

# Investigating Generative AI innovative Strategies for Customer Engagement in Marketing Automations in the Digital Era

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## ABSTRACT

This study explores the potential of Generative Artificial Intelligence (AI) in enhancing customer interaction and content production in digital advertising. It emphasizes the importance of customization, where AI can analyse vast amounts of consumer data to tailor information to individual interests, resulting in higher engagement rates and relevance. AI can also produce novel and varied content, such as text, pictures, and video, aligning with customer demands. Predictive analytics is another area of focus, allowing marketers to create proactive plans that connect with their audience. Chatbots equipped with AI and AI-driven virtual assistants are also examined for real-time assistance and engagement, fostering deeper brand connections. AI techniques are also used in networking strategy development, analysing networking dynamics and optimizing content delivery to increase user engagement. AI's role in A/B testing and optimization is also examined, resulting in increased engagement, conversion rates, and more tailored marketing tactics. The study also highlights the growing significance of voice and image search optimizations in digital advertising, where AI uses advanced search techniques to improve access to material and exposure. Overall, generative AI is a crucial component in developing customized, inventive, and proactive marketing tactics, combining efficiency, creativity, and customization with digital marketing initiatives.

**Keywords:** Generative AI, customer engagement, technology, automation, predictive analytics, digital marketing

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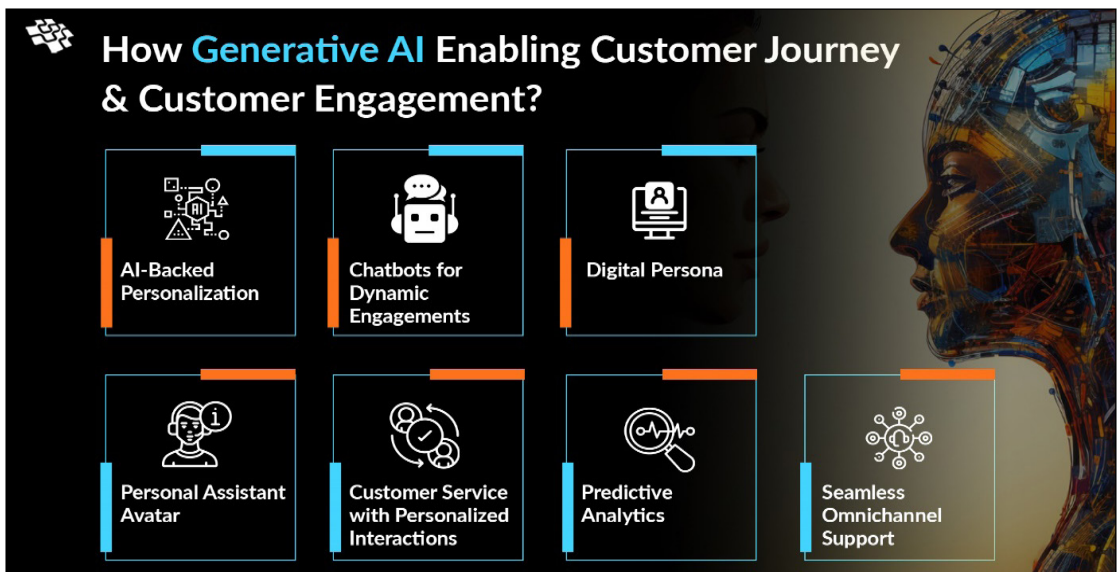
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Getting along with others, for academic researchers like me, customer interaction is an essential component of corporate strategy that has to be comprehended and examined. It is a broad term that includes a range of exchanges, conversations, and experiences between a business and its clients. It's more important than ever to achieve successful customer interaction in the cutthroat business environment of today. This article examines the value of customer interaction, its many aspects, and the tactics used by companies to improve it (Watson, 2022).

Engagement from customers is fundamentally the sense of connection and participation that consumers have with a business or brand. It includes not only the transactions but everything else that a consumer enjoys with a firm. Customers who are actively involved in a brand are prone to be devoted, promote it, and make repeated purchases. Studying client engagement as a scientist entail exploring the components which motivate a social bond.

Communication is an essential component of consumer engagement. Entertaining clients is largely dependent on having efficient interaction channels. Businesses engage with their consumers via a variety of channels, such as social media and conventional advertising. These channels supply two-way interactions as well as direct communication, allowing clients to ask for help or offer comments. Customers' opinions of a brand may be greatly impacted by a company's capacity to have meaningful conversations with them.



*Source:* <https://nextgeninvent.com/blogs/generative-ai-automation-enables-customer-engagement/>

**Fig. 1:** Generative AI and customer Journey

Furthermore, a crucial component of consumer involvement is customization. Companies gather information on the preferences, actions, and statistics of their clients to customize their services and communications. Customers feel appreciated as well as understood while using this customized approach, which increases their loyalty. To reconcile privacy concerns with interaction, educational study often looks at the moral ramifications of data collecting and personalisation (Bhattarai, 2023; Mohamed, 2020). The client's journey is included in the scope of customer interaction. Every touchpoint, throughout the

first consciousness phase to the final post-purchase phase, affects the degree of connection. To keep customers engaged, businesses need to make sure they have a smooth and enjoyable experience at every turn (Soni, 2021).

Technology has completely changed how companies interact with their consumers in the last few years. With the introduction of chatbots, big data analytics, and artificial intelligence (AI), businesses are now able to provide more individualized and effective services. Chatbots, for instance, may provide prompt support, increasing client happiness and engagement. We examine how these technology developments affect consumer participation as academic scholars.

Brand loyalty is another important component of consumer involvement. Even in the face of competition, brand loyalty is more likely to come from engaged consumers. Discounts, prizes, and loyalty programs are often used tactics to encourage this kind of commitment. Comprehending the mechanics of loyalty and its correlation with engagement constitutes a noteworthy field of study.

Customer involvement has also been significantly shaped by social media platforms. Users interact with their favourite companies on social media sites like Instagram, Facebook, and Twitter, in addition to connecting with friends on these platforms. Social media is a tool that businesses utilize for community development, advertisement, and service to clients. The efficiency of these tactics in establishing and sustaining client involvement is often studied in research. Evaluation and evaluation of client interaction requires careful attention to detail. Scholars use several metrics and analytics instruments to evaluate the degree of involvement and its influence on corporate results. Engagement levels are often measured using metrics like Net Promoter Score (NPS), Customer Satisfaction Score (CSAT), and Customer Lifetime Value (CLV).

## Objectives of the study

- ☐ AI's ability to improve content creation and consumer engagement.
- ☐ Customization for increased engagement rates via AI analysis of customer data.
- ☐ Creation of diverse material in line with consumer preferences.
- ☐ Proactive marketing strategies using predictive analytics.
- ☐ Chatbots and virtual assistants with AI capabilities are used to provide real-time support and interaction.

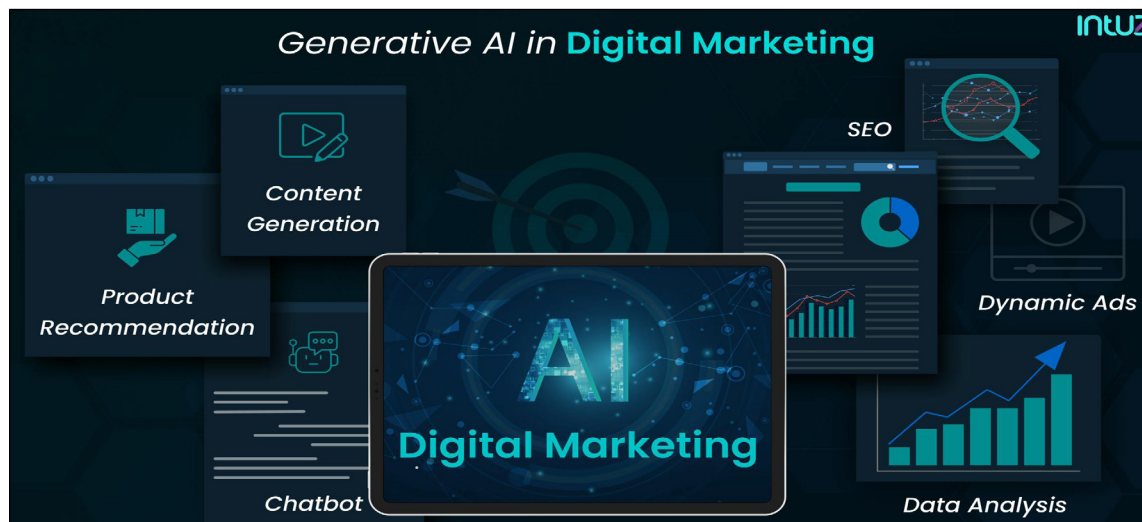
One of the main goals of research is to comprehend the relationship between engagement indicators and company success. In the current business environment, customer engagement is a complex idea that is very important for companies. It includes several elements, including technology, customization, communication, and loyalty. As academic researchers, our goal is to examine and comprehend the variables that influence consumer engagement, how it affects business results, and the tactics used by businesses to improve it. Research on customer involvement is still an important and active area of study in an era of rapidly changing technology and consumer expectations.

Academicians like us are very interested in generative AI, which has been quite popular recently because of its potential to revolutionize many different sectors. In the current business environment, customer

engagement is a complex idea that is very important for companies. It includes several elements, including technology, customization, dialog, and loyalty. As scientists, our goal is to examine and comprehend the variables that influence consumer engagement, how it affects business results, and the tactics used by businesses to improve it. Investigation on customer involvement is still an important and active area of study within an era of rapidly changing technology and consumer demands.

Academic academics like me are very interested in generative AI, which has been quite popular recently because of its potential to revolutionize many different sectors. The goal of the machine learning discipline known as “generative AI” is to develop mathematical models and algorithms that can produce text, graphics, music, and even whole applications on their own. Because generative AI is radically changing the way material is created, it is an area that merits in-depth investigation and examination. Fundamentally, generative AI produces original and cohesive material by using deep learning methods, including Generative Adversarial Networks (GANs) and Recurrent Neural Networks (RNNs). With the help of enormous datasets, these algorithms can “learn” and generate material that closely mimics that of humans.

Natural language processing represents one in its most well-known uses of generative AI (NLP). Scholars have created models that are excellent at producing language that resembles that of a person, like as OpenAI’s GPT (Generative Pre-trained Transformer) series. By automating processes like chatbots for myself content production, and even code development, these models have completely changed the information creation industry. It is crucial for academic researchers to comprehend the fundamental framework or capabilities of these models.



*Source:* <https://www.intuz.com/blog/generative-ai-in-digital-marketing>

**Fig. 2:** Generative AI in Digital Marketing

The production of audiovisual material is another important area where generative AI is essential. For example, generative adversarial networks (GANs) in computer vision may produce realistic photos, artwork, even deepfakes. Scholars investigate the moral ramifications of these technologies, which includes concerns about confidentiality, false information, and genuineness.

Additionally, the creative business has changed because of generative AI. AI-powered tools may provide ideas, designs, and even whole musical compositions for artists and engineers. Understanding the limits of human-AI cooperation, the capacity to work in tandem with artificial intelligence (AI) algorithms to improve innovation and output is an important topic of study.

Healthcare is another area where generative AI is making progress. It helps with medication development, medical picture processing, and even creating artificial healthcare information for study. Researchers in this field concentrate on the ethical issues, accuracy, and dependability of AI-generated medical material. Important concerns about biases, rules of conduct, and proprietary information are brought up by the area of generative AI. The ethical ramifications of AI-generated material are frequently addressed by academic academics, particularly in relation to deepfakes, trolling, and subject matter tampering. Additionally, they investigate the possibility of partiality in material produced by AI and attempt to address these problems. generative teaching AI models are painstakingly built via training on large datasets and fine-tuning to produce desired outcomes. To balance resource use with output value, experts in this discipline research methods for enhancing the efficacy as well as effectiveness of such models.

The area of generative AI is cutting edge and has broad ramifications for many different sectors. It is our responsibility as academic scholars to evaluate and comprehend the invention's importance, uses, and moral implications. As we traverse the constantly changing world of intelligent machines and its transformational potential, the field of generative AI offers a plethora of research options, including natural language processing to inventive content production, medical services to ethical considerations.

Utilizing generative AI in marketing automation to enhance client interaction is a novel approach in the digital age. Here are a few creative methods:

- ❑ Generative AI may be used to produce highly tailored content, such emails, social media posts, or product suggestions, by analysing client data and preferences. Brands may boost engagement and conversion rates by customizing content to audience interests and habits.
- ❑ **Dynamic Website material:** Using generative AI on websites enables the real-time production of dynamic material that is customized for every visitor. Based on user behaviour and interests, this might include interactive experiences, tailored landing pages, or personalized product suggestions.
- ❑ **Chatbots and Virtual Assistants:** By using generative AI, chatbots and virtual assistants may connect with clients in a more organic and tailored way. By offering product suggestions, responding to questions, and assisting clients with the purchase process, these AI-powered assistants may enhance the general customer experience and engagement.
- ❑ **Content Creation at Scale:** With the help of generative AI, marketers can produce enormous volumes of content fast and effectively, freeing them up to concentrate on strategy and analysis. This might include creating blog entries, social media pieces, or even whole marketing campaigns with predetermined constraints and objectives.
- ❑ **Predictive Analytics for Customer Insights:** With generative AI algorithms to analyse massive datasets, marketers may get important insights into the behaviour and preferences of their customers. In the end, these insights may lead to increased engagement and return on investment via focused marketing campaigns, product development plans, and client retention initiatives.

- ❑ **Interactive Experiences:** Marketing initiatives using virtual reality (VR) and augmented reality (AR) may be powered by generative AI. Brands can draw in customers and develop stronger ties with their goods and services by creating immersive and interesting experiences.
- ❑ **Gamification:** Using generative AI to integrate gamification components into marketing automation helps raise consumer engagement. This might be in the form of challenges, games, or quizzes that encourage brand interaction and reward users to increase conversions and brand loyalty.
- ❑ **Predictive Personalization:** Using historical behaviour and data analysis, generative AI can forecast the wants and requirements of customers. Brands may enhance consumer happiness and engagement by tailoring marketing messages and offers proactively, resulting in more timely and relevant engagements. Businesses may use generative AI to increase client engagement and maintain an advantage in the cutthroat digital market by adopting these cutting-edge tactics.



*Source: Authors' own contributions*

**Fig. 3:** Utilization of Generative AI in Marketing Automation

## Engaging customers using generative AI

The field of marketing and consumer involvement might greatly benefit from the disruptive power of generative AI. It is capable of delving deeply into the unique habits and interests of each consumer by analysing enormous databases. When producing highly specific material that connects with consumers on a personal level, that data become very significant. Generative AI, for example, may be used to create customized email messages, provide personalized product suggestions, or send highly targeted ads using each customer's profile (Braun *et al.* 2017; Soni, 2022).



Furthermore, content production is impacted by generative AI. It is a flexible tool that can help with the creation of many kinds of creative material. Generative AI pushes innovation forward in a variety of fields, including writing engaging material, developing visually attractive images, and even making video content. It may, for instance, provide captivating written material for readers, intriguing and visually arresting visuals or infographics for consumers, and even captivating videos for viewers (Sari *et al.* 2016). Furthermore, generative AI is quite good at modelling future events. It can predict future trends and consumer behaviour's by examining past data. Marketers are empowered by this predictive ability to proactively comprehend and cater to the changing demands and preferences of their customers.

The field of marketing and client interaction is changing because of generative AI. Its capacity for customisation, content production, and predictive analytics is completely changing the way that companies interact with their clientele. Investigating the subtleties of generative AI's contribution to improving marketing tactics and consumer interaction as a scholar might provide insightful knowledge about the dynamic landscape of AI-driven marketing approaches.

The field of generative AI is a game-changer when it comes to chatbots and virtual assistants. These driven by AI organizations supply clients a tailored, conversational environment rather than just mechanical replies. The processing of natural languages or artificial intelligence are used by creative AI-powered chatbots to comprehend consumer inquiries and provide contextual appropriate answers. In addition to improving the consumer experience, this maintains customers' interest in and loyalty to the brand. Additionally, as AI algorithms advance, chatbots and AI assistants are better at managing complicated conversations, which increases client engagement (Wind & Mahajan, 2002).

An additional field where generative artificial intelligence excels is social media optimization. In the era of social media, companies need to optimize their content and make continual adjustments to remain relevant. Large volumes of social media data may be analysed using generative AI techniques, which can then be used to spot patterns, trends, and consumer preferences. Businesses can fine-tune their social media strategy, including posting schedules and content kinds, using this data-driven approach. Additionally, AI can create customized replies to messages and comments, resulting in meaningful exchanges that appeal to certain people (Kannan, 2017; Soni, 2023). In addition to raising engagement, this kind of optimization supports the development of a devoted and engaged online community centred on the brand.

Generative AI streamlines exploration and refining in the context of A/B testing and efficiency. To identify which marketing materials are most successful, A/B testing often entails manually producing and evaluating many iterations of the materials. This technique is made more efficient using generative artificial intelligence, which creates variants automatically and analyses their performance quickly. Marketers can make decisions based on data for personalization by learning which aspects of their advertisements are most engaging (Soni, 2022). Businesses may remain ahead of the competition by regularly adjusting their tactics for higher engagement and sales conversions thanks to this adaptability in monitoring and optimisation.

The increasing use of voice-activated devices and visual search technology has led to a growing interest in Voice and Visual Search Optimization. By making sure that material has been designed for these cutting-edge search techniques, generative AI comes into play. AI-powered voice search needs content organization that complies with queries that are natural inquiries. Generative AI can help create voice-search-friendly material so that companies can be found by assistants that speak like Alexa and Siri. Additionally, visual search uses artificial intelligence (AI) to scan and understand photos, making it

simpler for users to discover information or items. In an ever-changing digital world, companies can stay relevant and approachable by adjusting to such new research patterns.

The impact of generative AI on marketing and consumer interaction is extensive and has several facets. Generative AI is continuing to change how companies communicate with their consumers. It is improving immediate communication with chatbots and virtual assistants, enhancing viral campaigns, speeding A/B testing, and adjusting to changing search technology. Scholars delving into these aspects of artificial intelligence's influence advance our knowledge of how AI influences contemporary marketing tactics and client interaction plans.

## CONCLUSION

Artificial intelligence (AI) plays a crucial part in today's digital world, as companies are always trying to attract the interest of their target market. Generative AI is one of the most potent AI technologies that could completely transform digital marketing strategies. The key to using generative AI in this situation is realizing that it can be used to create more customized, innovative, and adaptable marketing campaigns rather of just being an automated tool. We explore the many prospects that Generative AI offers in the field of digital marketing in this in-depth analysis, with an emphasis on how it may greatly improve client engagement.

It's important to comprehend the field of digital marketing before diving into the nuances of machine learning and generative AI in this field. Digital marketing is the wide variety of approaches and techniques used by companies to engage with their target market, advertise their goods and services, and eventually meet their marketing objectives. It encompasses a range of platforms, including keyword optimization (SEO), pay-per-click (PPC) advertising, electronic marketing through content, social networking sites, and many more (Ajiboye *et al.* 2019). The abundance of material and information accessible online is one of the main issues facing marketing in the age of digital media. The competition for attention from numerous web pages, social media accounts, and digital ads has made it harder than ever to separate out from the crowd and communicate with clients in an efficient manner.

At this point, generative AI steps in to provide a solution that not only simplifies marketing procedures but also gives campaigns a creative, personalized, and responsive element. It's critical to investigate Generative AI from several perspectives and consider its possible uses in the context of digital marketing to fully grasp the prospects it offers (Claffey & Brady, 2014; Soni, 2023).

A branch of artificial intelligence known as "generative AI" is dedicated to content creation on its own. Generative AI uses sophisticated machine learning methods, including deep neural networks, to produce material that may be very creative, coherent, and contextually relevant. This contrasts with classical AI, which depends on predetermined rules and data.

Fundamentally, generative AI works by identifying patterns in large datasets via analysis. Through this process of learning, it may generate material that includes text, graphics, videos, and more, mimicking human-like creativity. Generative Adversarial Networks (GANs), one of the core technologies of generative artificial intelligence, are made up of two neural networks—a discriminator and a generator—that operate together in a dynamic feedback loop to continuously enhance the quality of the material that is created (Mohanty *et al.* 2022). As was previously noted, the main way that Generative AI is affecting digital marketing is via personalization. It's not enough to just address clients by their first names in emails; you also need to have a detailed awareness of their requirements, preferences, and habits.



The basis for developing individualized content and marketing strategies is provided by these profiles. For instance, a Generative AI-powered e-commerce platform may provide product recommendations based on a customer's past purchases and particular preferences in addition to broad category analysis. It may provide distinctive, customized product listings that are catered to every visitor, going beyond basic product descriptions. This degree of customization strengthens the bond between the client and the business, boosting engagement and loyalty.

The capacity of generative AI to produce aesthetically pleasing material is another important feature in digital marketing. Images and videos are examples of visual material, and they are effective tools for drawing in and holding the interest of viewers. Generative AI may be used to produce visually appealing animations, films, and visuals that appeal to the intended audience.

Think of social media, where user interaction with visual material is crucial. Creating visually arresting articles and ads that stick out among the digital clutter may be aided by generative AI. It can make eye-catching infographics, provide original product photos, and even make captivating video content. In addition to increasing interaction, this creative edge helps build brand identification and identity.

Another interesting aspect of digital advertising is the use of artificial intelligence (AI) to power chatbots and artificially intelligent assistants. These AI-powered creatures can communicate with clients in real time, offering prompt assistance and replies. They are capable of meaningfully conversing with clients in addition to providing standard FAQ-style answers. For instance, a chatbot with an online store may help users by making suggestions for products that fit their interests, responding to certain questions, and assisting them with the buying process. These chatbots maintain customers intrigued and engaged with the company while also improving the customer journey by providing customized support and interaction (Sinha *et al.* 2011; Baporikar & Fotolela, 2017).

Additionally, chatbots may be used on social networking sites to instantly reply to inquiries and criticisms from users. This helps create a more dynamic and interesting social media network in addition to streamlining customer support. Consumers like prompt and friendly service, and a satisfying interaction may boost engagement and foster brand loyalty. Digital advertising requires content customisation, and generative AI elevates this practice to new dimensions. Through the analysis of user habits, interests, and the population, material may be constantly customized for different channels. Artificial intelligence (AI) technology makes sure the material is personalized to each user, whether it be for blog entries, social networking comments, or landing sites. This degree of customization raises the conversion rate while also boosting engagement.

Furthermore, using analytics for prediction, artificial intelligence (AI) can forecast consumer behaviour and movements. It can predict which goods or services will probably be in great demand in the future by examining past data. This makes it possible for marketers to proactively modify their plans to conform to the demands and preferences of their target audience. Generative AI, for example, may be used by a fashion shop to forecast future trends in fashion and modify its product offers and marketing strategies appropriately. Businesses may stay ahead of the curve and engage consumers with timely and appropriate products because to these predictive capabilities.

Digital marketers often use A/B testing, which compares two variants of a marketing feature to see which one works better. This process may be accelerated and automated using generative AI, which can find a marketing campaign's most successful components fast. By gaining insight into what appeals to their audience the most, marketers can improve their campaigns for higher engagement and conversion rates

by making data-driven choices. Furthermore, content optimization for voice assistants and visual search technologies may be greatly aided by Generative AI. These technologies are becoming more and more popular. AI-powered voice search requires content organization that complies with natural language inquiries. Generative AI can help create voice-search-friendly material so that companies can be found by voice-activated assistants like Alexa and Siri. Additionally, visual search uses artificial intelligence (AI) to scan and understand photos, making it simpler for users to discover information or items. In an ever-changing digital world, companies can stay relevant and approachable by adjusting to these new search paradigms.

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