



A Case Study on the Impact of ChatGPT On Personalised Marketing and Customer Engagement at Different Stages of the Purchase Process

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ABSTRACT

ChatGPT is a natural language processing (NLP) model that uses deep learning algorithms to generate human-like responses to text-based inputs. ChatGPT has a unique ability to simulate human-like responses. This tech phenomenon has revolutionized the world with its wide range of applications, including customer services, chatbots, and virtual assistance. The pandemic has brought about a paradigm shift in our purchase patterns and the way the customers are engaged. The marketing world is redefined by the mantra of personalization. Personalized messages and experiences of the individual's needs and preferences have started to play a pivotal role in customer engagement models. The AIDA was considered for the study. It can be found that by using data and technology to create customized marketing campaigns, product recommendations, and other experiences, efficient customer engagements can be achieved. This paper is an attempt to analyze the impact of ChatGPT on Customer Engagement at different stages of purchase.

Keywords: ChatGPT, Natural Language Processing, Customer Engagement models, Personalized Marketing

1. Introduction to the study

1.1 Overview of the customer engagement model & its importance:

The customer engagement model is a framework that helps businesses understand how customers interact with their brand at different stages of the customer journey. The model typically includes stages such as awareness, consideration, purchase, and advocacy.

By understanding how customers engage with their brand at each stage of the customer journey, businesses can identify opportunities to improve the customer experience and build stronger relationships with their customers. The customer engagement model helps businesses identify opportunities for engagement by mapping out the customer journey and identifying touchpoints where customers engage with the brand. Businesses can identify opportunities to improve the customer experience and build stronger relationships with their customers. By focusing on customer engagement and providing a positive customer experience at each stage of the customer journey, businesses can improve customer satisfaction and increase customer loyalty. Customer engagement and loyalty play an important role in driving the business revenue growth through increased customer retention, repeat purchases, and positive word-of-mouth referrals.

1.2 The AIDA Model



1.3 ChatGPT's Role in Customer Engagements

With the present-day competition customer engagements have become central to every business and brand house. The AI-powered ChatGPT has helped to improve customer engagement to new and extraordinary levels. ChatGPT's advent into the mass market provides customers with helpful information and assistance. They perform myriads of roles to optimize the sales and marketing funnels by integrating with CRM, social media platforms, and other virtual assistance. By providing accurate answers to the questions put forth unlike the search engines where the subject has to select the best answers from the given search results ChatGPT promotes personalized interactions. They use the data of the customer and sense their needs and preferences to provide customized recommendations and solutions.

The quick and immediate response also provides consistent and good quality support to customers 24*7, helping them make rational purchases with reduced dissonance.

Through the personalization of the marketing content, ChatGPT integrates all the customer interactions across the various channels thereby reflecting the brand values and messaging. This helps the brand build and strengthen its identity and image. Chatbots are a perfect AI tool that enables to handling of multiple inquiries simultaneously, this capability of the AI tool makes customer support operations very efficient and increases word-of-mouth referrals and thereby the sales volume

The Integration with the CRM platform helps the companies to track customer needs and preferences. The specialized features of the ChatGPT help the customers to identify cross-selling and upselling opportunities Based on which personalized recommendations can be provided to the customer. This feature of ChatGPT helps convert the leads into actual sales.

2. Literature Review

Thomas Ramage and Viktor Mayer Schönberger (2023)¹ in the article "Using ChatGPT to make better decisions" talk about the three steps in the success of the decision-making models. According to the authors

Large language models can help at each stage of the process. These LLMs act as debiasing tools, helping the customers to frame and make decisions by themselves.

According to Prado Thiago (2023),² ChatGPT shines in providing round-the-clock customer support through chatbots. Engagement happens at a better level with chatGPT in the picture. It understands customer queries and responds with relevant information. This not only improves customer satisfaction but also significantly reduces response times.

Jungkeun Kim, Jeong Hyun Kim, Changju Kim, Jooyoung Park (2023)³ in the article "Decisions with ChatGPT: Reexamining choice overload in ChatGPT recommendations" examines how individuals respond differently to recommendation options generated by ChatGPT, an AI-powered language model, in five studies. In contrast to previous research on choice overload, Studies 1 and 2 demonstrate that people tend to respond positively to a large number of recommendation options (60 options), revealing diverse consumer perceptions of AI-generated recommendations. Studies 3 and 4 further illustrate the moderating effect of recommendation agents and indicate that choice overload elicits distinct patterns of consumer reactions depending on whether the recommendations are from a human or AI agent. Lastly, Study 5 directly measures consumer preferences for recommendation agents, revealing a general preference for ChatGPT, particularly when a large number of options are available. These findings have significant implications for recommendation system design and user preferences regarding AI-powered recommendations.

3. Research Methodology

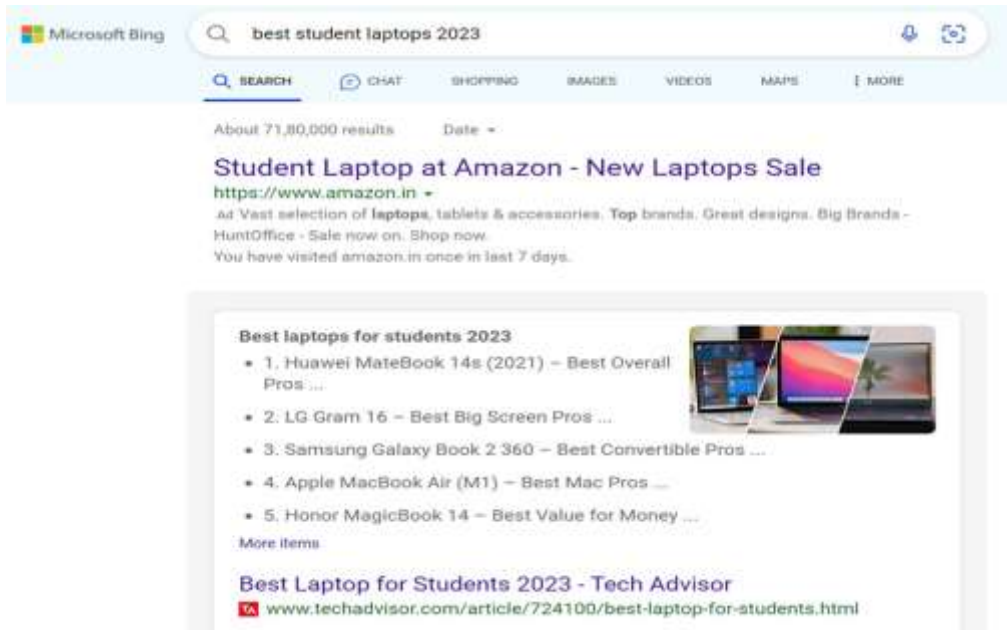
An exploratory case study methodology has been employed in this research to learn the impact of ChatGPT on the customer engagement models. This methodology is used to investigate an issue or a phenomenon within its real-life context. The subject of the age of 21 was selected for the study. The AIDA model was used to determine how ChatGPT influences the customer at each stage of decision-making. The entire research is flexible and open-ended in nature. The Scenario in the case delved around a subject of 21 years intending to purchase a student laptop. The exploration of various aspects led to valuable insights and a deeper understanding of the objective of the study.

4. The study

In this case, we'll use the AIDA model and determine how ChatGPT can influence the customer at each stage of it considering a 21-year-old who is going to purchase a student laptop. Let's decode how ChatGPT will influence him at each stage and make him purchase the product.

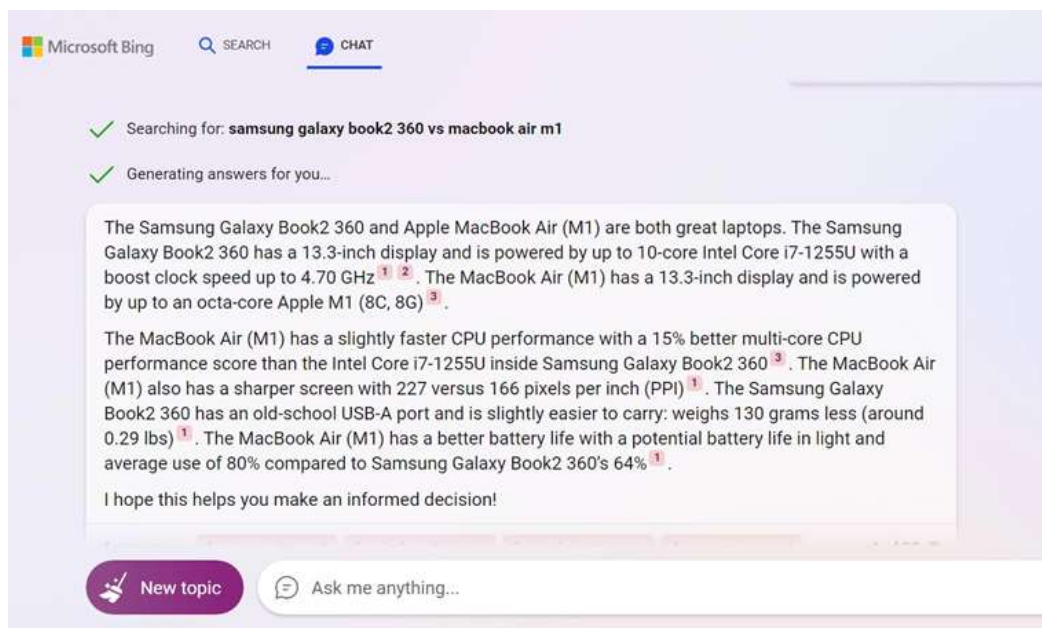
4.1 Attention

The subject becomes aware of a new laptop model through an online advertisement, search engine results, or social media posts. The ChatGPT provides personalized recommendations based on the subject's search history, preferences, and browsing behavior, which can grab our attention and pique our interest in the laptop.



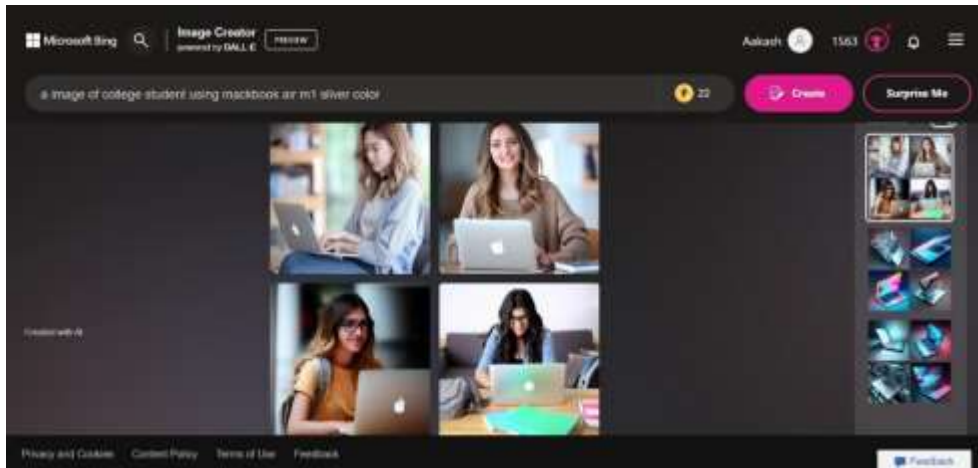
4.2 Interest:

Now the subject in the study may start researching the features, specifications, and prices of the laptop to determine if it meets his needs and budget. In this case, ChatGPT provides the subject with accurate and relevant information about the laptop's features, compares it with other models, and provides reviews from other customers who have bought the same laptop. This can help the subject gain a better understanding of the laptop and develop a stronger interest in it.



4.3 Desire

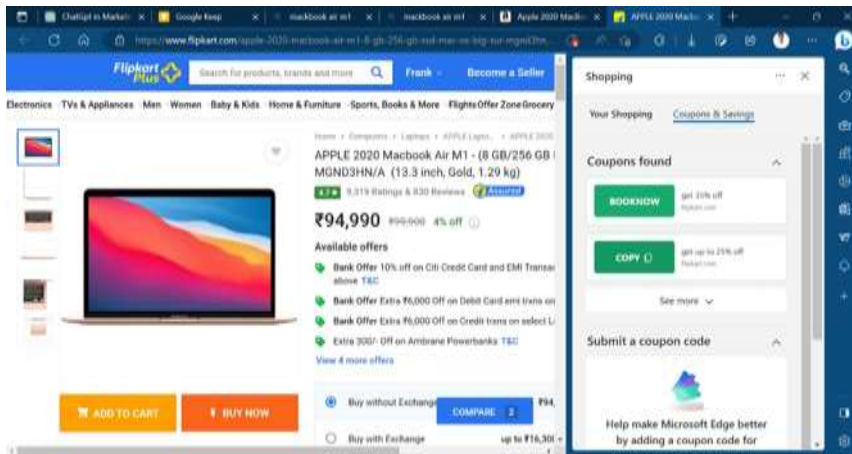
Once the subject starts visualizing how the laptop will look and perform, he starts thinking about how owning the same can enhance our work and personal lives. In this stage, the ChatGPT provides the subjects with various virtual-reality simulations that help them subject to imagine and understand how the laptop will look and perform. When Bing was asked to create an image of the student using a MacBook Air M1 Silver Color. And with the power of DALL-E, it created a beautiful visual that increased my desire



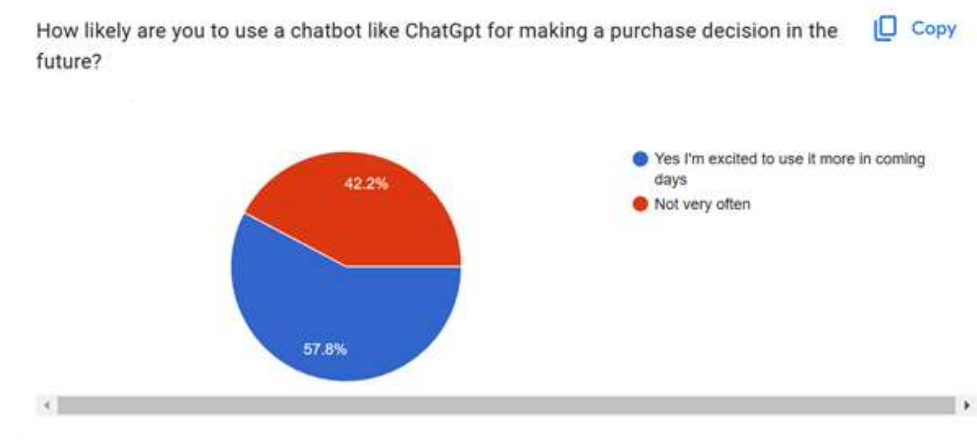
4.4 Action:

In the next stage, the subject adds the laptop to his online cart or visits a physical store to buy it.

In this stage, the ChatGPT provides the subject with reminders, such as abandoned cart notifications or in-store discounts, that encourage the subject to take action and complete the purchase.



In conclusion, ChatGPT can influence a potential customer at each stage of the AIDA model by providing personalized recommendations, accurate information, visual aids, promotions, and reminders that can improve customer engagement and ultimately lead to a purchase decision.



4.5 Effect of ChatGPT in Post-Purchase stages of customer Engagement:

ChatGPT can be used in the post-purchase stages of customer engagement to enhance the overall customer experience and increase the chances of customer loyalty and repeat purchases. Here are some ways to use ChatGPT in the post-purchase stages:

- ✓ **Order Status Updates:** Customers expect timely updates on their order status, and ChatGPT can provide real-time updates on the status of their orders. This can help reduce anxiety and uncertainty associated with the order process and provide a positive experience for the customer.
- ✓ **Customer Feedback:** ChatGPT can be used to gather customer feedback after a purchase. It can ask customers to rate their experience and provide suggestions for improvement. This information can be used to improve customer experience and identify areas of improvement.
- ✓ **Personalized Recommendations:** ChatGPT can provide personalized recommendations based on the customer's previous purchases. It can suggest products that complement their previous purchase or offer personalized discounts on future purchases.
- ✓ **Cross-selling and Upselling:** ChatGPT can be used to cross-sell or upsell products based on the customer's previous purchases. For example, if a customer has purchased a laptop, ChatGPT can suggest laptop accessories like a laptop bag, a mouse, or a laptop stand.
- ✓ **Customer Support:** ChatGPT can provide customer support after a purchase. It can answer questions related to the product or provide troubleshooting tips if the customer is facing any issues. By using ChatGPT in the post-purchase stages, businesses can improve customer engagement, enhance the customer experience, and increase the likelihood of repeat purchases and customer loyalty.

4.6 Analyzing the impact of ChatGPT in Customer Satisfaction and loyalty.

Why it matters?

- **Retention:** Customer satisfaction and loyalty are critical components of customer retention.
- **Word of Mouth:** Happy customers will recommend a company to their know circle.
- **Revenue:** Satisfied and loyal customers are also more likely to spend more money.
- **Competitive Advantage:** Companies with high customer satisfaction and loyalty rates may have a competitive advantage over their competitors
- **Feedback:** Analyzing customer satisfaction and loyalty can also provide valuable feedback for a company.

4.6.1 Steps to measure the impact:

To analyze the impact of ChatGPT on customer satisfaction and loyalty, we can follow these steps:

- **Define the metrics:** Firstly, we need to define the metrics to measure customer satisfaction and loyalty. We can use metrics such as Net Promoter Score (NPS), Customer Satisfaction Score (CSAT), Customer Effort Score (CES), and Repeat Purchase Rate.
- **Collect data:** Next, collect data from various sources such as customer feedback, surveys, and social media to analyze the impact of ChatGPT.
- **Analyze the data:** Use various analytical techniques such as regression analysis and correlation analysis to understand the impact of ChatGPT on customer satisfaction and loyalty. For instance, we can measure the correlation between the number of interactions with ChatGPT and the NPS score.
- **Compare with the control group:** To get a more accurate analysis, compare the impact of ChatGPT with a control group that did not have access to ChatGPT.
- **Interpret the results:** Finally, interpret the results and draw conclusions. If ChatGPT has a positive impact on customer satisfaction and loyalty, we can further optimize the ChatGPT system to improve its performance and enhance the customer experience.

For example, let's say we are an e-commerce company that uses ChatGPT for customer support. We can analyze the impact of ChatGPT on customer satisfaction by measuring the correlation between the number of successful interactions with ChatGPT and the CSAT score. We can also compare the results with a control group that did not have access to ChatGPT. If the results show that ChatGPT has a positive impact on customer satisfaction, we can further optimize the ChatGPT system to provide a more personalized experience and enhance customer loyalty.

4.7 Challenges in integrating ChatGPT with existing customer engagement systems and processes

4.7.1 Data Integration:

Data integration is one of the biggest challenges in integrating ChatGPT with existing customer engagement systems and processes. Here are some points that explain this challenge in detail:

- Different customer engagement systems and processes often store data in different formats, making it difficult to combine and analyze the data. For example, data may be stored in various formats such as spreadsheets, databases, or even text files, and may not be easily transferred between different systems.
- Inconsistencies in data collection can also pose a challenge for data integration. For instance, one system may collect data using different variables or metrics than another system, making it difficult to align data sets for analysis. This inconsistency can lead to inaccurate insights or flawed analysis.
- Integration with legacy systems that are outdated or not designed for compatibility with modern software can be problematic. For example, an old CRM system may not have the necessary APIs to integrate with ChatGPT, or may require manual data entry.
- Lack of standardization in data quality can also pose a challenge for data integration. Data may be collected at different levels of granularity or quality, making it difficult to align data for analysis. This inconsistency can lead to inaccurate insights or flawed analysis.

4.7.2 Technical Expertise:

Technical expertise is a crucial factor in the successful integration of ChatGPT with existing customer engagement systems and processes. Here are some additional points that elaborate on this challenge:

- Lack of technical expertise: ChatGPT is a complex technology that requires specialized knowledge and skills to implement and maintain. Organizations may not have the necessary technical expertise to integrate ChatGPT with their existing systems, leading to delays or errors in the implementation process. For example, a small business may not have the resources to hire a data scientist to work on integrating ChatGPT with their CRM system.
- Integration with legacy systems: Many organizations have legacy systems that are outdated and not designed to work with modern AI technologies like ChatGPT. This can make it difficult to integrate ChatGPT with these systems, requiring additional technical expertise and resources to update or replace the legacy systems. For example, a bank with a decades-old core banking system may find it challenging to integrate ChatGPT with the system due to technical limitations.
- Compatibility issues: ChatGPT may not be compatible with all existing systems, which can create technical challenges during integration. For example, a company may use a proprietary customer relationship management (CRM) system that is not compatible with ChatGPT, requiring customization or development of a new system to integrate the two.
- Maintenance and updates: Integrating ChatGPT with existing systems requires ongoing maintenance and updates to ensure that the technology continues to function properly. This requires technical expertise to monitor, troubleshoot, and optimize the system. For example, an e-commerce company that integrates ChatGPT with its inventory management system must ensure that the system continues to function properly even as the inventory grows and changes over time.

4.7.3 Change Management:

Implementing ChatGPT requires significant changes to existing systems and processes. This can create resistance to change among employees and customers. It is important to manage the change effectively, communicate the benefits of the ChatGPT system, and provide adequate training and support to help employees adapt to the new system.

4.7.4 System Compatibility:

System compatibility refers to the ability of the ChatGPT system to work seamlessly with the existing customer engagement systems and processes of a business. Here are some examples of how this challenge can arise:

- Incompatibility with legacy systems: Some businesses may be using older, legacy systems that are not compatible with the latest technologies, such as ChatGPT. This can make it difficult to integrate ChatGPT into their existing systems without significant reconfiguration or even the need to replace the legacy systems altogether.
- Platform-specific limitations: ChatGPT may be developed to work on specific platforms or programming languages, which can create compatibility issues with businesses that use different platforms or languages. For example, a business that primarily uses Java may face challenges in integrating ChatGPT, which is developed using Python.

- Integration with third-party systems: Many businesses use third-party systems and tools, such as customer relationship management (CRM) software or marketing automation tools, to manage their customer engagement processes. Integrating ChatGPT with these systems can be challenging if the systems are not designed to work together or if there are technical limitations that prevent seamless integration.

5. Summary of Key Findings

After conducting an extensive study on ChatGPT and its impact on customer engagement and personalized marketing, the following are the key findings and insights:

- ChatGPT can significantly improve customer engagement by providing personalized recommendations and assistance, which can lead to increased customer satisfaction and loyalty.
- ChatGPT integration with existing customer engagement systems and processes can pose challenges such as data integration, technical expertise, and system compatibility, but these challenges can be overcome with proper planning and execution.
- ChatGPT has certain limitations such as bias, lack of emotional intelligence, and inability to handle complex tasks, but advancements in technology and research can overcome these limitations in the future.
- The future of ChatGPT in customer engagement and personalized marketing is promising, with trends such as hyper-personalization, conversational commerce, and voice assistants becoming more prevalent.

6. Recommendations:

Based on the key findings and insights from this project, the following recommendations are suggested:

- Organizations should invest in developing customized ChatGPT models to cater to the unique needs and preferences of their customers.
- Adequate measures should be taken to ensure data privacy and security in the implementation of ChatGPT.
- Companies should provide sufficient training and support to their employees to enhance their technical expertise in integrating ChatGPT into their existing systems and processes.
- Further research and development should be undertaken to improve the accuracy and performance of ChatGPT in personalized marketing and customer engagement.
- It is essential to continually monitor and evaluate the impact of ChatGPT on customer engagement and satisfaction and make necessary adjustments based on the feedback received.

By following these recommendations, organizations can leverage the potential of ChatGPT to enhance customer engagement, increase customer satisfaction and loyalty, and gain a competitive advantage in the market.

Conclusion:

The use of ChatGPT in customer engagement and personalized marketing has emerged as a promising area of research and development. This project has highlighted the impact of ChatGPT in different stages of the customer journey, its benefits in improving customer satisfaction and loyalty, and the challenges and limitations associated with its integration and implementation.

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