



# Role of Artificial Intelligence in Digital Marketing

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## Abstract

Artificial intelligence (AI) marketing is the process of leveraging AI methods and tools such as data models, algorithms, and machine learning to produce customer insights that marketers can use to optimize spending, customize content, and personalize the customer journey. AI is used in marketing to provide actionable recommendations for managing relationships by integrating multiple data sources and systems, AI can generate a profile for each consumer, so that decision-makers can understand what drives their customers' choices and guide them to their next best action. The present paper mainly attempts to study the role of AI in digital marketing. This study is based on secondary data. The following are the important objectives of the study: 1. to study about the components of AI 1. to study about the AI technologies used in digital marketing, 2. to study the impact of Artificial intelligence in digital marketing, 3. to know the benefits of AI in digital marketing.

**Keywords** – AI ( Artificial Intelligence), Digital Marketing, Technologies

## Introduction

AI in digital marketing is the use of artificial intelligence to plan, execute, or optimize a company's marketing efforts. AI marketing aims to improve the company's marketing performance, efficiency, and cost savings. AI uses machine learning and large-language models (LLM) to analyse big data and turn it into actionable insights, automated actions, and content. AI can even interact with customers who perform a specific behaviour on your website, like clicking a button or liking a social media post<sup>1</sup>.

AI marketing uses artificial intelligence technologies to make automated decisions based on data collection, data analysis, and additional observations of audience or economic trends that may impact marketing efforts. AI is often used in digital marketing efforts where speed is essential. Generative AI is often used in digital marketing efforts where speed is essential. AI marketing tools use data and customer profiles to learn how to best communicate with customers, then serve them tailored messages at the right time without intervention from marketing team members, ensuring maximum efficiency<sup>2</sup>.

Artificial Intelligence enables organizations to improve their overall marketing efforts. AI can automate your everyday marketing tasks like scheduling and sending emails or predicting campaign performance. It also goes even further by personalizing experiences for both marketers and consumers<sup>3</sup>.

## Objectives of the Study

The objectives of the study are:

- to study about the components of AI
- to assess the AI technologies used in digital marketing

- to study the impact of AI in digital marketing
- to identify the benefits of AI in digital marketing

## Methodology of the Study

### 1. Research Design

Research design is the detailed plan of conducting a research study. Fundamental or basic research design has been used in the study.

### 2. Data and sources of data

For this study secondary data has been collected from online journals and websites.

## Components of AI

AI marketing tools simulate human intelligence and problem-solving capabilities.<sup>4</sup> Experts who combine artificial intelligence and marketing can generate promotional content faster, get more accurate results in customer data analysis, and improve prospect experience.<sup>5</sup>

Two key components of AI are:

- Machine learning (ML): ML algorithms enable computers to learn from data and make predictions without being explicitly programmed; machine learning in marketing can be used for customer segmentation and predictive analytics tasks<sup>6</sup>
- Natural language processing (NLP): NLP algorithms enable computers to understand, interpret, and generate human language; in marketing, NLP is mainly used in content generation, including images, videos, and text<sup>7</sup>

## AI Technologies used in Digital Marketing

Powerful social marketing platforms, like Sprout, weave together sophisticated AI technologies under the hood to provide the insights you need to succeed. Capabilities such as semantic classification, named entity recognition and aspect-based sentiment analysis help you get targeted insights specific to your industry, while natural language processing helps you optimize social content and improve customer engagement—all leading to greater competitive advantage and share of voice. The following are the various AI technologies used in digital marketing.

**1. Machine Learning :** Machine learning (ML) uses statistical methods to analyse social data for high-precision insights around customer experience, audience sentiment and other marketing drivers. Once trained, ML models automatically complete text mining, topic extraction, aspect classification, semantic clustering and other tasks to provide results in seconds. AI-ML models get smarter as they process more data over time and so upgrade automatically, which is perfect for scaling your business operations while minimizing future investment in your tech stack.

**2. Natural Language Processing (NLP) :** Natural language processing powers your AI marketing tool so it can semantically and contextually understand social listening data. It combines rules-based lexical and statistical methods, enabling you to scan a wide range of posts, messages, reviews or comments and extract critical information from it.

When NLP algorithms are coded for social listening, they can interpret the data even if it's splattered with colloquialisms, code switches, emojis, abbreviations, hashtags or spelling mistakes. Natural language generation (NLG) further enhances the tool's capabilities to help you create high-performing copy for posts, customer responses and more.

This gives you access to a wider audience for outreach campaigns, stronger communication with existing customers and better returns on our investment in social.

**3. Semantic Search :** Semantic search algorithms are critical in NLP because they help understand the intent of a phrase or lexical string without depending on keywords. These algorithms extract relevant keywords and categorize them into semantic clusters. This eliminates chances of duplicates in text mining, especially where sentiment analysis is concerned, for an accurate measure of customer experience or brand performance. Knowing exactly how strong your brand is in relation to your competitors and monitoring it against your benchmarks can help you alter marketing and sales strategies to achieve long-term business goals.

**4. Named Entity Recognition (NER) and Neural Networks:** NER helps an AI platform identify named entities in big data. These entities could be important people, places or things such as CEOs, celebrities, locations, currencies, businesses and others. It can identify these entities even if they are misspelled. NER also is a key function in generating knowledge graphs because they establish a relationship between entities in order to derive context and insights from data. Neural network (NN) algorithms, built to mimic how a human brain handles information, remember these interconnected data points, and keep adding them to their knowledge database. This is what enables ML models to provide more precise results with time through deep learning. Thus, you get to know why certain brands keep appearing in your social listening data, what new market trends are brewing, which influencers would be a great fit and many other insights that can help you strengthen your social marketing strategy.

**5. Sentiment Analysis :** Sentiment analysis is the process of measuring customer sentiment from feedback data and can be instrumental in helping with reputation management. Sentiment analysis algorithms analyse social listening data including survey responses, online reviews and incoming messages, both in real-time and historically. They measure sentiment in every aspect that is extracted from the data and assign polarity scores in the range of -1 to +1. Neutral statements are counted as zero.

When analysing social data where customers are talking about aspects of a business, sentiment analysis models consider the polarity score of each aspect. These sentiment scores are aggregated to provide an overall sentiment of the brand in terms of customer experience. This eventually gives you an idea of how well your business is performing. With such insights available, you can grow your brand by evaluating and improvising social media content, shaping sales and marketing, improving brand management, better interpreting customer intent and so much more<sup>8</sup>.

## Impact of Artificial Intelligence in Digital Marketing

Here are some key areas where AI is making an impact in digital marketing

- 1. Personalized Marketing:** AI enables businesses to analyse vast amounts of customer data to create highly personalized marketing campaigns. By leveraging machine learning algorithms, businesses can segment their audience more effectively, deliver personalized content, and tailor marketing messages to individual preferences and behaviours.
- 2. Predictive Analytics:** AI-driven predictive analytics tools help businesses forecast future trends, customer behaviour, and marketing outcomes with greater accuracy. By analysing historical data and identifying patterns, AI algorithms can predict which marketing strategies are likely to yield the best results, enabling businesses to allocate resources more effectively and optimize their marketing efforts.
- 3. Chatbots and Virtual Assistants:** AI-powered chatbots and virtual assistants are transforming customer service and engagement in digital marketing. These intelligent bots can interact with customers in real time, answer questions, provide personalized recommendations, and assist with purchases, enhancing the overall customer experience and driving sales.
- 4. Content Creation and Optimization:** AI technologies such as natural language generation (NLG) and natural language processing (NLP) are used to create and optimize content at scale. AI-powered tools can generate blog

posts, product descriptions, and social media posts, analyse content performance, and make recommendations for improvement.

- 5. Search Engine Optimization (SEO):** AI is playing an increasingly important role in Search Engine Optimization, helping businesses improve their search engine rankings and visibility. AI algorithms analyse search trends, optimize website content, and identify opportunities for keyword targeting and link building, driving organic traffic and conversions.
- 6. Advertising Optimization:** AI-powered advertising platforms, such as Google Ads and Facebook Ads, use machine learning algorithms to optimize real-time ad campaigns. These platforms can automatically adjust bidding strategies, target audience segments, and ad creatives based on performance data, maximizing return on ad spend (ROAS) and driving conversions.
- 7. Marketing Automation:** AI enables the automation of repetitive marketing tasks, such as email marketing, social media posting, and campaign management. By automating these processes, businesses can save time and resources while also delivering more timely and relevant marketing messages to their audience<sup>9</sup>.

## The Benefits of AI in Digital Marketing

AI offers numerous benefits in digital marketing:

- 1. Automated Campaign Management:** AI-powered tools can automate various aspects of campaign management, including ad placements, scheduling, and optimization. This saves time and resources while improving campaign performance.
- 2. Content Generation:** AI can generate content, such as product descriptions, blog posts, and social media marketing, based on predefined parameters. This streamlines content creation processes and ensures consistent quality.
- 3. Customer Service:** AI-powered chatbots and virtual assistants can provide 24/7 customer support, answering queries, resolving issues, and even guiding users through the sales process. This improves customer satisfaction and reduces response times.
- 4. Optimized Ad Targeting:** AI algorithms analyse user data to identify the most relevant audience segments for advertising campaigns. This ensures that ads are shown to people likely to be interested in the products or services offered.
- 5. Dynamic Pricing:** AI can analyse market conditions, competitor pricing, and customer behaviour to dynamically adjust prices in real-time. This helps maximize revenue and maintain competitiveness.
- 6. A/B Testing and Optimization:** AI algorithms can conduct A/B tests on various marketing elements, such as ad copies, landing pages, and email subject lines, to identify the most effective variations. This continuous optimization improves campaign performance over time.
- 7. Fraud Detection:** AI algorithms can detect and prevent fraudulent activities, such as click fraud and account hijacking, in digital marketing campaigns. This protects advertisers from wasting their budget on invalid traffic.
- 8. Cross-channel Integration:** AI enables seamless integration across multiple marketing channels, allowing marketers to deliver consistent messaging and experiences to customers across platforms<sup>10</sup>.

## Conclusion

Overall, AI empowers marketers to streamline processes, enhance targeting accuracy, and deliver more personalized and effective campaigns, ultimately driving better results and ROI in digital marketing efforts. The scope of AI in digital marketing is vast and continues to grow as businesses increasingly adopt AI-powered technologies to drive growth, improve efficiency, and enhance the customer experience. As AI continues to evolve, it will play an increasingly central role in shaping the future of digital marketing strategies and practices <sup>11</sup>.

## References

1. <https://blog.hubspot.com/marketing/ai-marketing#What-is-AI-in-digital-marketing>
2. <https://www.marketingevolution.com/marketing-essentials/ai-marketing>
3. <https://levity.ai/blog/how-to-use-ai-for-marketing-benefits-examples>
4. [ibm.com/topics/artificial-intelligence](https://ibm.com/topics/artificial-intelligence)
5. [ibm.com/blog/ai-in-marketing/](https://ibm.com/blog/ai-in-marketing/)
6. [ibm.com/topics/machine-learning](https://ibm.com/topics/machine-learning)
7. [oracle.com/ke/artificial-intelligence/what-is-natural-language-processing/](https://oracle.com/ke/artificial-intelligence/what-is-natural-language-processing/)
8. <https://sproutsocial.com/insights/ai-marketing/>
9. <https://www.linkedin.com/pulse/ai-digital-marketing-step-by-step-guide-softtrix-web-solutions-bwrhc>
10. <https://www.linkedin.com/pulse/ai-digital-marketing-step-by-step-guide-softtrix-web-solutions-bwrhc>
11. <https://www.linkedin.com/pulse/ai-digital-marketing-step-by-step-guide-softtrix-web-solutions-bwrhc>

