

## Influence of AI driven Digital Marketing on Consumer Purchase Intention: An Empirical Study

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### Abstract

In recent years, the digital market has experienced rapid expansion, reshaping business activities with advancing technology. E-commerce has introduced new buying and selling practices, nurturing a new cultural norm. The integration of artificial intelligence (AI) has been transformative, delivering personalized customer experiences that basically modify the landscape of online retail. AI plays a critical role in driving interest to purchase conversion, utilizing vast data on prospective customers collected by e-commerce platforms. This AI-driven approach has transformed traditional marketing, offering marketers personalized tools to customize advertisements based on individual shopping histories and internet searches. Furthermore, AI enables real-time programmatic advertising, leveraging current browsing behaviours to optimize ad targeting on e-commerce platforms. This personalized approach has revolutionized traditional marketing methods, allowing marketers to tailor advertisements based on individual shopping behaviour and internet search history. Additionally, AI facilitates real-time programmatic advertising, leveraging current browsing patterns to enhance the effectiveness of online advertising strategies. A sample of 227 respondents was collected from people of marketing industry and from online platform customers. The factors that identify the Influence of AI driven Digital Marketing on Consumer Purchase Intention are Personalized Recommendations, Behavioral Targeting, Chatbots and Virtual Assistants, and Predictive Analytics.

**Keywords:** Artificial Intelligence, Consumer Behaviour, Purchase Intention, Digital Marketing

### Introduction

AI Marketing employs artificial intelligence principles, including machine learning, to predict client behaviour and achieve marketing goals. Customer purchasing decisions are intricate, intertwined with behaviour, perceptions, and attitudes. Forecasting purchase decisions often relies on understanding buying intentions, which is considered the most accurate method. Extensive research has explored the impact of digital marketing and artificial intelligence on shaping consumer purchasing intentions (**Busman & Ananda, 2022**). AI represents a new technology in digital marketing, offering significant potential to enhance its influence on consumer behaviour. AI marketing introduces a fresh marketing approach, shifting from simple automation to more effective personalization. The plenty of available data has empowered marketers to tailor

their sales and marketing strategies, surpassing customer expectations. The application of AI engineering holds promises in transforming service and products delivery to consumers (Rabby, Chimhundu, & Hassan, 2021). Consumers have expressed their consensus that digital marketing offers a diverse array of products and facilitates optimal purchasing practices through e-shopping and electronic word-of-mouth. It provides comprehensive information about products, enhancing the shopping experience and making it more engaging. Moreover, electronic word-of-mouth aids in seamless information exchange. Furthermore, consumers agree that digital marketing fosters opinion exchange and discussions regarding the positive or negative attributes of a product. This enables consumers to gain a clearer understanding of a product before making a purchase decision (Alwan & Alshurideh, 2022). Purchase intention refers to a consumer's readiness or inclination to purchase a product or service that incorporates AI technology. With AI's growing presence across industries, consumers are becoming increasingly aware of its potential benefits. Factors influencing purchase intention include the perceived usefulness, ease of use, and trustworthiness of AI-powered products or services. Consumers also take into account perceived risks associated with AI technology, such as privacy concerns and the potential for AI to replace human workers. Therefore, purchase intention in the context of AI is shaped by a variety of factors, highlighting the importance of understanding consumer attitudes and perceptions toward AI for businesses aiming to leverage this technology (Ragul & Dulloo, 2023). The effect of machine learning, product recommendations, and purchase duration on customers' consideration sets supports the idea that these elements play a significant part in shaping behaviour of consumers. Also, communication between consideration sets of customers and these factors underscores their mutual influence on each other. AI tools emerge as effective aids in achieving this interaction due to their ability to provide valuable data on various variables that influence customer behavioural intentions. Customers' online activities, often noticeable through their search history, enable easy access to resources crucial for business growth. Marketing efforts can leverage this by fostering conditions conducive to longer purchase durations and increased engagement with social media platforms (Subbaiah, Manjushree & Kondamudi, 2023).

## Literature Review

Krishna & Prathapkumar (2023) stated that AI's effect on personalized marketing is revolutionary, reshaping how businesses engage with and cater to their audiences. Integrating AI into marketing strategies prioritizes precision, relevance, and individualization, marking a new era in customer interaction. Research insights shed light on key aspects of this impact. AI-powered chatbots, virtual assistants, and conversational interfaces have redefined customer interactions, delivering instant, personalized, and context-aware responses. This not only improves customer service but also creates a unified and engaging user experience. Across marketing channels, AI integration ensures a unified customer journey. From websites and social media to email campaigns and mobile apps, AI optimizes each touchpoint for personalized engagement, fostering connection and loyalty.

Satapathy & Nanda (2023) revealed that the combination of AI into marketing operations has greatly improved efficiency across various stages of the marketing lifecycle. From data analysis and predictive analytics to personalized customer interactions and real-time insights, AI has become a dynamic asset for today's marketers. By automating ordinary tasks, offering valuable insights, and enabling tailored customer experiences, AI not only improves marketing efficiency but also guarantees businesses remain competitive in the ever-changing digital realm. As AI continues to progress, its impact on marketing efficiency is poised to expand, influencing the future direction of marketing strategies. With its evolving capabilities, AI will remain a keystone of innovation in digital marketing. Its capability to deliver highly targeted content, forecast customer behaviour, and adapt to dynamic marketing landscapes makes AI an indispensable tool in modern marketing practices. Eventually, AI integration signifies not just a technological leap but a fundamental shift in how businesses engage with their audiences in the digital age.

Yin & Qiu (2021) stated that online shopping platforms must ensure the sustainability of AI technology development and invest in marketing. They should endlessly improve intelligent search, recommendation, and interaction technologies, improving accuracy of search engine across text, images, voice, and image retrieval. Strengthening technical capabilities in big data retrieval services is also crucial. Higher interaction with AI marketing technology on these platforms improves perceived utility and enjoyment values of consumers. Consumers prioritize accuracy and insightful experiences over satisfaction with AI virtual assistants.

**Nagy & Hajdu (2020)** found that trust emerges as a vital element influencing consumer attitudes toward Artificial Intelligence in online shopping. Along with trust, perceived usefulness plays an important role, overshadowing perceived ease of use in shaping attitudes and behavioural intentions. These findings hold valuable implications for web-shop owners aiming to boost customer acceptance. Establishing trust is pivotal for consumer acceptance of AI in online shopping. Without trust in an AI-powered web-shop/app, consumers may perceive it as less useful and develop negative attitudes, leading to reduced online traffic. AI must deliver personalized offerings to their online consumers, and must ensure that they can access the best deals and products with the highest value. Furthermore, AI must streamline the search process of products to improve shopping efficiency. Consequently, a positive attitude toward AI-powered web-shops drives increased online traffic to these electronic stores.

**Chintalapati & Pandey (2021)** studied that the rise of artificial intelligence (AI) has been a substantial catalyst in driving digital transformation, escorting in a new era of disruption across enterprise businesses. Marketing stands out as a domain experiencing deep transformations because of integration of artificial intelligence at a significant level. Modern marketing strategies are accepting advanced technologies like AI that are becoming essential for achievement of rapid success. Implementing AI-powered marketing practices nurtures innovation throughout various marketing functions and campaigns. Among digital marketing channels, social media emerges as a dominant force, convincing digital marketers to bind transformative marketing techniques. Evolution of artificial intelligence is ongoing, with the probability to become progressively intelligent and augment human thinking. As AI continues to advance, it is likely to blend seamlessly with human creativity, potentially surpassing human capabilities in creative thinking.

**Dahiya & Garg (2023)** revealed the rise of digital technology, fuelled by widespread usage of smartphone and the influence of social media, leading to a fundamental transformation about how enterprises interact with consumers. This transformation has highlighted the requirement for businesses to adapt to an altering environment, where mobile devices and social platforms are key communication channels. Acceptance of these shifts can result in expanded outreach and increased sales for businesses. Research into consumer buying behaviour reveals the complex interplay between various elements that influence online purchasing decisions. These elements range from convenience and social interactions to concerns about security and privacy. Demographic and socio-economic variables, such as age, income level, and gender, also play a role in shaping online consumer behaviour, adding nuances to the overall landscape.

**Anandvardhan & Jaiswal (2022)** studied that AI-based promotional techniques have emerged as a strong marketing tool for targeting audiences effectively. With consumers' growing awareness of AI, its effect on them has also increased. Display, video, and personalized advertisements are visually appealing promotional tools that capture attention. However, some consumers still hesitate to purchase expensive items online. Reliance Digital, a leading retailer in the Indian retail industry, is perceived as a less preferred e-retail website among online consumers. Consumer buying behaviour encompasses the study of how individuals, groups, or organizations select, obtain, consume, and dispose of products, services, experiences, or ideas to meet their needs. It investigates into consumers' emotional, mental, and behavioural responses, influenced by various factors categorized as cultural, social, personal, and psychological.

**Rajdhar (2021)** revealed that AI is paving the way forward for both businesses as well as consumers. As businesses innovate, buyers respond, prompting further adjustments from businesses. This cycle results in improved buyer satisfaction and improved business deals. By effectively analysing data and taking appropriate actions, businesses can substantially improve their associations with buyers. Artificial Intelligence plays a critical role in bringing e-commerce organizations closer to their customers. Leveraging capabilities of AI, e-commerce platforms can tap into extensive datasets on buyer behaviour and consumption patterns. Self-learning algorithms of AI enables the creation of personalized shopping experiences for online buyers.

**Thilagavathy & Kumar (2021)** Digital marketing, as a legitimate branch of Marketing science, has brought significant value to organizations by improving customer engagement through electronic services. The rapid advancement of technology has transformed digital marketing, creating a competitive landscape that demands continuous adaptation to digitalization. Businesses worldwide leverage digital technology to enhance service levels and operational efficiency in marketing. AI plays a crucial role in marketing, facilitating more intelligent search engines, smarter advertisements, refined content delivery, utilization of bots, ongoing learning, fraud prevention, data security, image and voice recognition, sales forecasting, language processing, predictive customer service, customer segmentation, and more. Artificial intelligence empowers businesses to gain deep insights into customer needs, leading to increased sales and revenue generation.

**Manjula (2021)** found that consumers are involvedly connected to Artificial Intelligence and its implications, driving a curiosity about its effect on their lives. This information, connected through AI systems, enables brands to refine their

selling strategies, reaching customers with the right offers at the right time. This work studies about how AI influences habits of consumer, shaping their purchasing behaviours now and in the future. AI is composed to reshape our future, exerting a significant influence across various industries. Its impact extends beyond industries, affecting consumer behaviour and habits. The growing communication between customers and brands throughout the buyer's journey will spur innovation. AI's role in this dynamic will continue to evolve, shaping consumer choices and transforming market dynamics.

**Objective**

To identify the “Influence of AI driven Digital Marketing on Consumer Purchase Intention”.

**Study's Methodology**

227 respondents are considered for this study which was collected from people of marketing industry and from online platform customers. Random sampling method was used to collect data and examined by “Explanatory Factor Analysis” for results.

**Findings of the Study**

Below table shows demographic details of participants it shows that 51.98% are male, and 48.02% are female participants. Regarding age of the respondents, 31.28% are between 30 to 35 years, 30.39% are 35 to 40 years, and 38.33% are above 40 years of age. About Business sector type, Apparel / Footwear are 26.87%, Grocery is 29.52%, and Electronics is 43.61%.

**Details of Participants**

<b>Variable</b>	<b>Participants</b>	<b>% age</b>
<b>Gender of Participants</b>		
Male	118	51.98%
Female	109	48.02%
<b>Total</b>	<b>227</b>	<b>100</b>
<b>Age in years</b>		
30 to 35	71	31.28%
35 to 40	69	30.39%
Above 40	87	38.33%
<b>Total</b>	<b>227</b>	<b>100</b>
<b>Business sector</b>		
Apparel / Footwear	61	26.87%

Grocery	67	29.52%
Electronics	99	43.61%
<b>Total</b>	<b>227</b>	<b>100</b>

***“Factor Analysis”*****“KMO and Bartlett's Test”**

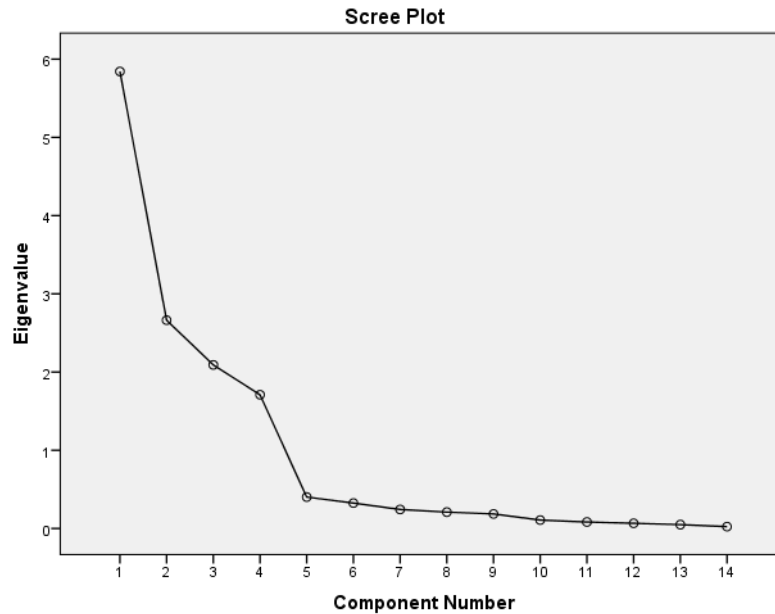
“Kaiser-Meyer-Olkin Measure of Sampling Adequacy”		.792
“Bartlett's Test of Sphericity”	“Approx. Chi-Square”	3724.730
	df	91
	Significance	.000

“KMO and Bartlett's Test”, value of KMO is .792

**“Total Variance Explained”**

“Component”	“Initial Eigenvalues”			“Rotation Sums of Squared Loadings”		
	“Total”	“% Of Variance”	Cumulative %	“Total”	“% Of Variance”	Cumulative %
1.	5.843	41.733	41.733	<b>3.798</b>	27.128	27.128
2.	2.663	19.020	60.753	<b>3.598</b>	25.703	52.831
3.	2.091	14.936	75.690	<b>2.502</b>	17.872	70.703
4.	1.710	12.213	87.903	<b>2.408</b>	17.200	<b>87.903</b>
5.	.402	2.870	90.773			
6.	.325	2.318	93.091			
7.	.243	1.738	94.830			
8.	.209	1.496	96.326			
9.	.186	1.327	97.653			
10.	.107	.767	98.420			
11.	.082	.589	99.009			
12.	.067	.475	99.484			
13.	.049	.350	99.834			
14.	.023	.166	100.000			

All the four factors are making contribution in explaining total 87.903% of variance. The variance explained by Personalized Recommendations is 27.128%, Behavioral Targeting is 25.703%, Chatbots & Virtual Assistants is 17.872%, and Predictive Analytics is 17.200%.



**ScreePlot**

**“Rotated Component Matrix”**

“S. No.”	“Statements”	“Factor Loading”	“Factor Reliability”
	<b>Personalized Recommendations</b>		<b>.981</b>
1.	AI algorithms analyze customer data to offer personalized product recommendations	.961	
2.	It can suggest products by understanding individual preferences and purchase history	.957	
3.	AI delivers personalized offerings to online consumers, ensuring they can access the best deals	.942	
4.	AI optimizes each touchpoint for personalized recommendations, fostering connection and loyalty.	.940	
	<b>Behavioral Targeting</b>		<b>.960</b>
1.	AI enables marketers to target specific consumer segments with tailored messages and advertisements	.951	
2.	AI-driven digital marketing increases the chances of converting leads into customers	.924	
3.	AI tools emerge as effective aids that influence customer behavioral intentions	.900	
4.	It investigates into consumers' emotional, mental, and behavioral responses, influenced by various factors	.888	
	<b>Chatbots &amp; Virtual Assistants</b>		<b>.896</b>
1.	Chatbots and virtual assistants powered by AI provide instant support	.908	
2.	It guides customers all through the purchase process	.872	
3.	Real-time assistance can enhance consumer trust and confidence of customers	.871	
	<b>Predictive Analytics</b>		<b>.867</b>

1.	AI algorithms can foresee consumer behavior by examining past data and recognizing patterns	.910	
2.	Marketers can use information to anticipate needs and preferences, adjusting their marketing strategies	.892	
3.	Leveraging AI and data analytics yield highly predictive insights into buyer behavior	.817	

### Factors and the associated variables

The first factor of the study is Personalized Recommendations, the variables that are included under this factor are AI algorithms analyze customer data to offer personalized product recommendations, it can suggest products by understanding individual preferences and purchase history, AI delivers personalized offerings to online consumers, ensuring they can access the best deals, and AI optimizes each touchpoint for personalized recommendations, fostering connection and loyalty. Second factor of the study is Behavioral Targeting, it includes variables like AI enables marketers to target specific consumer segments with tailored messages and advertisements, AI-driven digital marketing increases the chances of converting leads into customers, AI tools emerge as effective aids that influence customer behavioral intentions, and it investigates into consumers' emotional, mental, and behavioral responses, influenced by various factors. Chatbots & Virtual Assistants is the third factor of the study, it includes variables like AI-powered chatbots and virtual assistants provide instant support, it guides customers all through the purchase process, and Real-time assistance can enhance consumer trust and confidence of customers. Fourth and last factor is Predictive Analytics, the variables included under this factor are AI algorithms can foresee consumer behavior by examining past data and recognizing patterns, Marketers can use information to anticipate needs and preferences, adjusting their marketing strategies, and Leveraging AI and data analytics yield highly predictive insights into buyer behavior.

### “Reliability Statistics”

“Cronbach's Alpha”	“Number of Items”
.885	14

Total reliability of 14 items that includes variables for Influence of AI driven Digital Marketing on Consumer Purchase Intention is 0.885

### Conclusion

The integration of artificial intelligence digital marketing and in business is driving faster, cheaper, and is a more accurate marketing technique. This innovation has transformed how businesses communicate with their targeted audiences, accompanying in a new era of efficiency and effectiveness. AI-powered solutions enable marketers to gain valuable insights, deliver personalized customer experiences, and achieve measurable results. Digital marketing has become the predominant method for marketers to communicate products or services to consumers, especially with the evolution of digital technology. Understanding the effect of digital marketing on consumers is crucial for maximizing value creation. Digital marketing significantly influences purchase intentions, as modern consumers are technologically savvy and adept at using devices like smartphones, computers, and tablets in their daily lives. The trust and comfort level consumers have with these devices encourage them to explore new approaches to online shopping, making digital marketing an essential tool for bridging them to products and services. Innovative platforms within digital marketing facilitate effective communication with online communities, enabling consumers to share their experiences and emotions regarding products, further impacting purchase intentions. Moreover, digital marketing enhances customer satisfaction and revenue growth through personalization, leading to improved customer retention rates. The factors that identify the Influence of AI driven Digital Marketing on Consumer Purchase Intention are Personalized Recommendations, Behavioral Targeting, Chatbots and Virtual Assistants, and Predictive Analytics.

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