

Artificial Intelligence: Role of Chatgpt on Customer Engagement in the Context of Digital Marketing

Ms. Anjali Ranga

Assistant Professor, Faculty Of Management Studies, The Icfai University Himachal Pradesh

ABSTRACT

In the era of digital marketing, the field of consumer engagement has seen tremendous change with the introduction of conversational AI tool named ChatGPT. ChatGPT is an artificial intelligence model designed for conversational purposes and it is increasing popularity in digital marketing also. It provides businesses with an essential tool for engaging with customers and optimizing their marketing campaigns. Examining ChatGPT's effect on the customer engagement in the context of digital marketing is the primary goal of this study. This paper synthesizes existing literature to analyze the impact of ChatGPT on customer engagement in the digital marketing domain. The aim of this paper is to define the transformative impact of ChatGPT on digital marketing strategies and customer engagement. In-depth discussion of ChatGPT's revolutionary effects on digital marketing and how the sector is changing will be covered in this paper. In the conclusion, this paper highlights how ChatGPT has the ability to fundamentally alter the dynamics of consumer contact and suggests directions for further investigation into this emerging subject.

Keywords: ChatGPT, Artificial Intelligence, Customer engagement, Digital Marketing.

INTRODUCTION

Artificial intelligence is a technological advancement that allows computers, or machines with the same level of intellect as humans, to carry out tasks related to those carried out by the human brain. Nowadays, as technology develops, artificial intelligence (AI) is utilized in practically every facet of daily life. It has been used in combination with digital marketing to facilitate businesses' timely and effective consumer outreach. Artificial intelligence has been used in relation with digital marketing to facilitate the businesses and consumers to easily reach on time.

The role of artificial intelligence (AI) has grown in the ever changing field of digital marketing. ChatGPT is one amazing AI invention that is gaining popularity. ChatGPT, a sophisticated language model created by OpenAI, has the potential to completely change how companies interact with their customers and formulate their digital marketing plans. ChatGPT offers a multitude of options to improve customer interaction, personalization, automated customer support, content production, and more by utilizing the power of natural language processing, machine learning, and deep learning.

A family of language models called ChatGPT was created by OpenAI to reply to text prompts in a way that is similar to that of a person [B. Gordijn.& OpenAi,2023,] . With 175 billion parameters, the most recent version of ChatGPT, "ChatGPT-3," was launched in 2020 and is among the largest language

models ever created. [OpenAi,2023]. This artificial intelligence model, which comes in versions like GPT-3.5 and GPT-4, uses deep learning methods and an extensive data set to produce text that looks like human writing. This allows it to understand and produce natural language replies with remarkable proficiency. The distinctive feature of ChatGPT is its capacity for dynamic, contextually appropriate dialogues, which makes it an adaptable tool for a variety of uses. On November 30, 2022, ChatGPT was first shown to the public as a research preview [Rivas.P,2023]. ChatGPT has quickly become well-known, capturing the interest of both experts and users with its wide range of uses in various sectors. The introduction of ChatGPT to the AI world has been nothing short of groundbreaking. Numerous industries, including healthcare, customer service, education, content development, and language translation, stands to benefit from its disruptive potential [George, A.S,2023]. For instance, ChatGPT may be used by e-commerce businesses to lower labour expenses by offering automated order fulfilment and customer support around-the-clock. Similarly, teachers might use ChatGPT to create customised study schedules based on the interests and development of each student, as well as to provide real-time feedback via automatic grading and online question help. Healthcare practitioners might utilise ChatGPT in the healthcare industry to diagnose illnesses, provide first consultations, and even triage symptoms.

LITERATURE REVIEW

In the realm of digital marketing, the impact of ChatGPT on customer engagement is a subject of increasing interest. ChatGPT has the potential to transform consumer interactions by providing advantages such as enhanced consumer engagement, improved customer service, personalization, social interaction, cost-effectiveness, insights into consumer behavior, and enhanced marketing campaigns (Paul et al., 2023) discuss the benefits and potential drawbacks of ChatGPT in consumer studies, proposing future research directions in this domain. (Babu 2023) presents real-world case studies showcasing successful ChatGPT implementations, providing valuable insights for enhancing customer engagement. (Francis 2023) highlights how ChatGPT can improve consumer engagement, customer service, and personalize interactions. Garima (2023) points out that ChatGPT enhances client engagement through tailored and engaging user interfaces. (Крупський 2023) suggests that integrating ChatGPT in marketing strategies can enhance customer service quality, brand engagement, and customer loyalty. Mukherjee (2023) explains that ChatGPT is a large language model fine-tuned with human feedback and reinforcement learning, demonstrating its potential in customer engagement strategies.

Customer engagement plays a pivotal role in digital marketing, influencing purchase intentions and customer loyalty ("Trivedi & Twinkle 2022). Research has demonstrated that digital marketing strategies significantly impact customer outcomes, including satisfaction, engagement, and loyalty, subsequently affecting organizational outcomes (Aityassine et al., 2022). Moreover, studies have explored the role of customer engagement in various sectors such as higher education and financial services, underscoring the significance of social media marketing, e-service quality, and AI in enhancing customer engagement and experience (Simbolon & Yanti, 2021; , Mogaji et al., 2020).

Additionally, research has investigated the moderating effect of customer engagement experiences on the satisfaction-loyalty relationship within the digital business environment (Thakur, 2019). The influence of digital communication on value co-creation and customer engagement in business networks has also been examined, emphasizing the interconnected nature of digital communication, value creation, and customer engagement (Sashi, 2021). Furthermore, the impact of digital marketing on customer value, customer engagement, and repeat purchase behavior has been scrutinized, revealing a

direct correlation between digital marketing efforts and customer engagement in the marketplace (Susanti, 2021).

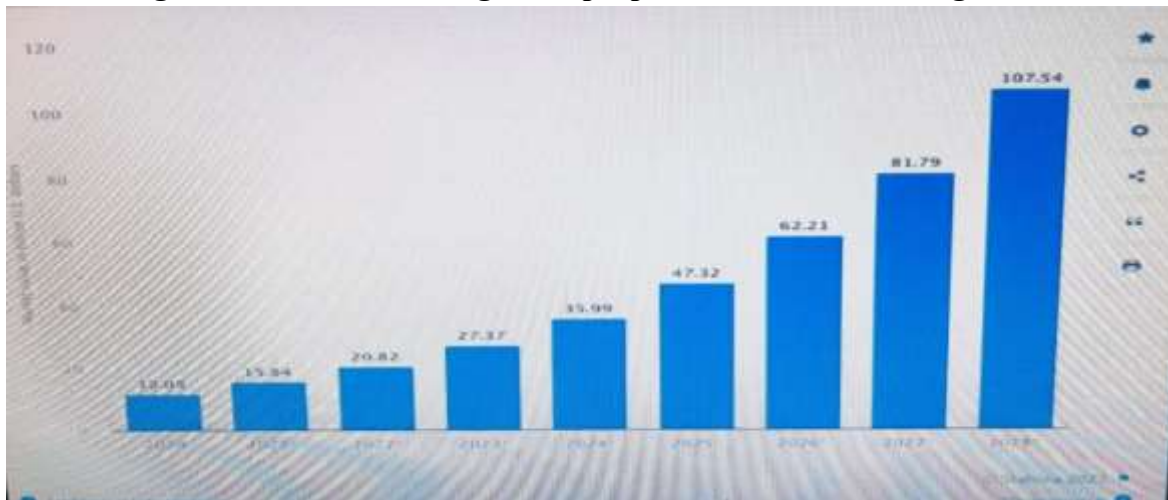
ChatGPT

According to Kirmani (2022), ChatGPT is an open-source programme created by OpenAI that utilises the GPT language model. An OpenAI language model called Generative Pre-Trained Transformer (GPT) may produce answer text that is almost identical to real human language (Dale, 2021). It is even able to create whole academic articles. The programme may be used to produce a full article by segmenting a core topic into subtopics and having GPT compose each portion. It is also feasible to compose a whole article in a couple of seconds with little assistance from a researcher if you use the full version, which permits longer replies. This invention may significantly cut down on the amount of time needed to write research articles, which may eventually make traditional research authors obsolete (Lund.B.,2023).

ChatGPT in Digital Marketing

Artificial intelligence's proportion in the marketing sector is rising quickly (see Figure 1). Nonetheless, there is a lack of awareness regarding the application of relatively recent technologies in marketing, such ChatGPT and generative AI. But in the next two years, 90% of business executives intend to implement generative AI solutions (McKinsey,2023).

Figure 1 : Artificial intelligence's proportion in the marketing sector



Source: Statista 2023

<https://www.statista.com/statistics/1293758/ai-marketing-revenue-worldwide/>

Customer Engagement

Although the idea of customer engagement (CE) has been explored in scholarly literature since 2006, it did not get widespread recognition until 2010(Lim.M.,2022).As the previous researches are concerned ,Customer engagement doesn't have an exact definition. Some definitions given by various authors:

Algesheimer et al. (2005)	The consumer's internal desire to communicate and work together with the members of group
Webster and Ahuja (2006)	a portion of flow and a more relaxed condition that indicate how much enjoyment and engagement there is in an activity.

Patterson et al. (2006)	The degree to which a client is physically, mentally, and emotionally present in their interaction with a service provider.
Bowden (2009)	A psychological procedure that encourages brand loyalty among customers for the service.
Sprott, Czellar, and Spangenberg (2009)	Individual variation indicating the tendency of customers to incorporate significant brands into their self-perception.
Calder, Malthouse, and Schaedel (2009)	Experience is described as "a consumer's beliefs about how a (web)site fits into his/her life." This is a second-order construct that appeared in several first-order "experience" models.
Higgins and Scholer (2009)	A condition of prolonged attention, complete engagement, absorption, or engrossment that produces the effects of a certain attraction or repulsion force. Value is added to or taken away from a goal according on how eager people are to approach or avoid it.
O'Brien and Toms (2010)	A mental procedure that results in the development of loyalty
Van Doorn et al. (2010)	A customer's behaviour towards a brand or company that is motivated by factors other than just making a purchase.
Brodie, Hollebeek, Juric, and Ilic (2011)	a mental state brought on by interactive client interactions with a focus agent or object in certain service partnerships.
Hollebeek (2011a)	The degree of a consumer's motivational, brand-related, and context-dependent mental state, shown by certain intensities of their emotional, behavioral, and cognitive responses during brand encounters.
Hollebeek (2011b)	The amount of time, energy, and behaviour a customer has put into certain brand interactions.
Vivek, Beatty, and Morgan (2012)	the degree to which a person engages and participates in the offerings and activities of the company, whether at the request of the company or on their own.
Brodie et al. (2013)	During relational exchange procedures, various relational concepts serve as antecedents or results of interactive engagement processes with the brand community and This is a multifaceted notion with cognition.
Chan, Zheng, Cheung, Lee, and Lee (2014)	The degree to which an individual participates in brand interactions with an online community on a cognitive, emotional, and behavioral level
Hollebeek et al.	Positively valenced cognitive, emotional, and behavioral brand-related acts taken

(2014)		by a customer during or connected to certain brand-customer encounters.
Baldus, and (2015)	Voorhees, and Calantone	the strong, internal incentives to keep connecting with a brand community online.

Customer Engagement is referred to as the level of engagement of customers with the product and particular market. When the engagement of customers are high than it will help in increasing the brand loyalty and awareness. Web content, marketing initiatives, and outreach through social media, mobile, and wearable technology may all help to engage the customers.

Some authors had given their views regarding customer engagement. One of the definition given by an author is that when customers are inclined to engage with a brand in order to increase their physical, psychological, or emotional attachment to it.(Chaffey,2007). Six assertions are presented based on the nature of Customer Engagement, these include the interactive and experiential nature of Customer Engagement, behavioural and psychological components, engagement intensity levels, valence of Customer Engagement, and temporal characteristics of Customer Engagement(Johnston, Kim A.; Taylor, Maureen,2018). Engagement is also mentioned in the research priorities for 2018–2020, which center on the best ways to guarantee client engagement with the company, link it to media strategy optimization, and identify the "moments" in the data that might indicate a unique engagement (Marketing Science Institute, 2018).

The academic literature's conceptualization of the consumer-brand connection is primarily predicated on the more expansive notion of "engagement," which has only just permeated the marketing literature from allied fields like organizational behavior and social psychology (Bowden, 2009; Brodie et al., 2011; Hollebeek et al., 2014; Dwivedi, 2015).

The majority of Customer Engagement research is conducted in the marketing field, with notable focus being paid to important topics including brand attachment, commitment, engagement, loyalty, satisfaction, trust, and value (France, Merrilees, & Miller, 2016; Hollebeek, 2011b; Kumar& Nayak, 2019; Leckie, Nyadzayo, & Johnson, 2016; Nysveen & Pedersen, 2014; Prentice, Weaven, & Wong, 2020; Solem, 2016; Thakur,2016; Vivek et al., 2012).

The efficacy of engagement initiatives across various platforms has been assessed, indicating that cognitive, emotional, and behavioral engagement dimensions lead to positive marketing outcomes, with variations based on platform characteristics (Blut et al., 2023).

In conclusion, future research endeavors exploring the impact of ChatGPT on customer engagement in digital marketing should focus on comprehending how ChatGPT can enhance consumer interactions, elevate customer engagement, influence purchase intentions and loyalty, and contribute to organizational outcomes. Additionally, investigating the roles of digital communication, social media marketing, AI, and value co-creation in customer engagement can offer valuable insights for marketers seeking to effectively leverage ChatGPT in their digital marketing strategies.

RESEARCH METHODOLOGY

This study has reviewed 50 papers with a thorough search was carried out using a variety of academic databases, including Google Scholar, Scopus, and PubMed. The aforementioned databases were selected

due to their comprehensive compilation of scholarly works within the domains of artificial intelligence, digital marketing, and customer engagement. The influence of ChatGPT on customer engagement in digital marketing was analyzed, with a focus on common themes, important insights, and developing trends that were methodically arranged. This synthesis made it easier to convey the results coherently and to produce insightful ideas.

Selection Standards for Incorporated Research:

1. Published in credible online platforms, conference proceedings, or peer-reviewed journals.
2. Specifically discussed how digital marketing metrics related to consumer engagement are affected by ChatGPT and other conversational AI technologies.
3. Conducted across a range of sectors and businesses in the context of digital marketing.
4. Relevance to empirical data as well as theoretical frameworks.

OBJECTIVES OF THE STUDY

- In order to examine ChatGPT's effects on consumer engagement in the field of digital marketing, this study integrates a collection of available research.
- This article aims to define ChatGPT's transformative influence on consumer engagement and digital marketing methods.

RESULTS

Based on the secondary data so collected and analyzed Chatgpt had put an impressive impact on the customer engagement as far as it is linked to digital marketing. There are various effective ways to engage customers in digital marketing. Some strategies include creating personalized recommendations, using targeted marketing campaigns, leveraging social media influencers, and enhancing user experience design. These tactics can help drive customer engagement and increase brand loyalty. These all strategies are opted by Chatgpt and eased the process of finding out the preferable product by the customers on various platforms like shopping apps, virtual businesses.

Likewise, Myntra is the shopping app which introduces my Fashiongpt in their platform for more personalized service to their customers in 2023. In order to provide customers with an exceptional shopping experience, Myntra has launched "MyFashionGPT," powered by ChatGPT. This feature allows natural language-based queries for seamless product discovery and gets multiple possibilities across related categories to complete looks. This innovative tool is going to change the way people purchase for fashion, beauty, and lifestyle products in the future. It can find fashion outfits at scale based on looks appropriate for events, destinations, celebrity styling ideas, occasions, and much more.

Following figure illustrates that how the use of ChatGPT and AI is influencing the digital economy: -

Figure 2: ChatGPT adoption by Myntra for Digital Marketing

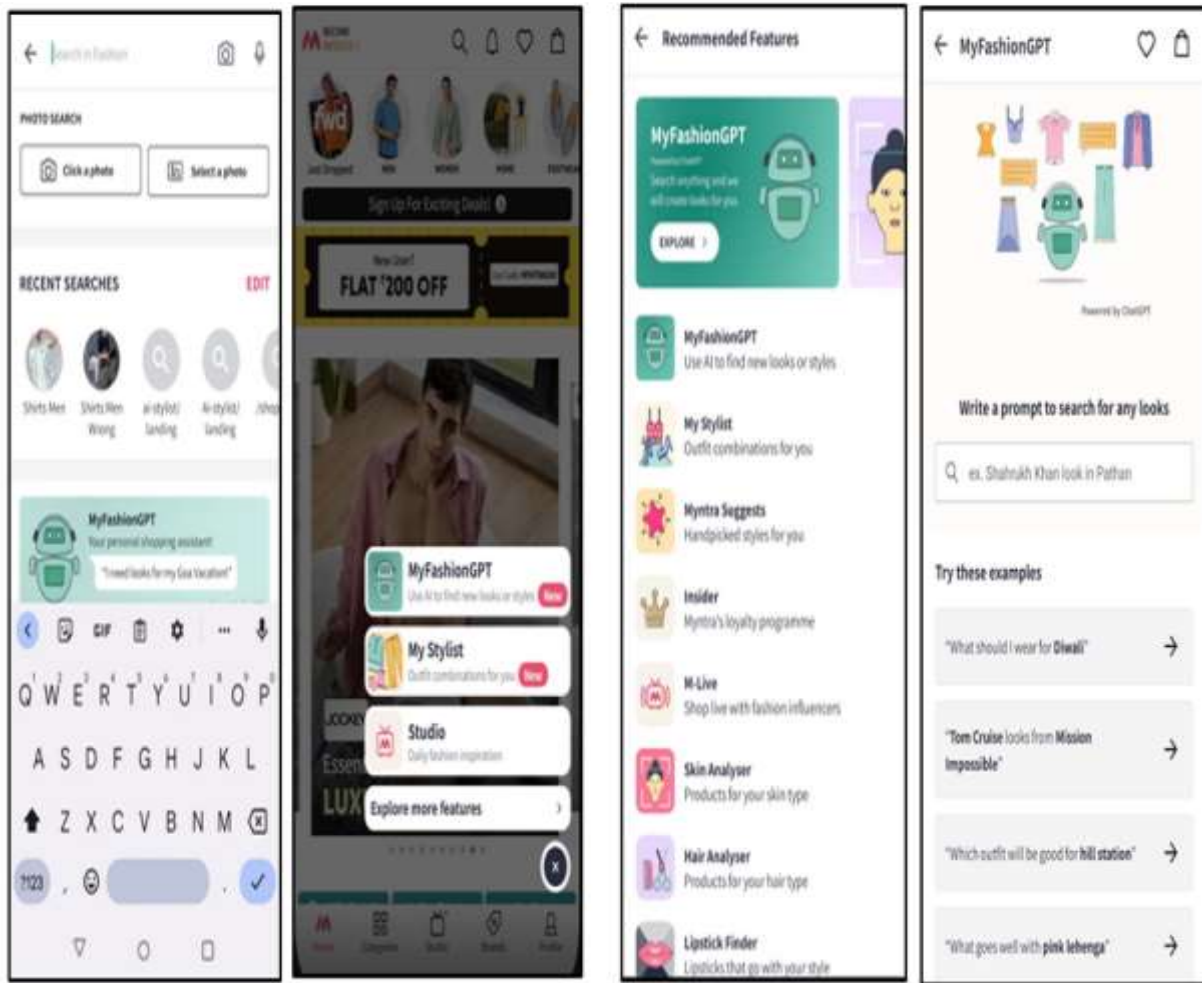
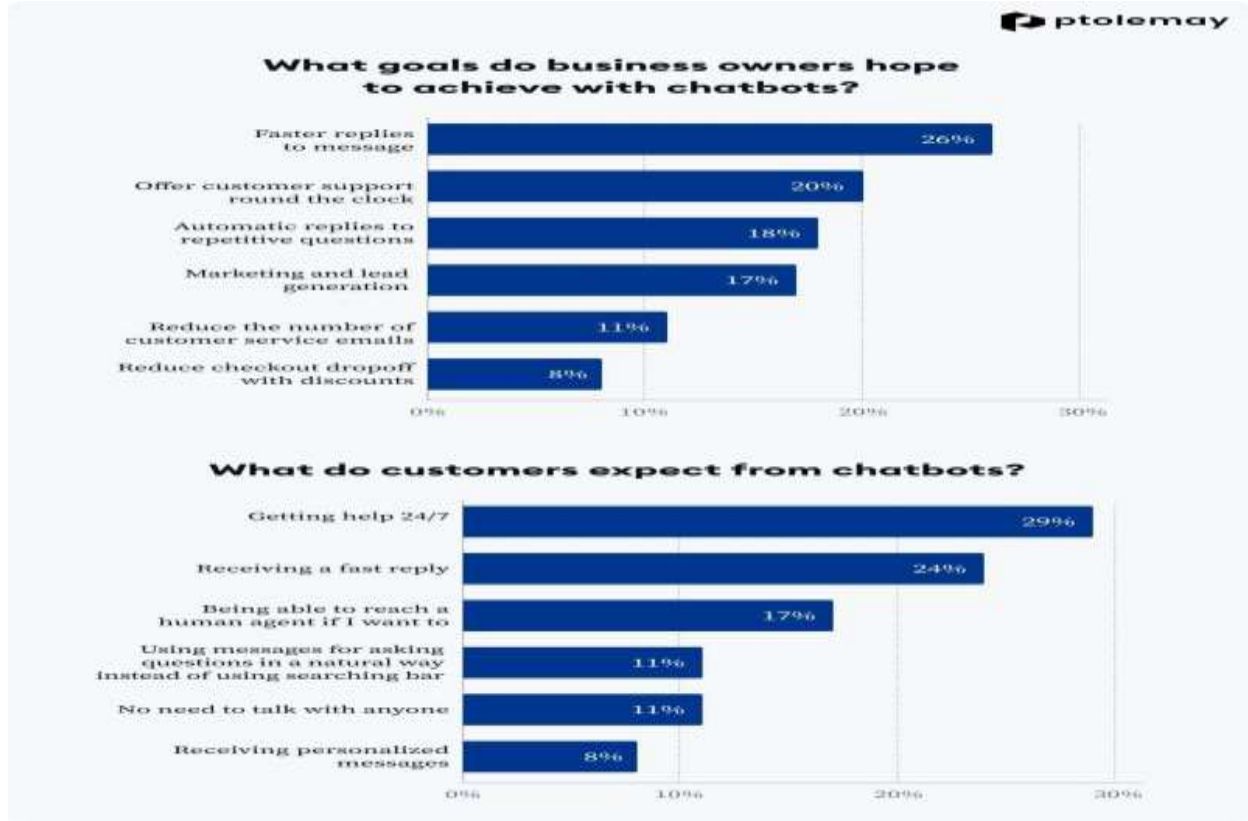


Image Source : MYNTRA

- Among the millions of styles that are available on Myntra here are some of the fashion queries that MyFashionGPT will be able to process and display results based on the ChatGPT's response:
- Please display the groom's attire for a South Indian wedding.
- What should I pack for my May trip to Goa? I also enjoy blue.
- How Should I Dress for a Pink Lehenga?
- How should I dress for a bike ride in Leh?
- What should I get my closest friend when she gets married?
- Please advise what to wear for hiking.
- What should I wear when I fly to Australia for a summer vacation?

So these kind of queries help the customers in solving their confusions and customers feel connected with the digital platforms. Chatbots also put financial impact on the economy. Businesses express great satisfaction with chatbots for enhancing marketing and customer service, particularly in the e-commerce industry.

Figure 3: Analysis of what the customers and business owners expects from these Chatbots.



Source: <https://www.linkedin.com>

Digital Marketing and Customer Engagement with ChatGPT

Customer engagement has been revolutionized by ChatGPT in digital marketing. The use of ChatGPT in marketing might completely change how firms interact with their customers and provide tailor-made, efficient, and scalable solutions. Here are some key roles that the ChatGPT plays in the realm of digital marketing.

- 1. Personalized Consumer Interactions:** ChatGPT can personalize the conversation to meet each user’s specific needs and preferences through analysis of user inputs and user profiles. Customized product recommendations, content, and suggestions can enhance customer satisfaction and increase engagement.
- 2. 24/7 Customer Support:** ChatGPT is capable of providing round-the-clock customer care service. In terms of any client concern or issue faced by a company, this system is quick in responding to messages from clients thus improving the overall experience they get as consumers.
- 3. Automation of Repetitive Tasks:** ChatGPT automates repetitive activities like answering Frequently Asked Questions (FAQs), processing orders, or managing complaints that free up human agents’ time to concentrate on more complex duties.
- 4. Data Analysis & Insights:** Besides understanding consumer behavior from their sentiments about different products across various platforms, ChatGPT is able to analyze this data revealing patterns for marketers to improve while giving insights into business transactions.
- 5. Content Generation:** ChatGPT can do surveys and obtain customer feedback that may then be used to enhance products, services, and advertising strategies.

CONCLUSION

Artificial Intelligence is a very rapid technological change that occurs in the business world and has put a tremendous effect on the whole economic world. Chatgpt is a very discussed and used tool by everyone nowadays which has been a greatest tool of artificial intelligence facilitating each one of us because ChatGPT offers academics new opportunities to improve the efficacy, precision, and creativity of their study, it has had a huge impact on marketing research.

There are various versions of ChatGPT that are being available like ChatGPT 3.5 and ChatGPT 4. Although some people may find the advantages of quicker reaction times and more accessibility to be enticing, using good prompting strategies will be able to give good results with the free version. The aforementioned ChatGPT usage examples show that this tool can be applied to every area. Pansari and Kumar (2017) introduce the concept of customer engagement "mechanics," which highlights the significance of emotion and trust in motivating consumer actions. Purchase-related behaviors are of particular importance as they augment the worth of the buyer and supplier.

To sum up, the study that was carried out to determine how ChatGPT affected customer engagement in the context of digital marketing highlights the critical role that AI-powered conversational agents play in influencing modern-day customer interactions. After a thorough literature research and empirical analysis, it is clear that ChatGPT, with its ability to respond to user inquiries and concerns in a personalized, quick, and effective manner, is a key player in modernizing customer engagement tactics. The results show that companies using ChatGPT see significant increases in customer satisfaction, retention rates, and general brand loyalty. Additionally, ChatGPT makes it easier to communicate across a range of digital channels, strengthening bonds between customers and brands.

Nevertheless, even though ChatGPT has many advantages, companies must use prudence and ethical AI practices in order to preserve consumer confidence and openness. Furthermore, in order to match changing customer expectations and preferences, ChatGPT systems must be continuously adjusted and improved due to ongoing developments in artificial intelligence and natural language processing algorithms.

Essentially, the study emphasizes how ChatGPT can revolutionize client involvement tactics in the field of digital marketing. Effectively incorporating ChatGPT into marketing strategies will be crucial for fostering sustainable growth and competitive advantage in the digital age as companies continue to use AI-powered solutions.

IMPLICATIONS FOR FUTURE RESEARCH

This research only studies one variable i.e. customer engagement with the help of Chatgpt in digital marketing. Here are Ssome recommendations for future studies:-

- Comparing ChatGPT's efficacy across various digital marketing domains and industries.
- To examine how ChatGPT performs differently in different businesses and determine the best ways to use it in different situations.
- Longitudinal studies can be conducted; this would shed light on how long-term ChatGPT-driven tactics may be sustained.
- Examine how well ChatGPT works in digital marketing engagements when combined with additional communication modalities like pictures, videos, or emoticons.

REFERENCES

1. Impact of digital content marketing on purchase intentions for online shopping post covid-19 pandemic. *International Journal of Management, Public Policy and Research*(2022)., 1(2), 24-33. <https://doi.org/10.55829/010204>
2. Unveiling the potential of chatgpt for enhancing customer engagement(2023), 111-128. <https://doi.org/10.4018/979-8-3693-0815-8.ch007>
3. McKinsey “Marketing and sales soar with generative AI.”, 11 May 2023. Accessed 10 August 2023.
4. José Manuel Gavilanes, Tessa Christina Flatten & Malte Brettel (2018) Content Strategies for Digital Consumer Engagement in Social Networks: Why Advertising Is an Antecedent of Engagement, *Journal of Advertising*, 47:1, 4-23, DOI: [10.1080/00913367.2017.1405751](https://doi.org/10.1080/00913367.2017.1405751)
5. Aityassinec, F. L. Y., Al-Ajlouni, M. M., & Mohammad, A. (2022). The effect of digital marketing strategy on customer and organizational outcomes. *Marketing and Management of Innovations*, 13(4), 45-54. <https://doi.org/10.21272/mmi.2022.4-05>
6. Algesheimer, R., Dholakia, U. M., & Herrmann, A. (2005). The social influence of brand community: Evidence from European car clubs. *Journal of Marketing*, 69(3), 19–34. doi:10.1509/jmkg.69.3. 19.66363
7. B. Gordijn, H.T. Have, ChatGPT: evolution or revolution? *Med. Healthc. Philos.* (2023) 1–2, <https://doi.org/10.1007/s11019-023-10000-w>.
8. Babu, C. V. S. and Moses, C. (2023). Reinventing customer support. *Advances in Business Information Systems and Analytics*, 93-110. <https://doi.org/10.4018/979-8-3693-0815-8.ch006>
9. Baldus, B. J., Voorhees, C., & Calantone, R. (2015). Online brand community engagement: Scale development and validation. *Journal of Business Research*, 68(5), 978–985. doi:10.1016/j.jbusres. 2014.09.035
10. Blut, M., Kulikovskaja, V., Hubert, M., Brock, C., & Grewal, D. (2023). Effectiveness of engagement initiatives across engagement platforms: a meta-analysis. *Journal of the Academy of Marketing Science*, 51(5), 941-965. <https://doi.org/10.1007/s11747-023-00925-7>
11. Bowden, J. L.-H. (2009). The process of customer engagement: A conceptual framework. *The Journal of Marketing Theory and Practice*, 17(1), 63–74. doi:10.2753/MTP1069-6679170105
12. Brodie, R. J., & Hollebeek, L. D. (2011). Response: Advancing and consolidating knowledge about customer engagement. *Journal of Service Research*, 14(3), 283–284. doi:10.1177/10946705114 15523
13. Brodie, R. J., Hollebeek, L. D., Juric, B., & Ilic, A. (2011). Customer engagement: Conceptual domain, fundamental propositions, and implications for research. *Journal of Service Research*, 14(3), 252–271. doi:10.1177/1094670511411703
14. Brodie, R. J., Ilic, A., Juric, B., & Hollebeek, L. (2013). Consumer engagement in a virtual brand community: An exploratory analysis. *Journal of Business Research*, 66(1), 105–114. doi:10.1016/j.jbusres.2011.07.029
15. Calder, B. J., & Malthouse, E. C. (2008). Media engagement and advertising effectiveness. *Kellogg on Advertising & Media*, 1–36. doi:10.1002/9781119198154.ch1
16. Calder, B. J., Malthouse, E. C., & Schaedel, U. (2009). An experimental study of the relationship between online engagement and advertising effectiveness. *Journal of Interactive Marketing*, 23(4), 321–331. doi:10.1016/j.intmar.2009.07.002

17. Chaffey, Dave (2007), "Customer Engagement Interview with Richard Sedley of cScape," Smart Insights, April 29, <http://www.smartinsights.com/customer-engagement/customer-engagement-strategy/customer-engagement-interview-with-richard-sedley-of-cscape/>
18. Chan, T. K. H., Zheng, X., Cheung, C. M. K., Lee, M. K. O., & Lee, Z. W. Y. (2014). Antecedents and consequences of customer engagement in online brand communities. *Journal of Marketing Analytics*, 2(2), 81–97. doi:10.1057/jma.2014.9
19. Dale, R. (2021). GPT-3 What's it good for? *Natural Language Engineering*, 27(1), 113-118.
20. Dessart, L., Veloutsou, C. and Morgan-Thomas, A. (2015), "Consumer engagement in online brand communities: a social media perspective", *Journal of Product & Brand Management*, Vol. 24 No. 1, pp. 28-42. <https://doi.org/10.1108/JPBM-06-2014-0635>
21. Francis, R. (2023). Leveraging chatgpt and digital marketing for enhanced customer engagement in the hotel industry., 55-68. <https://doi.org/10.4018/979-8-3693-0815-8.ch004>
22. George, A.S.; George, A.H.; Martin, A.G. A Review of ChatGPT AI's Impact on Several Business Sectors. *Partners Univers. Int. Innov. J.* 2023, 1, 1.
23. Higgins, E. T., & Scholer, A. A. (2009). Engaging the consumer: The science and art of the value creation process. *Journal of Consumer Psychology*, 19(2), 100–114. doi:10.1016/j.jcps.2009.02.002
24. Hollebeek, L. D. (2011a). Exploring customer brand engagement: Definition and themes. *Journal of Strategic Marketing*, 19(7), 555–573. doi:10.1080/0965254X.2011.599493
25. Hollebeek, L. D. (2011b). Demystifying customer brand engagement: Exploring the loyalty nexus. *Journal of Marketing Management*, 27(7–8), 785–807. doi:10.1080/0267257X.2010.500132
26. Hollebeek, L. D. (2013). The customer engagement/value interface: An exploratory investigation. *Australasian Marketing Journal (AMJ)*, 21(1), 17–24. doi:10.1016/j.ausmj.2012.08.006470 Weitzl and Einwiller
27. Hollebeek, L. D., Glynn, M. S., & Brodie, R. J. (2014). Consumer brand engagement in social media: Conceptualization, scale development and validation. *Journal of Interactive Marketing*, 28(2), 149–165. doi:10.1016/j.intmar.2013.12.002
28. <https://www.indiatvnews.com/technology/news/mynttra-introduces-myfashiongpt-to-leverage-chatgpt-for-the-platform-2023-05-24-872342>
29. <https://www.linkedin.com/pulse/boosting-e-commerce-conversions-chatgpt-virtual-shopping-assistant-i5g5f>
30. Johnston, Kim A.; Taylor, Maureen (2018). *The Handbook of Communication Engagement || Consumer Engagement in the Digital Era*, 10.1002/9781119167600(), 453–473. doi:10.1002/9781119167600.ch31
31. Kirmani, A. R. (2022). Artificial intelligence-enabled science poetry. *ACS Energy Letters*, 8, 574-576.
32. Lund, B. (2023). A brief review of ChatGPT: Its value and the underlying GPT technology. *Preprint. University of North Texas. Project: ChatGPT and Its Impact on Academia. Doi, 10.*
33. Marketing Science Institute (2018), "Research priorities 2018-2020", available at: <http://www.msi.org/research/2018-2020-research-priorities/> (accessed 25 January 2018).
34. Mogaji, E., Soetan, T., & Kieu, T. A. (2020). The implications of artificial intelligence on the digital marketing of financial services to vulnerable customers. *Australasian Marketing Journal*, 29(3), 235-242. <https://doi.org/10.1016/j.ausmj.2020.05.003>

35. Mukherjee, A. (2023). The ultimate solution in customer engagement using chatgpt., 28-54. <https://doi.org/10.4018/979-8-3693-0815-8.ch003>
36. O'Brien, H. L., & Toms, E. G. (2010). The development and evaluation of a survey to measure user engagement. *Journal of the American Society for Information Science and Technology*, 61(1), 50–69. doi:10.1002/asi.21229
37. OpenAi, OpenAi [Online]. Available:., 2023 <https://openai.com/>, 2023]
38. Pansari, A., & Kumar, V. (2017). Customer engagement: The construct, antecedents, and consequences. *Journal of the Academy of Marketing Science*, 45(3), 294–311
39. Patterson, P., Yu, T., & DeRuyter, K. (2006). Understanding customer engagement in services. In Proceedings of ANZMAC 2006 conference. Advancing theory, maintaining relevance, Brisbane, Queensland.
40. Paul, J., Ueno, A., & Dennis, C. (2023). chatgpt and consumers: benefits, pitfalls and future research agenda. *International Journal of Consumer Studies*, 47(4), 1213-1225. <https://doi.org/10.1111/ijcs.12928>
41. Prentice, C., & Nguyen, M. (2020). Engaging and retaining customers with AI and employee service. *Journal of Retailing and Consumer Services*, 56, 102186.
42. Prentice, C., Weaven, S., & Wong, IpKin. Anthony. (2020). Linking AI quality performance and customer engagement: The moderating effect of AI preference. *International Journal of Hospitality Management*, 90, 102629.
43. Rivas, P.; Zhao, L. Marketing with ChatGPT: Navigating the Ethical Terrain of GPT-Based Chatbot Technology. *AI 2023*, 4, 375–384. <https://doi.org/10.3390/ai4020019>
44. Sashi, C. (2021). Digital communication, value co-creation and customer engagement in business networks: a conceptual matrix and propositions. *European Journal of Marketing*, 55(6), 1643-1663. <https://doi.org/10.1108/ejm-01-2020-0023>
45. Simbolon, F. P. and Yanti, L. (2021). Customer engagement in higher education: how important the role of social media marketing, e-service quality and e-satisfaction for generation z students?. *The Winners*, 22(1). <https://doi.org/10.21512/tw.v22i1.6970>
46. Sprott, D., Czellar, S., & Spangenberg, E. (2009). The importance of a general measure of brand engagement on market behavior: Development and validation of a scale. *Journal of Marketing Research*, 46(1), 92–104. doi:10.1509/jmkr.46.1.92
47. Susanti, D. (2021). Digital marketing to customer value and customer engagement in repeat purchase on the marketplace. *SULTANIST: Jurnal Manajemen Dan Keuangan*, 9(2), 135-146. <https://doi.org/10.37403/sultanist.v9i2.339>
48. Thakur, R. (2019). The moderating role of customer engagement experiences in customer satisfaction–loyalty relationship. *European Journal of Marketing*, 53(7), 1278-1310. <https://doi.org/10.1108/ejm-11-2017-0895>
49. Van Doorn, J., Lemon, K. N., Mittal, V., Nass, S., Pick, D., Pirner, P., & Verhoef, P. C. (2010). Customer engagement behavior: Theoretical foundations and research directions. *Journal of Service Research*, 13(3), 253–266. doi:10.1177/1094670510375599
50. Webster, J., & Ahuja, J. S. (2006). Enhancing the design of web navigation systems: The influence of user disorientation on engagement and performance. *MIS Quarterly*, 30(3), 661–678.

51. Weng Marc Lim, Tareq Rasul, Satish Kumar, Mamun Ala, Past, present, and future of customer engagement, *Journal of Business Research*, Volume 140, 2022, Pages 439-458, ISSN 0148-2963, <https://doi.org/10.1016/j.jbusres.2021.11.014>.
52. Крупський, О. (2023). Перспективи використання чат gpt у маркетингу. *Time Description of Economic Reforms*, (3), 89-97. <https://doi.org/10.32620/cher.2023.3.11>