

## IMPACT OF AI ON PURCHASE DECISIONS IN DIGITAL MARKETING

Navdisha, Assistant Professor, Maitreyi College, University of Delhi

E-mail - aroranavdisha@gmail.com

Anjali Singh, Assistant Professor, Daulat Ram College, University of Delhi

E-mail- [anjalisingh0110@gmail.com](mailto:anjalisingh0110@gmail.com)

Ruchi Verma, Assistant Professor, Ramanujan College (NCWEB), Delhi University

Email- ruchiverma2019@gmail.com

### ABSTRACT

AI has the ability to increase productivity and economic growth. It may improve decision-making and quality while also encouraging creation of new services, markets, & even industries. This article looks at how artificial intelligence affects internet buying behavior. The major goal of this study is to investigate influence of AI on purchase choices in digital marketing. Finally, influence of AI on purchase choices in digital marketing cannot be overstated. It has altered the way users engage with online platforms by providing tailored suggestions, real-time customer assistance, and effective supply chain management. As AI technology progresses, organizations must embrace and leverage its promise to provide greater consumer experiences. Understanding and responding to changing client demands and concerns allows businesses to remain competitive and grow in the quickly digital world of online commerce.

**Keywords:** *Artificial Intelligence, Purchase decisions, Digital marketing etc.*

### INTRODUCTION

Artificial intelligence (AI) is a computerized system that uses data to execute tasks formerly handled by humans in a way that increases the chances of success for those professions. Most critical part of artificial intelligence is data, namely Big Data. Big Data is a term that refers to analytical methods & schemes that organizations use to collect data while communicating with clients all over the world online. Big Data refers to historical findings collected from the internet, and its major characteristics include a large volume, rapid speed, and a broad range of data. However, in context of a digital marketing platform, it is possible to use AI to help analyze and anticipate consumer purchasing behavior, which is tough to comprehend since it is linked to human mind. Consumers communicate their needs, wants, & perspectives in digital platform through search, comments, blogs, Tweets, likes, videos, & debates across several channels such as online, mobile, & face-to-face. As a result, there is a never-ending flood of information from consumers, both huge and diversified.

This deluge of data may be transformed into meaningful information about individual consumers' purchasing behavior using artificial intelligence (AI). Marketers use consumer purchasing behavior analytics to determine marketing tactics & anticipate sales. Artificial intelligence uses this information to provide product placement and cataloging recommendations to retailers. As a result, it's critical to have a clear handle on customer journey; AI can help marketers achieve just that, allowing them to better understand & engage customers at various stages along way. Understanding significant role that AI may play at each stage of customer journey is essential for understanding how AI impacts consumer purchasing decisions.

After utilizing AI as a reference point for almost a decade, we can safely state that its intelligent use in the future has already begun. Artificial intelligence has decided our future and will have far-reaching repercussions in a variety of economic areas. The ubiquitous link

between customers and organizations throughout the buyer's journey promises to bring in a slew of innovation across a wide range of industries, including consumer behavior and habits.

AI plays an increasingly important role in global economy. AI has ability to boost productivity & economic growth. It has ability to improve decision-making effectiveness and quality while also spurring the development of new services, markets, & perhaps whole industries. There is also the chance that AI will have a detrimental impact on corporations and society. There is a high risk of job market polarization, rising inequality, structural unemployment, & emergence of new, unfavorable industrial structures. Shopping online, whether using a desktop computer's web browser or a mobile app, is a sort of electronic commerce in which a buyer and seller complete a transaction digitally.

Customers may find the desired item by either going directly to the online store's website or using a shopping search engine that combines results from several online businesses to compare prices and availability. By 2020, a wide range of personal PCs, laptops, tablets, and smartphones were ready for online shopping. Non-essential item sales fell considerably between the second and third quarters as a result of the epidemic, prompting shoppers to reconsider their purchases. In recent years, online shopping has exceeded brick-and-mortar enterprises in popularity, owing to the growing acceptance of social isolation as the best method to safeguard one's ideals from the spread of a potentially hazardous infection. Rapid advancement of digital technology has transformed internet buying.

AI has gained popularity in e-commerce in recent years as a method of adapting to changing consumer demand and increasing sales effectiveness. By 2023, it is expected that over 325000retailers would have used AI technology, and global spending on AI services will have doubled to \$12 billion.

## **IMPACT OF AI ON PURCHASE DECISION IN DIGITAL MARKETING**

The rapid rise of the internet in recent years has had a significant impact on ecommerce. People can engage in "online shopping," a sort of electronic purchasing, by connecting their computer to the internet and using a web browser. It reminds me of going to an actual store to buy anything. Companies find it difficult to forecast their activities since client preferences are always changing. Consumers' purchasing and consumption behaviors necessitate extensive information. When paired with data analytics, machine learning may give a complete picture of client behavior. AI refers to ability of technology, particularly computers, to simulate human intelligence in a controlled context. Yes, AI plays an important role in background by monitoring internet & social media customer comments.

Customers may easily identify their preferred items using AI-powered social listening techniques. As a result, these customers regularly see pop-up ads from related websites. Furthermore, it allows users to keep information in the cloud without taking too many extra steps, making future internet use easier. As a result, all customers demand convenience and flexibility (Andrew, 1990).

As a result of AI, people no longer have to compromise their dreams for a 9-to-5 work; they may fulfill their tasks without ever leaving their house. When it comes to purchasing, customers have access to a wealth of information, allowing them to research items, read reviews, and compare prices until they discover the one that's just perfect. Google and other AI-powered search engines are critical to the process since they enable online buying. Machines now gather and interpret user instructions and provide the appropriate data, simplifying the shopping experience by allowing customers to pay online and have items delivered to their homes.

## LITERATURE REVIEW

Rodgers, W. and Nguyen, T. (2022) used AI has transformed how organizations reach out to, learn about, and interact with their consumers. In this case, marketers should be most concerned about whether use of AI in advertising was ethical. This research investigated six most common algorithmic purchasing pathways that are consistent with online customers' ethical beliefs. It had 6ethical positions: ethical egoism, deontology (rule-based), relativism, utilitarianism, virtue ethics, & ethics of caring (stakeholder perspective). Furthermore, the research presents a new AI issue, "intelligent advertising," by delving into its present & future, as well as delineating key stages of intelligent advertising. To help guide ethical AI decision-making, we highlight a number of research concerns that should be addressed in future studies on intelligent advertising. Finally, some areas were identified for further study broadly applicable to ethical, intelligent advertising.

According to Khan, S. I.(2022), usage of AI in corporate settings is fast growing. Its utility has been demonstrated in a variety of circumstances, including business & daily life. AI in workplace implies that advertising can be done faster, cheaper, and with higher accuracy. The study's objectives were to (1) determine how AI influences consumer purchasing habits and (2) learn how these behaviors differ by customer demography. To achieve these objectives, study analyzed data from 314respondents in Nagpur. The following statistical analyses were performed using SPSS: descriptive statistics, correlation, Cronbachs alpha, analysis of variance, MannWhitney test, & Kruskal Wallis test. The association between AI and consumer expenditure was shown to be statistically significant. It was also shown that male and female consumers' shopping patterns vary according to gender and financial level. The outcomes of these experiments supported these statements.

Xiong, Yi. (2022) contrasted E-commerce and online marketing as two fields that have gained significantly from the expansion of contemporary internet infrastructure, resulting in a new style of business and a plethora of new opportunities. The study examined customer behavior in online purchasing in light of market trends caused by AI and the digital economy, with the goal of improving online shopping statistics and promoting real economic growth. The findings reveal that consumers of all ages have been exposed to online shopping; nonetheless, majority of online shoppers are under the age of 30, and the average number of purchases made /month stays b/w 4 & 11. Furthermore, research examined size of China's online retail industry, determining that there were 820million Internet shoppers in China as of Dec2021, with that figure likely to rise to 910million by2022. The poll indicated that by 2021, B2C market share will be around 61 %. This was owing to B2C model's higher-quality products & more dependable services.

Areiqat, A. Y., et al. (2021) assessed the significant ways in which its growth has dramatically altered our jobs and way of life. Use of AI has become increasingly prevalent with the rapid expansion of research, revolution, and economic society. "Artificial intelligence" technology has also been widely used with great success in internet shopping. AI has emerged as a significant driving force in improving online business. In this study, we will look at AI's immense relevance and far-reaching impact on the growth of online businesses. Online retailers use AI to deliver visit bot services, analyze consumer feedback, and adapt customer assistance to individual needs. In fact, a 2019 Unbiased survey found that one in every five customers was eager in purchasing things or services from a visit bot, while 40% of online buyers were hoping for amazing bargains and discounts from chatbots.

Han, M. C. (2021) noticed that businesses have begun utilizing chatbots that sound and talk like humans to assist customers with online purchases and questions, but it is yet unclear if this investment would pay off. To what extent will the digital-born generation utilize chatbots? In that scenario, what was it about chatbots that made people want to utilize them?

More academic study is needed to understand how customers perceive and respond to chatbot-facilitated transactions. The study sought to answer this issue by examining how customers' anthropomorphic biases influence their perceptions of chatbots for mobile messaging services and their subsequent behaviour. The findings revealed that anthropomorphism impacts consumers' intents to buy through chatbot commerce.

Okundia, J. (2021) stated that technology has had a growing influence on marketing operations; prior to the introduction of modern digital assistants, employees would schedule meetings, make calls, do errands, and perform other administrative tasks for their coworkers. However, recent technical breakthroughs have enabled artificial intelligence to assist with specific activities (at least for the time being). We all have at least one of these computer-generated assistants (Alexa, Siri, or Google) in our homes, phones, or internet gadgets. Marketers are presently reaping the benefits of this technology transition by using artificial intelligence to do a variety of complex tasks such as digital marketing, search engine optimization, and social media monitoring. The research highlighted how artificial intelligence may help with marketing by increasing the consumer experience. The conclusion refers to a case study on the firm.

H Mussa, M. (2020) investigated how AI has influenced buying behaviors in Egypt's retail business. The study was mainly based on statistical analysis. Data were mostly gathered through online questionnaire replies. This was an example of handy sampling. We utilize a sample size of 400 for our study. There were 384 total valid replies. The statistical study was conducted using IBMs "Statistical Package for the Social" Sciences version 22 for Windows. The studies revealed that AI has a significant impact on consumer decisions. Furthermore, initial hypothesis (H1) was supported by the model ( $R\text{-Sq.} = 0.95.8$ ), revealing the program's excellent ability to anticipate and explain consumer purchasing behavior using AI. According to the report, merchants should use AI at every point of consumer experience, from detecting a need to looking for and analyzing available choices to making a final purchase decision.

Pticek, M., and Dobrinic, D. (2019) investigated the origins and advancements of AI, pushing the boundaries of technological growth that pervades all aspects of modern civilization. Not even marketing was exempt. The phrase "artificial intelligence" initially originated in the 1950s, but its contemporary application did not emerge until the 1980s, with the introduction of expert systems and machine learning. Arthur C. Clarke's script for the 1968 film *2001: A Space Odyssey* introduced the world to artificial intelligence and its potential for growth. In the film, an intelligent machine named HAL 9000 demonstrated human-level intellect. The need to improve existing goods and gain a competitive advantage prompted the marketing and sales sectors to be among the first to adopt and implement new technologies.

According to Devang, V. et al. (2019), voice and picture recognition, decision-making, machine learning methods, & semantic search are only a few of the numerous capabilities included by the phrase "artificial intelligence," which refers to computers replicating human intellectual processes. This study sought to introduce marketers to current & future possibilities of AI through secondary research, using experiences of a select group of forward-thinking companies as case studies and connecting those companies with AI-powered technologies that can improve marketing performance & fundamentally alter their businesses. This study aims to explore implications of AI on marketing business as a whole using primary sources. Finally, the research makes a modest effort to identify which industries will profit the most from using artificial intelligence into their marketing strategy.

Jarek, K., and Mazurek, G. (2019) discovered that artificial intelligence (AI) has been gaining traction in various industries, including the natural sciences, commercial world, medical industry, automotive industry, and academic world, among others, in recent years. AI has had an influence on advertising. The study's goal was to evaluate the extent to which AI is

presently being utilized in marketing and generate conclusions regarding the implications for marketing professionals. The authors submitted two research questions: what AI applications were discovered in marketing, and what benefits does AI give to marketing managers? To answer these issues, the writers examined secondary sources, including examples of AI in marketing. The evaluation of gathered cases reveals the extensive adoption of AI in the marketing business, although for operational purposes. Possible outcome of cautiously introducing new technology while still in the testing stage.

Yan, S. J. et al. (2018) argued that the retail sector was critical to the nation's economy due to its prominent role in the provision of products and services. China's conventional retail business has been in a developmental bind in recent years, owing to pressure from the macroeconomic climate and e-commerce. In this sense, the research developed the phrase "new retail." Jack Ma has proposed a new retail model that leverages big data and artificial intelligence to seamlessly integrate online platforms & physical stores with modern logistics. The researchers employed models and surveys to investigate customers' tendencies in today's modern retail environment. In doing so, it seeks to provide practical ideas for retail enterprises on how to better service consumers, overcome hurdles, and enhance wealth distribution in society.

Marinchak, C. L. M, etal. (2018) investigated state of AI, focusing on its practical applications in advertising. The study investigated the changing playing field in light of AI marketing skills. The marketing effort targets not just customers, but also the algorithms that control their virtual personal assistants (VPAs). In the future, marketing would have to shift its focus from exploiting people's baser inclinations to meeting their true needs. As marketing efforts change to compete with other similar products and services, maintaining high levels of customer satisfaction will become increasingly vital. Finally, some thoughts on the far-reaching implications were presented, including necessity of consumers' trust in AI agents, stringency of their safeguards, and the moral quandaries that emerge from having unrestricted access to them.

Park, S., and Lee, D. (2017) discovered that the fast spread of smart devices has resulted in stores providing new interactive communication channels to consumers, many of which can be accessed via mobile. In terms of customer relationship management (CRM), merchants have recognized the importance of the mobile channel. To deconstruct and explain omni-channel consumer behaviour, the study used a multivariate probity model that included demographics, communication channels, order timing, and product categories. Our empirical study demonstrates that demographic characteristics such as age and gender play an important influence in defining watching habits and preferences. The customer focused on their intake system. Communication methods such as short messaging service (SMS) and app push alerts have a significant influence on customers' preferred channels of connection. Customers that purchase on mobile devices are not bound by time limitations, unlike conventional shoppers.

## **OBJECTIVE**

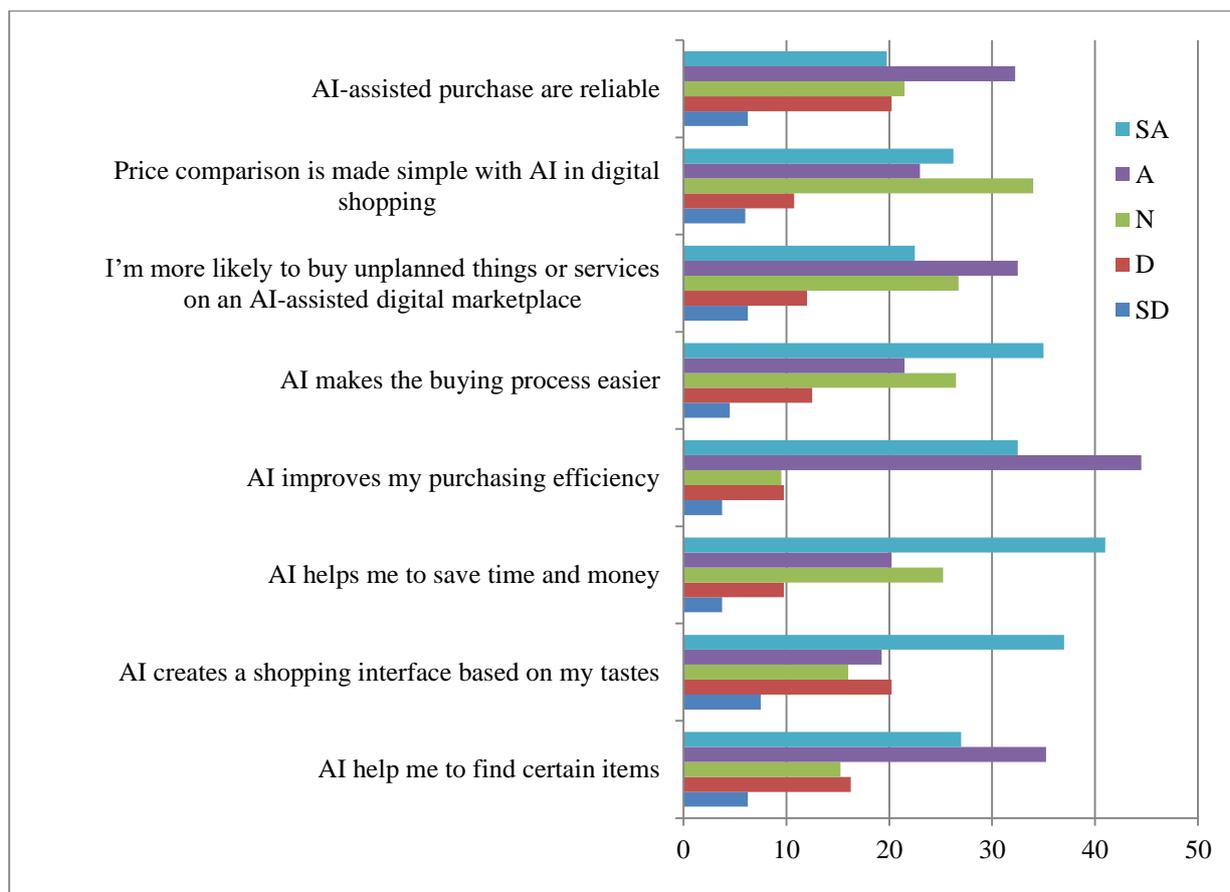
The main aim of this research is to examine impact of AI on purchase decision in digital marketing.

## **HYPOTHESIS**

**H01:** There is no significant association between the impact of AI and purchase decision of consumer in digital marketing.

**Table 1: impact of AI on purchase decisions**

S.	Statements		SD	D	N	A	SA	Total
1	AI help me to find certain items	N	25	65	61	141	108	400
		%	6.25	16.25	15.25	35.25	27.00	100
2	AI creates a shopping interface based on my tastes	N	30	81	64	77	148	400
		%	7.50	20.25	16.00	19.25	37.00	100
3	AI helps me to save time and money	N	15	39	101	81	164	400
		%	3.75	9.75	25.25	20.25	41.00	100
4	AI improves my purchasing efficiency	N	15	39	38	178	130	400
		%	3.75	9.75	9.50	44.50	32.50	100
5	AI makes the buying process easier	N	18	50	106	86	140	400
		%	4.50	12.50	26.50	21.50	35.00	100
6	I am more likely to buy unplanned things or services on an AI-assisted digital marketplace	N	25	48	107	130	90	400
		%	6.25	12.00	26.75	32.50	22.50	100
7	Price comparison is made simple with AI in digital shopping	N	24	43	136	92	105	400
		%	6.00	10.75	34.00	23.00	26.25	100
8	AI-assisted purchase are reliable	N	25	81	86	129	79	400
		%	6.25	20.25	21.50	32.25	19.75	100



**Fig. 1: % of responses on impact of AI on purchase decisions**

According to table 1, There were 400 respondents, and 6.25 percent of them strongly disagreed with statement, 16.25% disagreed, 15.25% were neutral, 35.25% were in agreement,

and 27.00% were extremely so. According to table 1, We asked 400 people their opinions and found that 7.50 percent are strongly against the statement, 20.25 percent are against the statement, 16.00% are neutral, 19.25% agree with the statement, & 37.00% are very agree with the statement second. According to table 1, 3.75% responded strongly disagreeing with the statement, 9.75% responded disagreeing, 25.25% were neutral, 20.25 percent; % responded agreeing, and 41.00% responded strongly agreeing. According to table 1, 3.75 percent strongly disagreed, 9.75 percent disagreed, 9.50% were neutral, 44.50% agreed, & 32.50% were very agreeable to this statement 4<sup>th</sup>. According to table 1, 4.50% strongly disagree, 12.50% disagree, 26.50% were ambivalent, 21.50% agreed, & 35.00% were extremely happy with the statement 5<sup>th</sup>. From a total of 400 people polled, 6.25 percent strongly disagreed, 12.00 percent disagreed, 26.75% were neutral, 32.50% agreed, % 22.50% were extremely happy with the statement 6<sup>th</sup>. 6.00% strongly disagreed, 10.75% disagreed, 34.00% were neutral, 23.00% were in agreement, and 26.25% were in strong agreement 7<sup>th</sup>. According to table 1, A total of 400 people were polled; of these, 6.25% strongly disagreed, 20.25% disagreed, 21.50% were neutral, 32.25% agreed, & 19.75% were extremely so.

### HYPOTHESIS TEST

**H01: There is no significant association between the impact of AI and purchase decision of consumer in digital marketing.**

**Table2: Descriptive Statistics**

	Mean	SD	N
Impact of AI	50.915	6.706	400
Purchase decision	55.663	7.498	400

In above table 2, we define the descriptive statistics of impact of AI on purchase decision in digital marketing. According to Table 2, mean value of impact of AI is 50.915 and mean value of purchase decision is 55.663.

**Table 3: Correlations**

Correlation		Impact of AI	Purchase decision
Impact of AI	Pearson correlation	1	0.200**
	Sig. (2-tailed)		0.000
	N	400	400
Purchase decision	Pearson correlation	0.200**	1
	Sig. (2-tailed)	0.000	
	N	400	400

\*\* . Correlation is significant at 0.05 level (2-tailed).

According to table 3, there is a significant relationship b/w impact of AI and purchase decision, as the significant value is .000 which is smaller than 0.05. As per the results, there is a significant association b/w the impact of AI & purchase decision as significant value is lower than 0.05, hence, Hypothesis H01 is rejected.

### CONCLUSION

The study looked at the influence of AI on purchasing decisions in context of digital marketing. An in-depth examination of current literature, empirical research, and real-world instances has revealed that AI has transformed how customers interact with digital marketing platforms and greatly changed their behavior. AI-powered recommendation systems have shown to be extremely efficient in tailoring the digital marketing experience for clients. These

systems use machine learning algorithms to analyze massive quantities of data, such as consumer preferences, browsing history, and purchase trends, to provide individualized product suggestions. This level of customisation not only improves client pleasure, but also raises the possibility of a purchase. Customers like the simplicity and efficiency of receiving relevant and personalized recommendations, which leads to greater engagement and loyalty. Finally, influence of AI on purchasing decisions in digital marketing cannot be emphasized. It has altered the way users engage with online platforms by providing tailored suggestions, real-time customer assistance, and effective supply chain management. As AI technology advances, organizations must adapt and leverage its potential to provide extraordinary consumer experiences. Companies that understand and adapt to changing customer demands and concerns may remain competitive and survive in the increasingly digital world of online purchasing.

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