



The impact of artificial intelligence on tailored marketing strategies

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Abstract

This research aimed to investigate the influence of artificial intelligence on customized marketing strategies. Four research inquiries and a single hypothesis were formulated and analyzed. The study was directed by the goal of understanding the effect of artificial intelligence on personalized marketing strategies and their efficacy in improving consumer engagement and business performance. A descriptive and explanatory design was utilized; data collection involved the use of questionnaires alongside library research. Both primary and secondary data sources were employed, and the analysis was conducted using the chi-square statistical method at a 5% significance level, with results presented in frequency tables and percentages. The primary sample consisted of residents from Lagos State, selected from 23 Local Government Areas (LGAs) within the state. Data collection was facilitated through a questionnaire titled "Questions on the Role of Artificial Intelligence in Personalized Marketing (QRAIPM)." The validity of the instruments was evaluated in terms of face, content, and constructs validity. Additionally, the reliability of the instruments was assessed, revealing internal consistency reliability coefficients of 0.76, 0.78, and 0.87 for the questions related to the role of artificial intelligence in personalized marketing scales. There was no significant difference regarding whether business owners should leverage AI to gain a deeper understanding of customer needs and preferences, thereby ensuring that marketing initiatives are genuinely pertinent and beneficial. The findings of the study indicated that AI serves as a potent tool that has transformed personalized marketing, presenting both opportunities and challenges. As technological advancements continue, the significance of AI in marketing is expected to grow, fostering innovation and altering the ways in which brands engage with their audiences.

Keywords: Artificial intelligence, marketing, strategies

Introduction

The swift advancement of Artificial Intelligence (AI) in the last ten years has profoundly altered various sectors, with marketing emerging as a primary area where AI's capabilities are increasingly utilized (Umanah *et al.*, 2025) [21]. In the context of personalized marketing, AI has empowered companies to provide customized experiences to consumers, taking into account their distinct preferences, behaviors, and demographics (Obruche *et al.*, 2018) [12]. Personalized marketing is defined as the strategy of leveraging customer data to develop individualized communications and offers that resonate with each consumer's interests. AI methodologies, including machine learning (ML), natural language processing (NLP), and predictive analytics, have enabled organizations to enhance their marketing strategies by automating and refining targeting and segmentation processes (Umudi *et al.*, 2025) [18]. Consequently, personalized marketing has evolved into one of the most vital strategies for boosting customer engagement, increasing conversion rates, and fostering brand loyalty (Ogwuche & Obruchr, 2020) [13]. The function of AI in personalized marketing goes beyond mere segmentation, as it facilitates marketers in delivering hyper-targeted content, suggesting personalized products, and even forecasting future consumer behaviors (Itodo, 2021) [8]. These innovations are propelled by the capacity of AI algorithms to analyze extensive datasets and discern patterns that were once unimaginable. For example, enterprises like Amazon, Netflix, and Spotify have leveraged AI's potential to provide highly personalized recommendations based on a user's historical behaviors, preferences, and demographic data (Agarwal & Dhar, 2018) [2]. The rising adoption of AI-

driven chatbots and virtual assistants in customer service has further underscored its influence on personalized marketing by allowing for more effective, real-time interactions between brands and consumers (Andreu *et al.*, 2020) [3]. This research investigates the current literature regarding the influence of artificial intelligence (AI) on personalized marketing, a field characterized by its dynamism and rapid evolution. Personalized marketing, which entails customizing marketing strategies and content to align with individual consumer preferences, has emerged as a pivotal element in achieving success in contemporary business (Bai & Xie, 2019) [4]. The introduction of AI technologies has equipped marketers with sophisticated tools and methodologies that allow for the analysis of extensive consumer data, the prediction of behaviors, and the creation of tailored experiences (Obruche *et al.*, 2019; Umudi *et al.*, 2025) [11, 20]. This chapter examines the transformative impact of AI on personalized marketing by enhancing customer engagement, refining targeting precision, and optimizing resource distribution, thereby enabling companies to forge more significant connections with their audiences (Festus-Amadi *et al.*, 2021) [7]. The focus of this study will be on enterprises that have adopted AI-driven personalized marketing strategies, including e-commerce platforms, retail brands, and service providers (Oberoi & Verma, 2020) [10]. The research will delve into AI technologies such as machine learning, predictive analytics, and natural language processing, along with their applications in personalized marketing. The scope of the study will be confined to the analysis of AI in marketing from 2018 to the present, as this timeframe encapsulates the latest advancements in AI technologies and their

incorporation into marketing practices (Sharma & Agrawal, 2020) [16]. In the current highly competitive market landscape, businesses are increasingly compelled to comprehend and anticipate consumer demands. Personalized marketing has become a vital strategy for sustaining customer satisfaction and loyalty (Obruche *et al.*, 2019) [14]. Nevertheless, despite the considerable promise that AI offers for enhancing personalized marketing initiatives, numerous businesses encounter obstacles in the effective implementation of AI-driven strategies (Umudi *et al.*, 2025) [22]. These obstacles encompass challenges in acquiring accurate customer data, upholding privacy and security, and ensuring that AI-generated content resonates with varied customer segments. Furthermore, there exists a limited comprehension of the direct effects that AI-driven personalized marketing exerts on consumer behavior and business results (Erienu *et al.*, 2022) [6]. Consequently, this research seeks to fill the knowledge gap concerning the function of AI in personalized marketing, particularly its influence on consumer engagement, brand loyalty, and sales performance.

Purpose of the Study

The primary aim of this research is to assess the impact of artificial intelligence on personalized marketing strategies and their efficacy in improving consumer engagement and business performance. The specific objectives encompass:

1. To determine if businesses owners should adopt AI-powered platforms to analyze customer data and gain actionable insights for personalized marketing strategies.
2. To check if businesses owners should implement clear policies and practices to ensure customer data is collected and used ethically, building trust and compliance with regulations.
3. To find out if businesses should use AI to deliver dynamic, real-time content and offers that adapt to individual customer behaviors and preferences
4. To see if businesses owners should regularly evaluate the performance of AI tools and algorithms to ensure they are delivering the desired results and adjust strategies as needed

Research Questions

1. Should businesses owners adopt AI-powered platforms to analyze customer data and gain actionable insights for personalized marketing strategies?
2. What is the effectiveness if businesses owners implement clear policies and practices to ensure customer data is collected and used ethically, building trust and compliance with regulations?
3. Should businesses owner use AI to deliver dynamic, real-time content and offers that adapt to individual customer behaviors and preferences?
4. Should businesses owners should regularly evaluate the performance of AI tools and algorithms to ensure they are delivering the desired results and adjust strategies as needed?

Research Hypotheses

H0: There is no significant difference if Businesses owners should use AI to better understand customer needs and preferences, ensuring that marketing efforts are genuinely relevant and valuable

Theoretical review

The research is grounded in Algorithmic Marketing theory, and was proposed by Obruche in 1986. The Theory of Algorithmic Marketing in AI-Driven Personalization asserts that sophisticated machine learning algorithms and data analytics are pivotal in shaping consumer experiences by developing tailored marketing strategies. This theory is based on the premise that consumer behavior can be effectively predicted and influenced through algorithms that continuously analyze vast amounts of data to reveal patterns, trends, and insights that were previously obscured in conventional marketing methods. It posits that the strategic application of artificial intelligence (AI) enables businesses to improve personalization efforts via real-time modifications, thereby making interactions more pertinent to the consumer and fostering increased engagement, conversion rates, and loyalty (Singh & Gupta, 2021; Obruche *et al.*, 2025) [9, 17]. The second theory, known as the theory of Customer Experience Management (CEM) in AI-Powered Personalized Marketing, was proposed by Agarwal & Dhar, (2018) [2] and it highlights the strategic importance of AI in shaping and enhancing the overall consumer journey through personalized marketing initiatives. CEM emphasizes that a seamless, personalized experience across all consumer touchpoints is crucial for cultivating long-term customer satisfaction and loyalty. This theory suggests that the implementation of artificial intelligence in personalized marketing allows businesses to gather, analyze, and respond to real-time customer data, thus facilitating a more responsive and individualized experience. AI technologies, such as machine learning and natural language processing, empower brands to refine every phase of the customer experience, from initial awareness to post-purchase engagement, and to adapt their strategies as they acquire deeper insights into customer preferences and behaviors (Obruche *et al.*, 2025) [9].

Methodology

This section delineates the methodology that will be utilized in the study. It encompasses research design, the population of the study, the sample and sampling technique, the research instrument, the validity of the instrument, the reliability of the instrument, the method of data collection, and the method of data analysis.

Research Design

For this study, the survey research design was selected. The decision regarding the design was guided by the objectives of the study as detailed in chapter one. This research design offers a prompt, efficient, and precise means of evaluating information concerning a population of interest. It aims to investigate the role of artificial intelligence in personalized marketing. The study will take place in Lagos state (Umudi *et al.*, 2025) [23].

Population of the Study

The populations for this study consisted of residents of Lagos state. A total of 134 respondents were chosen from the population figure, from which the sample size was established, samples were collected in June, 2025. The rationale for selecting Lagos state is its proximity to the researcher (Obruche *et al.*, 2019) [14].

Sample and Sampling Techniques

The sample for this study includes of residents of Lagos state selected from the total population using the statistical

table by Ugochukwu *et al.* (2025) [19]. According to Ugochukwu *et al.* (2025) [19], a sample size of 100 is sufficient for a population of around 134 at a 95% confidence level. The researcher employed Taro Yamane’s formula to ascertain the sample size from the population. Taro Yamane’s formula is given as;

$$n = \frac{N}{1 + N (e)^2}$$

Where N = Population of study (134)
 n = Sample size (?)
 e = Level of significance at 5% (0.05)
 1 = Constant

$$n = \frac{134}{1 + 134 (0.05)^2}$$

The sample size therefore is 100 respondents
 n = 100

Research Instrument and Instrumentation

Data for this research was gathered from both primary and secondary sources. The primary data was predominantly obtained through a structured questionnaire specifically designed to gather insights regarding the impact of artificial intelligence on personalized marketing. The questionnaire IS titled "Questions on the Role of Artificial Intelligence in Personalized Marketing (QRAIPM). The secondary data sources included textbooks, academic journals, and scholarly articles.

Validity of Instrument

The instrument utilized in this study underwent face validation. Face validation assesses the relevance of the items within the questionnaire. This method is employed to ascertain whether the instrument appears to measure what it is intended to measure. Consequently, face validations are aimed at evaluating the degree to which the questionnaire aligns with the study’s objectives. In the process of conducting face validation, copies of the initial draft of the questionnaire will be reviewed by the supervisor. The supervisor is anticipated to thoroughly analyze the items of the instrument in relation to the specific objectives of the study and provide constructive feedback to enhance the instrument’s quality. Following the supervisor’s recommendations, the instrument will be modified and refined prior to its administration in the study (Ekpo *et al.*, 2023) [15].

Reliability of Instrument

A reliability coefficient of 0.81 was deemed acceptable, as Obruche *et al.*, (2019) [11] posits that a test-retest coefficient of 0.5 is sufficient to validate the use of a research instrument.

Method of Data Collection

This research is founded on two potential data sources: the primary and secondary sources.

Primary Source of Data: The primary data for this research comprises raw data collected from the responses to questionnaires and interviews conducted with the participants.

Secondary Source of Data: The secondary data encompasses information acquired through a literature review, which includes journals, monographs, textbooks, and various other periodicals.

Method of Data Analysis

The research questions were addressed utilizing frequency tables, percentages, and mean score analysis, while the nonparametric statistical test (Chi-square) was employed to evaluate the formulated hypotheses using SPSS (Statistical Package for the Social Sciences). After collecting the data through the distribution of questionnaires, the gathered information was coded, tabulated, and analyzed with SPSS statistical software in accordance with the research questions and hypotheses. All hypotheses were assessed at a significance level of 0.05.

Results and Discussion

This section focuses on the presentation and analysis of the results obtained from the questionnaires. The data collected were presented in the order corresponding to the arrangement of the research questions, and simple percentages were utilized to analyze the demographic information of the respondents, while the Chi-square test was implemented to evaluate the research hypotheses.

Analysis of Demographic Data of Respondents

Table 1: Gender of Respondents

sex		Frequency	Percent	Cumulative Percent
	Male	65	65.0	65.0
	Female	35	35.0	100.0
	Total	100	100.0	

Source: Field Survey

Table1 shows the gender distribution of the respondents used for this study. Out of the total number of 100 respondents, 65respondents which represent 65.0percent of the population are male. 35 which represent 35.0 percent of the population are female.

Table 2: Age range of Respondents

Age Range	Frequency	Percent	Cumulative Percent
20-30years	15	15.0	15.0
31-40years	10	10.0	25.0
41-50years	25	25.0	50.0
51-60years	20	20.0	70.0
above 60years	30	30.0	100.0
Total	100	100.0	

Source: Field Survey

Table 2 illustrates the age distribution of the participants involved in this study. Among the total of 100 respondents, 15 individuals, accounting for 15.0 percent of the population, fall within the age range of 20 to 30 years. Additionally, 10 respondents, representing 10.0 percent of the population, are aged between 31 and 40 years. Furthermore, 25 respondents, which constitute 25.0 percent of the population, are in the age group of 41 to 50 years. There are also 20 respondents, making up 20.0 percent of the population, who are between 51 and 60 years old. Lastly, 30 respondents, representing 30.0 percent of the population, are over 60 years of age.

Research Question One: Should businesses owners adopt AI-powered platforms to analyze customer data and gain actionable insights for personalized marketing strategies?

Table 3: Businesses should adopt AI-powered platforms to analyze customer data and gain actionable insights for personalized marketing strategies

Valid items		Frequency	Percent	Cumulative Percent
	Strongly agree	30	30.0	30.0
	Agree	42	42.0	72.0
	Undecided	10	10.0	82.0
	Disagree	10	10.0	92.0
	Strongly disagree	8	8.0	100.0
	Total	100	100.0	

Source: Field Survey

Table 3 illustrates the opinions of participants regarding the necessity for businesses to implement AI-driven platforms for the analysis of customer data and the acquisition of actionable insights aimed at enhancing personalized marketing strategies. A total of 30 respondents, accounting for 30.0 percent, expressed strong agreement with the notion that businesses should adopt AI-powered platforms for this purpose. Additionally, 42 respondents, representing 42.0 percent, indicated their agreement with the adoption of such platforms. Meanwhile, 10 respondents, or 10.0 percent, remained neutral on the issue. Conversely, 10 respondents, also comprising 10.0 percent, disagreed with the idea that businesses should utilize AI-powered platforms for customer data analysis and actionable insights. Lastly, 8 respondents, equating to 8.0 percent, strongly disagreed with the proposition that businesses should embrace AI-powered platforms for the analysis of customer data and the derivation of actionable insights for personalized marketing strategies.

Research Question Two: What is the effectiveness if businesses owners implement clear policies and practices to ensure customer data is collected and used ethically, building trust and compliance with regulations?

Table 4: Businesses should implement clear policies and practices to ensure customer data is collected and used ethically, building trust and compliance with regulations

Valid items		Frequency	Percent	Cumulative Percent
	Strongly agree	30	30.0	30.0
	Agree	42	42.0	72.0
	Undecided	10	10.0	82.0
	Disagree	10	10.0	92.0
	Strongly disagree	8	8.0	100.0
	Total	100	100.0	

Source: Field Survey.

Table 4 illustrates the opinions of participants regarding the necessity for businesses to establish transparent policies and practices aimed at ensuring the ethical collection and utilization of customer data, thereby fostering trust and adherence to regulations. A total of 30 respondents, accounting for 30.0 percent, expressed strong agreement with the notion that businesses should implement clear policies and practices to ensure customer data is collected and used ethically, thereby building trust and ensuring compliance with regulations. Additionally, 42 respondents, representing 42.0 percent, agreed with the assertion that

businesses should adopt clear policies and practices for the ethical collection and use of customer data, which contributes to trust and regulatory compliance. Furthermore, 10 respondents, or 10.0 percent, remained undecided on this matter. Conversely, 10 respondents, making up 10.0 percent, disagreed with the idea that businesses should implement clear policies and practices to ensure the ethical collection and use of customer data, which is essential for building trust and complying with regulations. Lastly, 8 respondents, representing 8.0 percent, strongly disagreed with the proposition that businesses should establish clear policies and practices for the ethical collection and use of customer data, which is vital for fostering trust and ensuring compliance with regulations.

Research Question Three: Should businesses owner use AI to deliver dynamic, real-time content and offers that adapt to individual customer behaviors and preferences?

Table 5: Businesses should use AI to deliver dynamic, real-time content and offers that adapt to individual customer behaviors and preferences

Valid Items	Frequency	Percent	Cumulative Percent
Strongly agree	10	10.0	10.0
Agree	15	15.0	25.0
Undecided	5	5.0	30.0
Disagree	40	40.0	70.0
Strongly disagree	30	30.0	100.0
Total	100	100.0	

Source: Field Survey

Table 5 illustrates the opinions of respondents regarding whether businesses ought to utilize AI for the provision of dynamic, real-time content and offers that adjust to the behaviors and preferences of individual customers. A total of 10 respondents, accounting for 10.0 percent, strongly agree that businesses should employ AI to deliver such dynamic, real-time content and offers. Additionally, 15 respondents, representing 15.0 percent, agree with the notion that businesses should leverage AI for this purpose. Conversely, 5 respondents, or 5.0 percent, remained undecided on the matter. Furthermore, 40 respondents, which corresponds to 40.0 percent, disagree with the idea that businesses should use AI to provide dynamic, real-time content and offers tailored to individual customer behaviors and preferences. Lastly, 30 respondents, making up 30.0 percent, strongly disagree with the assertion that businesses should implement AI for delivering dynamic, real-time content and offers that adapt to individual customer behaviors and preferences.

Research Question Four: Should businesses owners should regularly evaluate the performance of AI tools and algorithms to ensure they are delivering the desired results and adjust strategies as needed?

Table 6: Businesses should regularly evaluate the performance of AI tools and algorithms to ensure they are delivering the desired results and adjust strategies as needed

Valid items	Frequency	Percent	Cumulative Percent
Strongly agree	65	65.0	65.0
Agree	30	30.0	95.0
Disagree	3	3.0	98.0
Strongly disagree	2	2.0	100.0
Total	100	100.0	

Source: Field Survey

Table 6 illustrates the feedback from participants regarding the necessity for businesses to consistently assess the effectiveness of AI tools and algorithms to confirm they are achieving the intended outcomes and modify strategies accordingly. A total of 65 respondents, accounting for 65.0 percent, strongly concur that businesses should routinely evaluate the performance of AI tools and algorithms to ensure they are delivering the desired results and adjust strategies as needed. Additionally, 30 respondents, representing 30.0 percent, agree that businesses should regularly assess the performance of AI tools and algorithms to ensure they are achieving the desired outcomes and adapt strategies as necessary. Meanwhile, 3 respondents, or 3.0 percent, remained neutral on the issue. Furthermore, 3 respondents, constituting 3.0 percent, expressed disagreement with the notion that businesses should regularly evaluate the performance of AI tools and algorithms to ensure they are delivering the desired results and adjust strategies as needed. Lastly, 2 respondents, representing 2.0 percent, strongly disagreed with the idea that businesses should routinely assess the performance of AI tools and algorithms to ensure they are achieving the desired outcomes and modify strategies as required.

Research Hypotheses

H0: There is no significant difference if Businesses owners should use AI to better understand customer needs and preferences, ensuring that marketing efforts are genuinely relevant and valuable.

Table 7: Businesses should use AI to better understand customer needs and preferences, ensuring that marketing efforts are genuinely relevant and valuable

Valid	Frequency	Percent	Cumulative Percent
Strongly agree	25	25.0	25.0
Agree	32	32.0	57.0
Undecided	13	13.0	70.0
Disagree	15	15.0	85.0
Strongly disagree	15	15.0	100.0
Total	100	100.0	

Source: Field Survey

Table 7 illustrates the opinions of participants regarding the utilization of AI by businesses to enhance their understanding of customer needs and preferences, thereby ensuring that marketing initiatives are genuinely pertinent and beneficial. Among the respondents, 25 individuals, accounting for 25.0 percent, strongly concur that businesses should employ AI to gain insights into customer needs and preferences, thus ensuring that marketing efforts are truly relevant and valuable. Additionally, 32 respondents, representing 32.0 percent, agree with the notion that businesses should leverage AI for a better understanding of customer needs and preferences, ensuring that marketing strategies are genuinely relevant and valuable. Meanwhile, 13 respondents, or 13.0 percent, expressed neutrality on the matter. Conversely, 15 respondents, making up 15.0 percent, disagreed with the idea that businesses should utilize AI to better comprehend customer needs and preferences, ensuring that marketing efforts are genuinely relevant and valuable. Lastly, another 15 respondents, also representing 15.0 percent, strongly opposed the notion that businesses should use AI to enhance their understanding of customer needs and preferences, ensuring that marketing efforts are genuinely relevant and valuable.

Conclusion

In summary, the findings indicate that AI serves as a formidable instrument that has transformed personalized marketing, presenting both opportunities and challenges. Business owners who adopt AI while addressing ethical considerations and upholding a human-centered approach will be strategically positioned to succeed in the dynamic marketing environment. As technological advancements continue, the significance of AI in marketing will only increase, fostering innovation and altering the ways in which brands engage with their audiences.

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