>
- Caldarini, G., Jaf, S., & McGarry, K. (2022). A Literature Survey of Recent Advances in Chatbots. *Information*, 13(1), 41. <https://doi.org/10.3390/info13010041>
- Chen, J.-S., Le, T.-T.-Y., & Florence, D. (2021). Usability and responsiveness of artificial intelligence chatbot on online customer experience in e-retailing. *International Journal of Retail & Distribution Management*, 49(11), 1512–1531. <https://doi.org/10.1108/IJRDM-08-2020-0312>

- Dwivedi, Y. K., Kshetri, N., Hughes, L., Slade, E. L., Jeyaraj, A., Kar, A. K., Baabdullah, A. M., Koohang, A., Raghavan, V., Ahuja, M., Albanna, H., Albashrawi, M. A., Al-Busaidi, A. S., Balakrishnan, J., Barlette, Y., Basu, S., Bose, I., Brooks, L., Buhalis, D., ... Wright, R. (2023). "So what if ChatGPT wrote it?" Multidisciplinary perspectives on opportunities, challenges and implications of generative conversational AI for research, practice and policy. *International Journal of Information Management*, *71*, 102642. <https://doi.org/10.1016/j.ijinfomgt.2023.102642>
- Fauzi, F., Tuhuteru, L., Sampe, F., Ausat, A. M. A., & Hatta, H. R. (2023). Analysing the Role of ChatGPT in Improving Student Productivity in Higher Education. *Journal on Education*, *5*(4), 14886–14891. <https://doi.org/10.31004/joe.v5i4.2563>
- Harahap, M. A. K., Ausat, A. M. A., & Suherlan, S. (2023). Analysing the Role of Religious Education in Improving the Work Ethic of MSME Owners. *Journal on Education*, *5*(4), 15050–15057. <https://doi.org/10.31004/joe.v5i4.2591>
- Harahap, M. A. K., Sutrisno, S., Raharjo, I. B., Novianti, R., & Ausat, A. M. A. (2023). The Role of MSMEs in Improving the Economy in Ramadan. *Community Development Journal: Jurnal Pengabdian Masyarakat*, *4*(2), 1907–1911. <https://doi.org/10.31004/cdj.v4i2.13794>
- Jenneboer, L., Herrando, C., & Constantinides, E. (2022). The Impact of Chatbots on Customer Loyalty: A Systematic Literature Review. *Journal of Theoretical and Applied Electronic Commerce Research*, *17*(1), 212–229. <https://doi.org/10.3390/jtaer17010011>
- Kamar, K., Lewaherilla, N. C., Ausat, A. M. A., Ukar, K., & Gadzali, S. S. (2022). The Influence of Information Technology and Human Resource Management Capabilities on SMEs Performance. *International Journal of Artificial Intelligence Research*, *6*(1.2), 1. <https://doi.org/https://doi.org/10.29099/ijair.v6i1.2.676>
- Kasneci, E., Sessler, K., Küchemann, S., Bannert, M., Dementieva, D., Fischer, F., Gasser, U., Groh, G., Günnemann, S., Hüllermeier, E., Krusche, S., Kutyniok, G., Michaeli, T., Nerdel, C., Pfeffer, J., Poquet, O., Sailer, M., Schmidt, A., Seidel, T., ... Kasneci, G. (2023). ChatGPT for good? On opportunities and challenges of large language models for education. *Learning and Individual Differences*, *103*, 102274. <https://doi.org/10.1016/j.lindif.2023.102274>

- Kraugusteeliana, K., Indriana, I. H., Krisnanik, E., Muliawati, A., & Irmanda, H. N. (2023). Utilisation of ChatGPT's Artificial Intelligence in Improving the Quality and Productivity of Lecturers' Work. *Jurnal Pendidikan Dan Konseling (JPDK)*, 5(2), 3245–3249. <https://doi.org/10.31004/jpdk.v5i2.13650>
- Kraugusteeliana, Surjati, E., Ausat, A. M. A., Pramono, S. A., & Prabu, H. K. (2022). A Literature Review on the Application of Technology During Covid-19 and Its Relationship to Performance. *International Journal Of Artificial Intelligence Research*, 6(1.2), 1. <https://doi.org/https://doi.org/10.29099/ijair.v6i1.2.765>
- Li, M., & Wang, R. (2023). Chatbots in e-commerce: The effect of chatbot language style on customers' continuance usage intention and attitude toward brand. *Journal of Retailing and Consumer Services*, 71, 103209. <https://doi.org/10.1016/j.jretconser.2022.103209>
- Rijal, S., Ausat, A. M. A., Kurniawati, R., & Suherlan, S. (2023). Opportunities and Challenges for MSMEs in Indonesia in the Face of Ramadan. *Community Development Journal: Jurnal Pengabdian Masyarakat*, 4(2), 2035–2039. <https://doi.org/10.31004/cdj.v4i2.13936>
- Subagja, A. D. (2023). Analysis of Factors Leading to E-commerce Adoption. *Apollo: Journal of Tourism and Business*, 1(1), 1–5. <https://doi.org/10.58905/apollo.v1i1.6>
- Subagja, A. D., Ausat, A. M. A., & Suherlan. (2022). The Role of Social Media Utilization and Innovativeness on SMEs Performance. *Jurnal IPTEK-KOM (Jurnal Ilmu Pengetahuan Dan Teknologi Komunikasi)*, 24(2), 85–102. <https://doi.org/https://doi.org/10.17933/iptekkom.24.2.2022.85-102>
- Supatmin, S., Paeno, P., & Sutrisno, S. (2022). The Role of Analysis Financial Report Management in Increasing MSMES Incomes. *Jurnal Ekonomi*, 11(3), 1815–1819.
- Sutrisno, Cakranegara, P. A., Asri, F., Yusuf, M., & Sahala, J. (2022). Strategi for MSME Development Using Financial Technology to Increase Capital and Consumers. *Jurnal Darma Agung*, 30(2), 677–686.
- Sutrisno, S., Ausat, A. M. A., Permana, R. M., & Santosa, S. (2023). Effective Marketing Strategies for MSMEs during Ramadan in Indonesia. *Community Development Journal: Jurnal Pengabdian Masyarakat*, 4(2), 1901–1906. <https://doi.org/10.31004/cdj.v4i2.13792>

