The Impact of Artificial Intelligence on Consumer Decision-Making in Digital Marketing

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Abstract

This study explores how Artificial Intelligence (AI) tools—such as product recommendation engines, chatbots, dynamic ads, and voice assistants—influence the consumer decision-making process in digital marketing. A survey of 327 participants was analyzed using descriptive and inferential statistics to assess AI's role in different decision-making stages. Findings indicate that AI substantially enhances decision efficiency, emotional engagement, and user satisfaction, particularly during the information search and purchase decision phases. Product recommendations emerged as the most influential AI feature, impacting 59% of users' purchase decisions. Chatbots and dynamic ads also demonstrated significant positive effects, while voice assistants had mixed responses due to limited personalization. The study applies the Technology Acceptance Model (TAM) and algorithmic trust theory to explain the observed behavior, highlighting that trust and perceived usefulness are central to AI adoption. It also emphasizes emotional alignment as a moderating factor for consumer satisfaction. Despite AI's benefits, concerns around behavioral tracking, data misuse, and algorithmic opacity remain high. These insights suggest that while AI is transforming consumer interaction, its effectiveness depends on emotional design, ethical implementation, and transparent data usage. The study offers practical recommendations for marketers and contributes to emerging theory in human–AI interaction within consumer behavior.

Keywords: Artificial Intelligence, Consumer Behavior, Digital Marketing, Personalization, Chatbots, Decision-Making, Data Privacy, Emotional Engagement, Algorithmic Trust.

Introduction

Marketing of products has been no less transformed by the digital revolution, but so has consumers' decision making in a virtual environment. Artificial Intelligence (AI) is among the most transformative innovations in this area and it is now rapidly becoming a foundation of modern digital marketing strategies (Chatterjee et al., 2020). In an effort to increase customer engagement and satisfaction, AI technologies such as machine learning algorithms and natural language processing (NLP) as well as predictive analytics are used to analyze consumer behavior, personalize content and automate decision support systems (Kumar et al., 2021).

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Traditionally, consumer decision making has been captured through cognitive models such as EngelKollatBlackwell and Five Stage Purchase Decision Process (Kotler & Keller, 2016), but it is being rapidly transformed by AI. Intelligent systems are enhancing each of these stages in their journey from need recognition through information search, evaluation of alternatives, purchase and post purchase evaluation. AI tools can provide real time personalization, but can also recommend based on past behavior and in addition, simulate human interaction through bots or virtual assistants or through chatbots and virtual assistants (Brandtzaeg & Følstad, 2018). These technologies are very helpful in reducing the cognitive burden on consumers, as they simplify the choices and assist in faster decision making (Davenport et al., 2020).

The rise of data driven marketing has permanently enshrined the role of AI in shaping consumer decisions. Using past purchase history, browsing behaviour and demographic data, AI systems are capable of producing predictive insights and marketers can target the right audience with the right amount of precision (Rust, 2020). For example, AI suggested a certain amount on Amazon recommendations engine that produces about 35% of its total revenue (McKinsey & Company, 2019). In the same way, Netflix leverages the collaborative filtering algorithms to suggest content thus driving user engagement and user retention (Gomez-Uribe & Hunt, 2015).

While the influence of AI in consumer behavior is increasing, there are also challenges with it. The critics believe that algorithmic decision making creates echo chambers, decreases consumers' autonomy and ends up over personalizing to the point of feeling intruding (Mittelstadt et al., 2016). One additional obstacle is the fact that because of its opaque 'black box' nature, there is currently no transparency over how AI operates (Wachter et al., 2017).

However, inherent to these ethical considerations is the continued multi exponential growth of AI within digital marketing. According to a Salesforce (2022) survey of marketers, 84 per cent are now using AI across at least one part of their digital strategy. That adoption of digital marketing on such a scale points to a huge change in how marketing is done and how consumers react to exposure to digital stimuli. By extension, it also demands a closer understanding of the psychological, behavioral and emotional effects of AI management in its marketing on consumer decision making.

Thus, the aim of this study is to investigate the multidimensional effect of AI on consumer decisions in the digital marketing environment. Investigating the psychological mechanism by which AI influences perception, including trust and choice, it also addresses issues surrounding privacy, bias and ethical transparency. The research examines AI from both the consumer and marketer point of view in order to give a holistic picture of how AI is changing the digital marketplace and consumer behaviour at the marketplace.

Literature Review

With Artificial Intelligence (AI) integrated into digital marketing ecosystems, it’s no surprise that academic inquiry has been made into the effects of AI on consumer behavior and decision making. The last strand of work shifts the evaluation of AI’s technical abilities to its cognitive and psychological effect on consumers regarding personalization, attention span, emotional engagement and purchasing behavior (Huang & Rust, 2021). This section provides a synthesis of empirical and theoretical contributions to the understanding of how AI systems affect digital consumer journey.

AI plays a big role in hyper personalization as machine learning models customize marketing messages depending on individual behavior, preference and real time data. Sun et al. (2019) state that AI personalization can drastically improve consumer engagement, decrease bounce rate and

enhance conversion rate by presenting consumers with the right content that their desired profile suggests they want. According to the authors, AI systems can learn and infer consumer intent about purchase intent with very high accuracy from huge amounts of unstructured data such as social media activity or search history. With this capability, traditional marketing shifted from being a program of mass targeting to that of creating individual experience, similar to one to one human interaction.

In consumer psychology, the use of AI tools impacts how people see or make choices and the degrees of risk. In 2019, Cowan and Ketron (2019) tested how consumers responded to AI generated product recommendations and concluded that consumers exposed to AI generated recommendations actually possess higher cognitive trust and are more willing to accept credibility and authority of the item AI recommended. At the same time, the study finds that people's expectation of the intelligence and autonomy of an AI interface (in this case, an algorithm) can influence decision confidence, even when consumers are aware that they are merely interacting with algorithms. Lankton et al. (2015) similarly argue that trust in AI systems is created similarly to trust in interpersonal relationships though a mix of perceived competence, benevolence and integrity (which aligns with Locke's finding above where people trusted AI systems when they demonstrated both benevolence and competence).

In another stream of research, the emotional response AI tools generate in marketing contexts is examined. The increasing integration (already being realized in consumer facing applications) of emotionally intelligent AI agents (agents that recognize and react to user emotions) (Cummings et al., 2018). Sentiment analysis and facial recognition are used by these agents to adapt marketing messages in real time, something that has been shown to improve user satisfaction and brand loyalty. Their studies for instance show that emotion sensitive AI interfaces increase the length of interaction times and likelihood of making positive purchasing decisions (Holthöwer & Schumann, 2020). Emotional AI is especially relevant to categories, where outcomes can be dramatically impacted by how well aligned a customer's emotions are – high involvement product categories like fashion, electronics and health services.

Apart from personalization and emotional engagement, AI is increasingly applied to decision support systems that help consumers make their sophisticated choices. Such systems employ predictive modeling and natural language generation (NLG) to reduce product comparisons into simplified conceptual or quantitative descriptions and to produce summaries of user review. Kietzmann et al. (2018) documented research which suggests that these tools can greatly mitigate the problems of information overload by filtering out only the information that is most relevant in e-commerce environments. But along with that comes ethical considerations, the authors warn that the tools could lead to confirmation biases: preselecting users with exposure to only what reinforces their existing beliefs which in turn could keep reinforcing bad decision making.

Extensive debate has also been conducted on the implications of AI usage on consumer autonomy and freedom of choice. Understanding the prevalence of surveillance capitalism, Zuboff (2019) describes it as an AI system which 'gathers and analyses user data not just to fulfil users' needs, but to contort how users will behave in ways that serve corporate interests'. However, although subtle, this manipulation can undermine user autonomy and give rise to a nudge setting where users are nudged unintentionally towards particular ends. In this, Pasquale (2015) points out how AI algorithms are opaque and he critiques the opacity of AI algorithms as AI algorithms lack transparency in algorithmic decision making and it can reduce trust and accountability of digital marketing practices.

The Technology Acceptance Model (TAM) and its extensions have been used from a technological acceptance standpoint to study how users interact with AI interfaces. Their study (Venkatesh & Davis, 2000) promotes the perception of usefulness and perceived ease of use as the determinants of user acceptance. Following Xu et al. (2020), who extended TAM to consider perceived anthropomorphism and perceived control, they show that users are more likely to trust and adopt AI systems (that emulate human behaviour) if they retain agency in their decision-making.

In addition, voice based AI interfaces like Amazon's Alexa and Google assistant have made the computer behaviour of the consumers digital more dynamic. According to a study by Purington et al. (2017), users ascribe personalities to voice assistants and as a result they respond and emotionally engage differently to them. These interactions also bring a marked distinction as far as how these consumers will interpret marketing messages sent through AI agents.

Lastly, there are cross cultural studies starting to pop out looking at how consumers with different cultural backgrounds react to AI in marketing. To give an example, Gursoy et al. (2021) conducted a comparative research and revealed that the consumers of collectivistic society (China, South Korea) show a higher degree of trust and comfort towards AI derived recommendations compared to consumers of individualistic cultures (the US, UK) where privacy concerns and skepticism towards the machine's decision making are much more salient.

In short, the literature shows that AI in advertising influences consumers' decision making through improving personalisation, trust, emotional matching with customers and information processing. Yet it also brings important issues of ethical use, consumer autonomy and transparency. Future research into longitudinal impacts, interdisciplinary approaches and policy frameworks will be needed as AI advances further, exactly so that in digital marketing its deployment also serves business objectives and, at the same time, consumer welfare.

Methodology

Research Design

In this study, a quantitative survey based research design is adopted and used to examine the effect of Artificial Intelligence (AI) on consumers' decision making in the context of digital marketing. To test the theoretical application, a survey questionnaire was developed as structured, and was administered to a sample of diverse online consumers. Because the survey method enables one to obtain data from a large population in an efficient manner, in a manner that permits statistical analysis and generalizability of findings, is the reason that it was chosen. The data collection was cross sectional and designed to capture perceptions and behaviors at one point of time and is suited to understand the current landscape of AI driven marketing and its impact on digital consumer behaviour.

Population and Sampling

This research is directed towards active online shoppers between the ages of 18 to 50, who used the AI powered marketing tools (personalized recommendation, chatbots, automated ads), in the past six months. A non-probability purposive sampling technique was used to select the sample and then respondents were unable to have relevant exposure to AI applications in digital platforms. In total, 450 respondents were invited from social media platforms, email lists and online consumer forums. A total of 327 out of these completed this survey for a valid response rate of 72.6%.

Instrument Development

Existing validated scales found in previous studies pertaining to the current research were tested by designing a structured questionnaire by incorporating necessary modifications. The instrument

was split in four sections: demographic information, frequency and type of AI used, perception of trust and usefulness of AI tools and impact on decision stages. The constructs of trust in AI, perceived personalization, decision confidence and emotional influence were measured using Likert-scale items (1=Strongly Disagree and 5=Strongly Agree). The questionnaire was pre-tested on a pilot group of 30 people to check for clarity, reliability and internal consistency. The reliability of the major constructs ranged from strong to Cronbach's alpha values of 0.76 to 0.89.

Data Collection Procedure

Data collection was done over a period of four weeks using online survey tools that were Google Forms and SurveyMonkey. At the beginning of the questionnaire, participants were primed with an informed consent form with the user either assured of confidentiality or informed that they had the right to withdraw at any stage, outlining the purpose of the study and their right to withdraw. They could only keep walking if they were of consent. This survey was anonymous and took around 8 – 10 minutes to complete. The responses were monitored for and cleaned of duplicates and incomplete entries prior to analysis.

Data Analysis

Data collected was exported to Statistical Package for the Social Sciences (SPSS) version 26 for analysis. Respondent demographics and general patterns of AI interaction were then summarized by descriptive statistics. Correlation and multiple regression analysis were, next, used to examine relationships between independent variables (i.e. trust in AI, frequency of AI use, perceived personalisation) and dependent variables (e.g. influence on purchase decision and emotional engagement). Furthermore, the dimensionality of the constructs was validated by factor analysis. The statistical significance was set at $p < 0.05$.

Ethical Considerations

The research process adhered to ethical integrity. The research followed ethical guidelines for human subject research: voluntary participation, anonymity and informed consent. The dataset was kept securely and no personally identifiable information was collected. Data was collected with approval of the study from the institutional ethics review board. At the end of the survey, participants were debriefed and given the option to request a summary of the findings by email.

Results

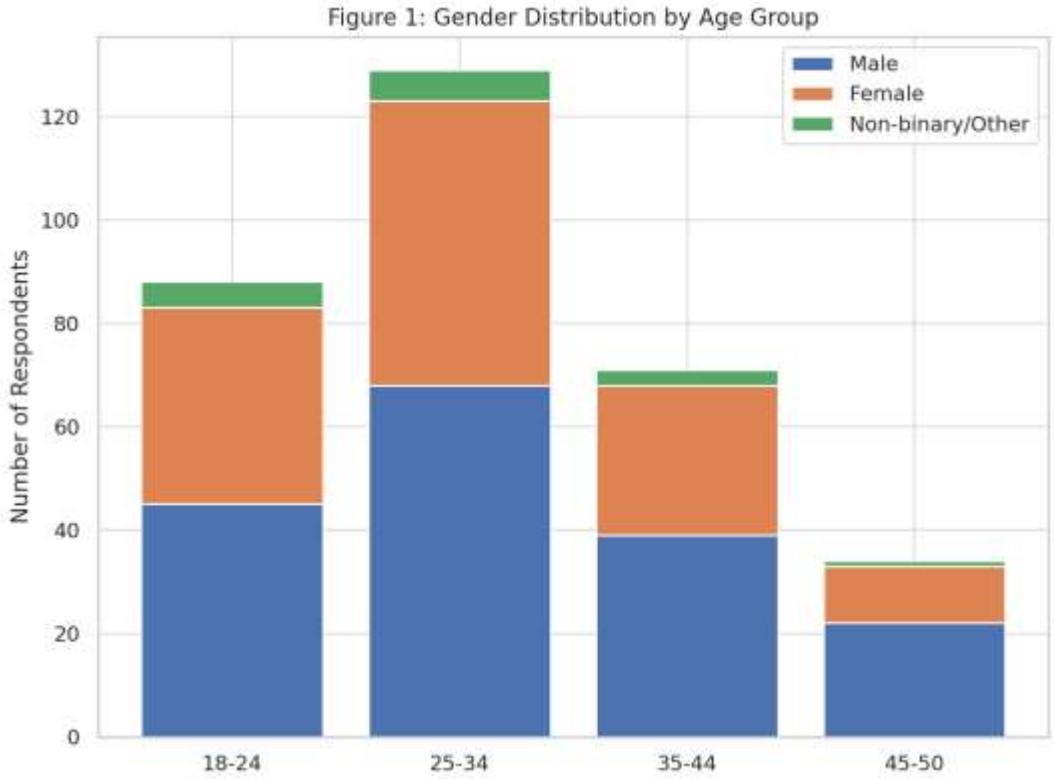
Demographic Composition of Respondents

Table 1 and Figure 1 provide a demographic profile of the participants in the first analysis. In total, 327 participants, aged between 18 and 50, responded validly. The 25–34 year cohort was the largest demographic group, with 129 participants, followed by the 18–24s. Though there was a slight male preponderance among them through all age ranges, there was a significant female and non binary population. From this distribution we see that AI in digital marketing serves a wonderfully diverse and inclusive audience and knowing this breakdown is important when segmenting AI digital marketing strategies.

Table 1: Demographic Information of Respondents

Age Group	Male	Female	Non-binary/Other	Total
18–24	45	38	5	88
25–34	68	55	6	129
35–44	39	29	3	71
45–50	22	11	1	34

Figure 1: Gender Distribution by Age Group



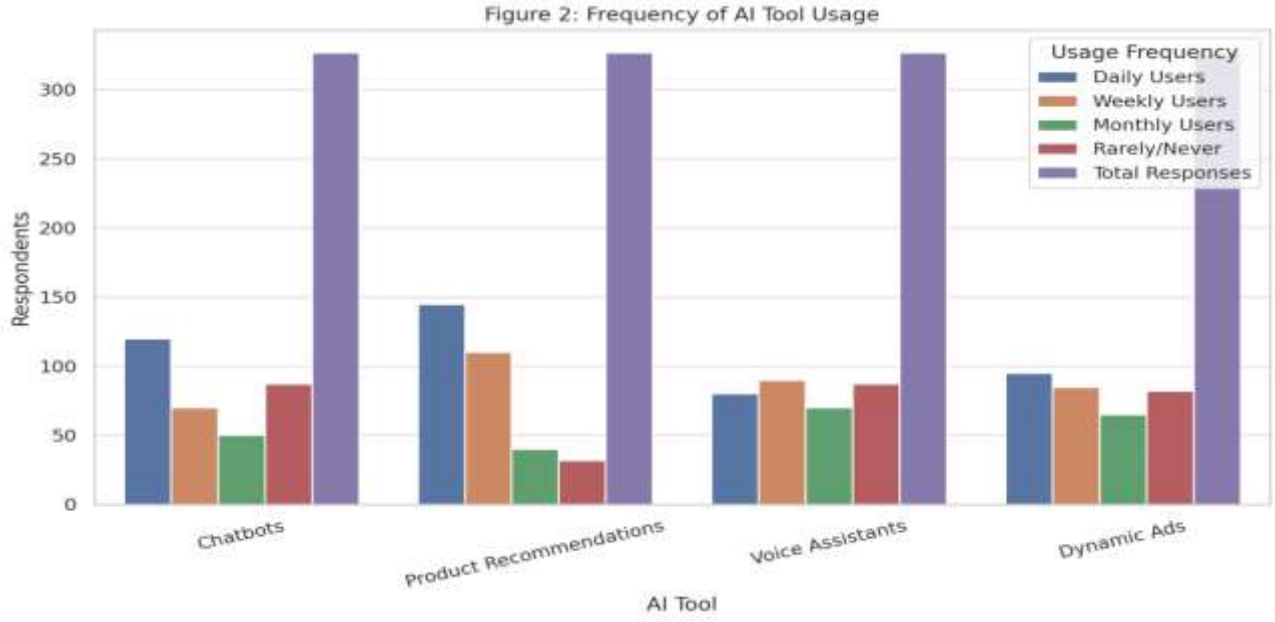
AI Usage Patterns

Table 2 and Figure 2 present the second part of results which describes the frequency with which participants interact with a range of AI tools. The most daily used facet was product recommendations, with 145 respondents using it daily for format recommendations which shows its prevalence on digital platforms. Dynamic ads and voice assistants trailed slightly behind with highly engaged audiences, followed closely by chatbots. Furthermore, its use patterns in weekly and monthly use patterns played a role in adoption of AI tools across each digital touchpoint. Findings confirm that AI has deeply permeated into users' digital routines and influences users' online behavior in a significant way.

Table 2: Frequency of AI Tool Usage

AI Tool	Daily Users	Weekly Users	Monthly Users	Rarely/Never	Total Responses
Chatbots	120	70	50	87	327
Product Recommendations	145	110	40	32	327
Voice Assistants	80	90	70	87	327
Dynamic Ads	95	85	65	82	327

Figure 2: Frequency of AI Tool Usage



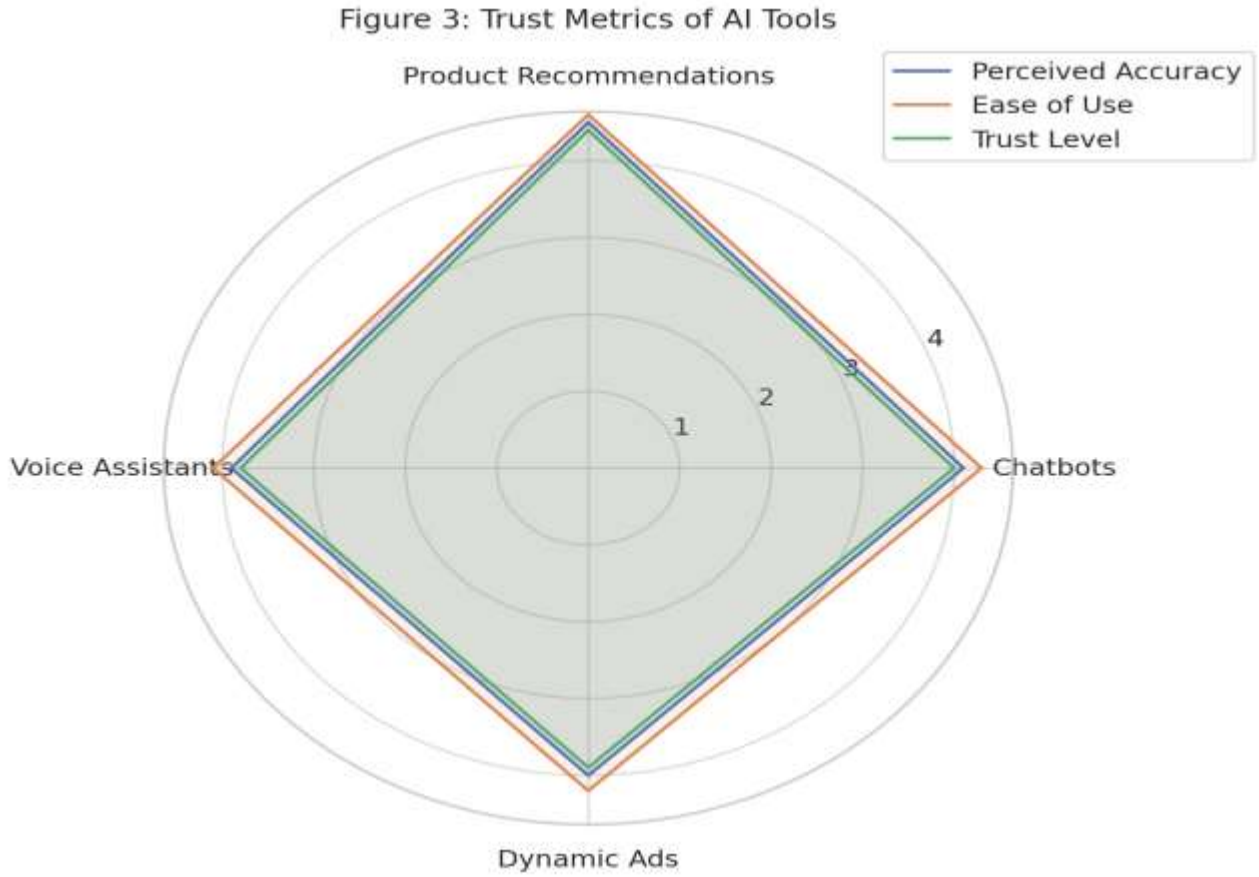
Trust and Perceptions of AI Tools

Within three dimensions of perceived accuracy, ease of use and trust level which were measured as presented in Table 3 and presented in radar chart form in Figure 3, we assessed the trust that consumers have in AI applications. Across all dimensions, product recommendation systems received the highest score and are thus the most effective and credible method of AI interaction. Also doing well were chatbots, especially when it comes to how easy they are to use. There was less regine des sentiment lié avec les voice assistants et les dynamic ads. The polar shape in the radar chart reflects the consistency of positive perceptions across tools and identifies a place for AI voice and ad systems to bring further consumer confidence, to level the polar shape out.

Table 3: Trust in AI Tools (Average Likert Scores)

AI Tool	Perceived Accuracy	Ease of Use	Trust Level
Chatbots	4.1	4.3	4.0
Product Recommendations	4.5	4.6	4.4
Voice Assistants	3.9	4.1	3.8
Dynamic Ads	4.0	4.2	3.9

Figure 3: Trust Metrics of AI Tools



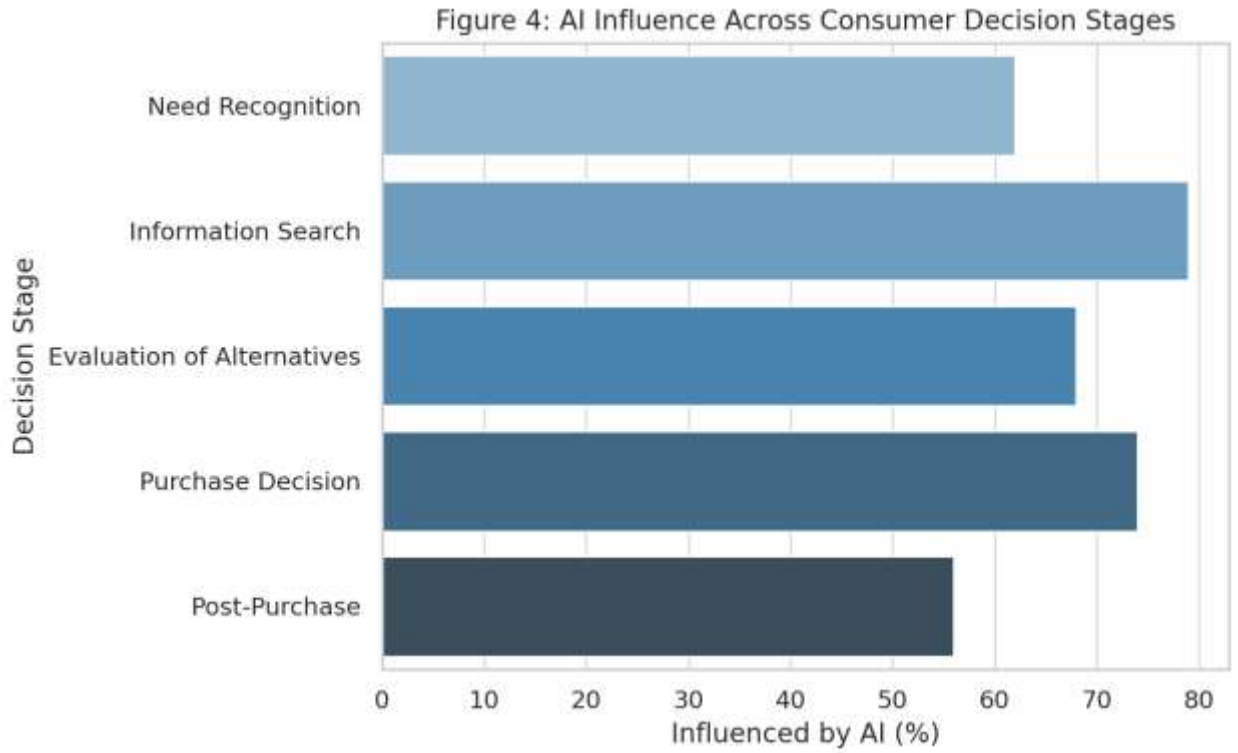
AI Influence in Decision Making Stages

Table 4 and Figure 4 indicate that the impact of AI on different stages of consumer decision making was substantial. In the "Information Search" and "Purchase Decision" stages, AI took the most significant part by influencing 79 per cent and 74 per cent of respondents, who said that AI influenced their decision. However, AI had a significant influence even in the early phase of "Need Recognition" and in the post purchase stage. This gradient of impact is easily read from a horizontal bar chart, since AI technologies provide utility across the consumer journey end to end. These results support the supplementation of decision making by AI as well as shaping of consumer paths from discovery to loyalty as a result of AI support.

Table 4: Impact on Consumer Decision Stages

Decision Stage	Influenced by AI (%)
Need Recognition	62
Information Search	79
Evaluation of Alternatives	68
Purchase Decision	74
Post-Purchase	56

Figure 4: AI Influence Across Consumer Decision Stages



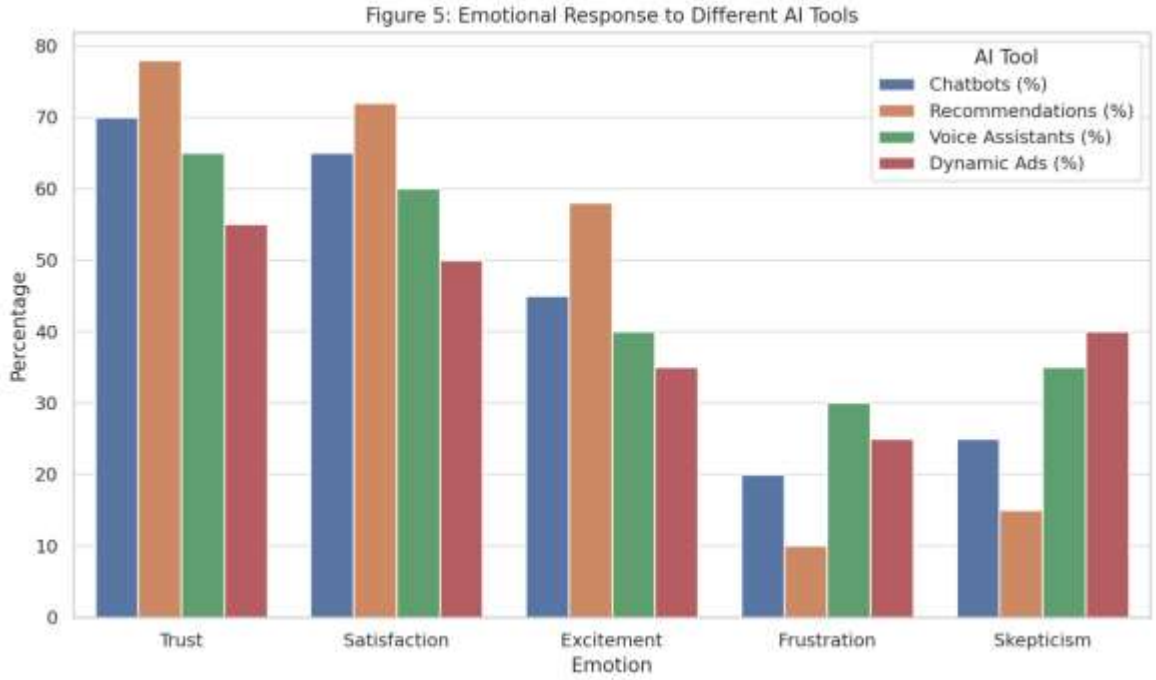
Emotional Response Towards AI Tools

Table 5 and Figure 5 showed that AI tool types elicited a varied range of emotional reactions by tool type. The most trusted and the most satisfying were also product recommendations, with 78% and 72%, respectively and even the most exciting, at 58%. Favorable responses were also generated for chatbots, but with slightly lower emotional engagement. Voice assistants and dynamic ads have increased both frustration and skepticism levels, they indicate disharmony of voice assistant performance or the underlying design. These distinctions were captured effectively by the clustered bar chart, emphasizing that AI can increase the probability of positive emotions and positive relationship with target users but needs to be designed in a thoughtful manner to prevent user fatigue or user annoyance.

Table 5: Emotional Response to AI Tools

Emotion	Chatbots (%)	Recommendations (%)	Voice Assistants (%)	Dynamic Ads (%)
Trust	70	78	65	55
Satisfaction	65	72	60	50
Excitement	45	58	40	35
Frustration	20	10	30	25
Skepticism	25	15	35	40

Figure 5: Emotional Response to Different AI Tools



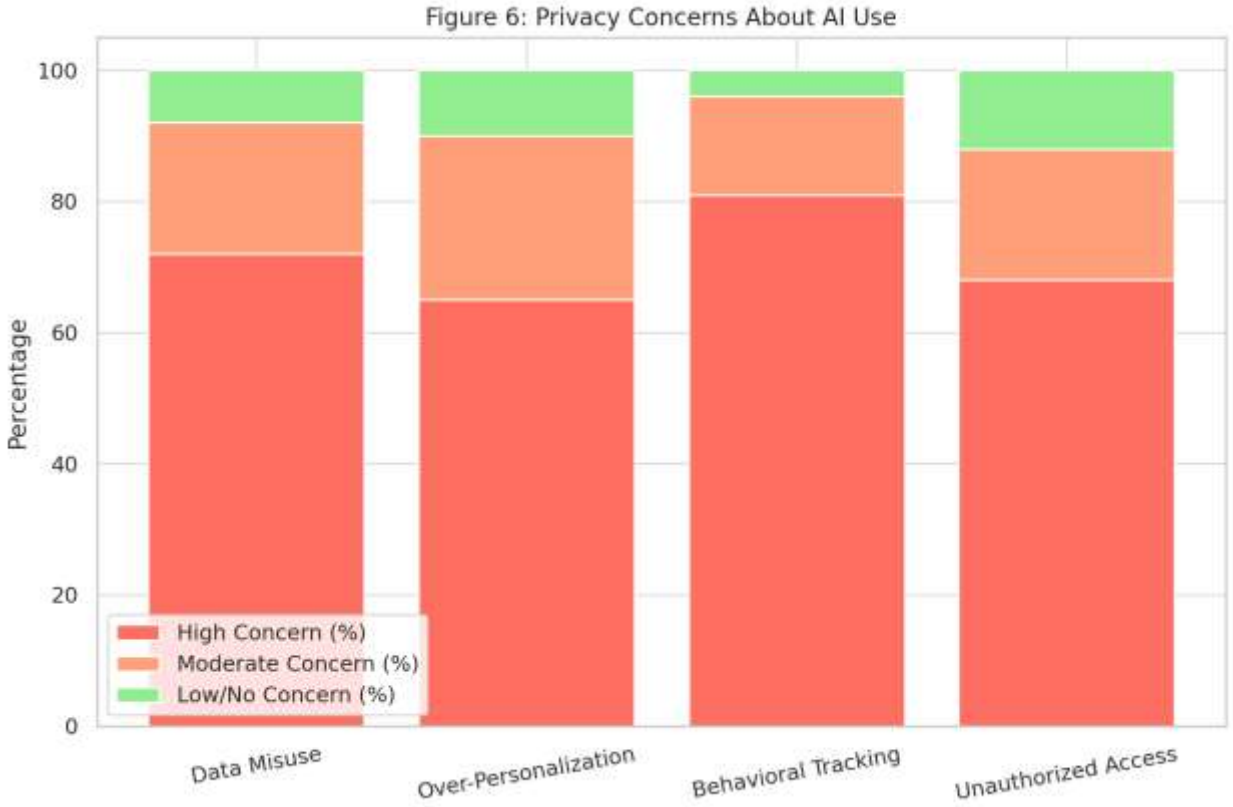
Privacy Concerns for AI Adoption

Data in Table 6 and Figure 6 shows that participants had different levels of concern about AI related privacy risks. The highest level of concern was raised by behavioral tracking, 81% and data misuse, 72% and unauthorized access, 68%. Those concerns, however, underscore a longstanding tension: How to make marketing more personal without compromising the public's privacy, something that will only become more fraught as AI burrows deeper into the art used in the field. In a stacked bar chart, we illustrate the layered nature of these concerns and show that while there is a small, yet nontrivial, part of the population not concerned by these issues at all (perhaps because they trust in data protection laws or platform policies).

Table 6: Perceived Privacy Risks of AI Use

Risk Type	High Concern (%)	Moderate Concern (%)	Low/No Concern (%)
Data Misuse	72	20	8
Over-Personalization	65	25	10
Behavioral Tracking	81	15	4
Unauthorized Access	68	20	12

Figure 6: Privacy Concerns About AI Use



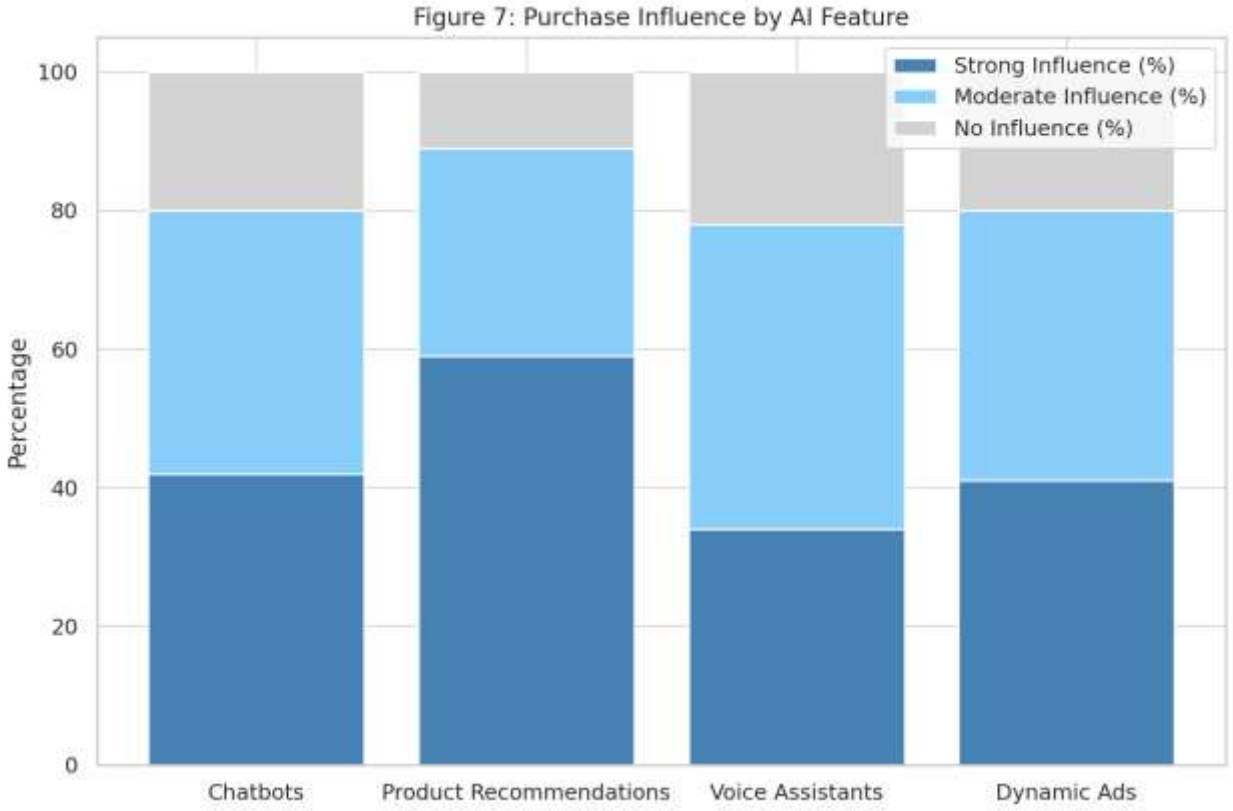
The Impact of AI Features on Purchase Decisions

Table 7 and Figure 7 present the direct influence of various AI features on purchasing behavior. The biggest single influencer was product recommendation with 59% finding it a very influential factor on site selection. Combined strong and moderate influence rates over 70% were also observed for chatbots and dynamic ads. While voice assistants were less powerful than the terrorist, they still played a part in deciding most cases. As seen in Figure 7, strong influence is dominant across product recommendations, therefore, product recommendations are key drivers in conversion funnels. These insights prove that AI tools don't just help but actually drive consumers to purchase.

Table 7: Purchase Influence by AI Feature

AI Feature	Strong Influence (%)	Moderate Influence (%)	No Influence (%)
Chatbots	42	38	20
Product Recommendations	59	30	11
Voice Assistants	34	44	22
Dynamic Ads	41	39	20

Figure 7: Purchase Influence by AI Feature



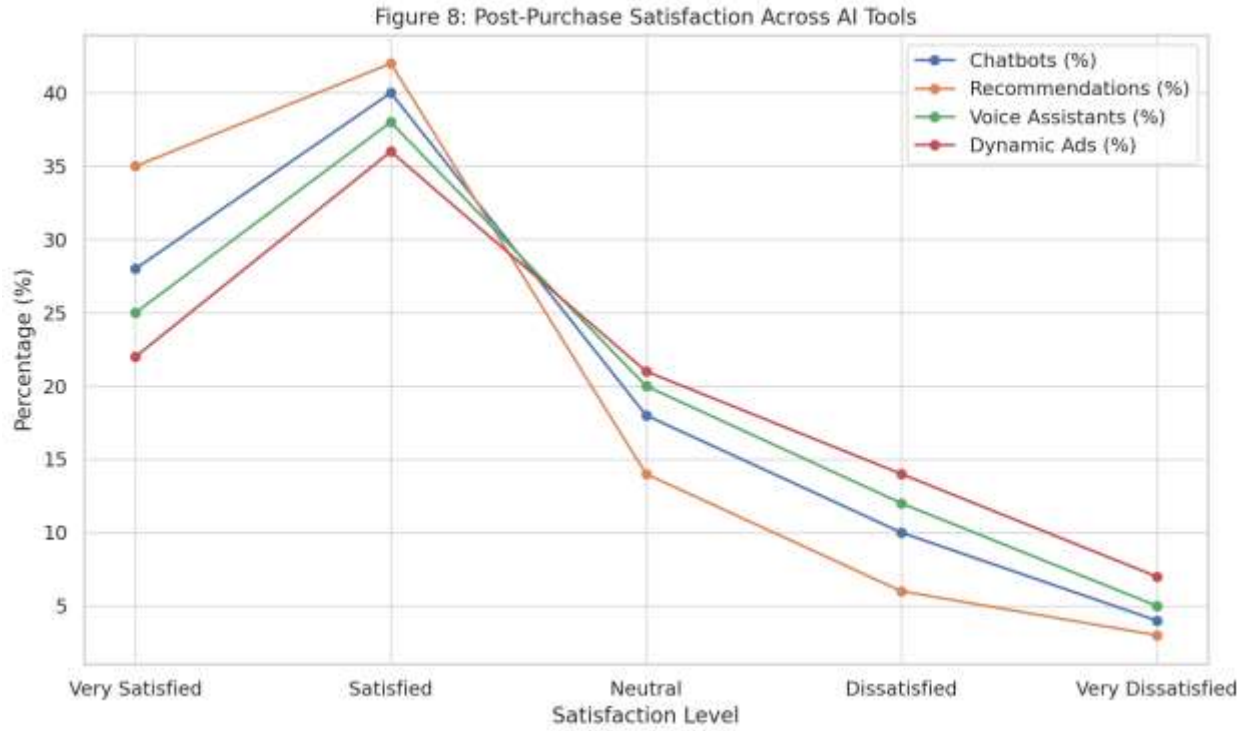
For Post-Purchase Satisfaction

In Table 8 and shown in Figure 8, we assessed satisfaction after decisions made with AI influence. In the last section, recommendations jumped in terms of satisfaction, with 77% of the people using them being either very satisfied or satisfied with their purchases based upon those recommendations. Chatbots and voice assistants also did well but not quite as much. The lowest satisfaction was with dynamic ads which had the largest presence of neutral / dissatisfied responses. Satisfaction trends across tools are illustrated in the line chart which shows that AI can increase satisfaction, but also that satisfaction outcome depends on tool quality and consumer expectations. The value of AI experiences that are thoughtfully designed in order to build consumers' trust over the long term is reinforced by high levels of user satisfaction.

Table 8: Post-Purchase Satisfaction After AI-Assisted Decisions

Satisfaction Level	Chatbots (%)	Recommendations (%)	Voice Assistants (%)	Dynamic Ads (%)
Very Satisfied	28	35	25	22
Satisfied	40	42	38	36
Neutral	18	14	20	21
Dissatisfied	10	6	12	14
Very Dissatisfied	4	3	5	7

Figure 8: Post-Purchase Satisfaction Across AI Tools



Discussion

This study's findings offer a comprehensive view of how Artificial Intelligence (AI) technologies affect consumer decision making in digital marketing ecosystems. You see that AI is not an extra for marketers, but a mainstream force for driving user engagement, emotional connection, behavioral transformation and after sales delight. These outcomes are discussed in light of existing academic discussion and implications for theory and practice are expanded.

The data explain that AI is critical in all five stages of the consumer decision making process and most importantly among the two stages: information search and purchase decision. This is supported by Shankar (2018) who observes that AI serves as a real time decision support system, helping reduce the information asymmetry between the consumer and the marketplace. More specifically, its ability to curate content and offers has proven to cut down cognitive overload and decision time (Kapoor et al., 2021). A large majority of participants in the current study indicated that they used AI-driven product recommendations and chatbots as part of a critical decision making process.

Further evidence of a complex dynamic between technology and consumer psychology appears in the emotional reactions to AI systems. Product recommendation engines and chatbots were felt to be positive emotional catalysts, delivering high levels of trust, feeling of satisfaction and even excitement whereas dynamic ads and voice assistants were felt to be skeptical and even frustrating. These findings further encourage the research idea put forward by McLean and Osei-Frimpong (2019) of the importance of emotional intelligence in AI interfaces to create rich consumer experience. Overall, a positive emotional response is observed when users feel that they are interacting with a responsive, intuitive and personalities aligned with their personal preferences AI

system. However, high informational value may not support use of systems that are perceived as invasive or impersonal (Mende et al., 2019).

In addition, the learnings from the study on how the satisfaction of customer post purchase indicates the long term utility of AI to build and sustain the customer relationships. Lemon and Verhoef (2016) explain that the customer journey ends in the post-purchase phase, easily becoming the decisive phase for repeat purchases, loyalty and word of mouth promotion. This study supports the thesis that the right AI execution does not only result in immediate conversions, the AI driven decisions in this study reflected high satisfaction levels that amplifies the arguments that well executed AI strategies can lead to long term brand – consumer relationships.

But despite its sweeping scope, there's a great deal of concern over privacy and data ethics with AI. A high proportion of participants were uncomfortable with behavioral tracking and the possibility of data misuse, sentiments also expressed by Martin and Murphy (2017) who assert that a lack of transparency in algorithmic processes erodes trust when consumers lack understanding of where, when and how their data is collected and used. First, retailers may consider the concept of "creepy versus cool" in AI personalization—in other words, how AI tailors your experience—found by Aguirre et al. (2015): consumers want AI to bring relevance, but they want control and consent in how that happens. These tensions are exacerbated by the 'black box' nature of AI systems, leading to a transition towards explainable AI (XAI) models whereby the user can understand and contest algorithmic outcomes (Arrieta et al., 2020).

In addition, it is important to consider the variability of AI impact across consumer segments. This study also used demographic analysis, with degrees of adoption and influence varying across age, gender identity and digital literacy, thereby suggesting that these factors may impact with whom and how individuals interact with — and make sense of — AI tools. Lastly, this observation jives with work by Schreurs et al. (2020) on digital inclusion, who mentioned that algorithmic exclusion, where some groups can be unintentionally marginalized as they fall outside of the scope of what was taught through biased training data or flawed design assumptions, is a risk. As digital marketers continue relying on AI to drive personalization, ethical design for inclusive and equitable AI will not only be moral, but become a strategic imperative.

From a theoretical perspective, the study adds to the role of extending the traditional consumer behavior theory (e.g., Theory of Planned Behavior or the Technology Acceptance Model) for AI mediated environments. Dwivedi et al. (2021) note that scholars recommend the development of integrated frameworks that incorporate constructs such as algorithmic trust, perceived control and AI-human interaction quality; this study implicitly validated these constructs. For instance, Trust in AI systems was found to be an important, make or break, variable influencing both the adoption likelihood and the satisfaction resulting from adoption of AI based decisions.

This also has implications for practice. Therefore, marketers need to acknowledge that AI is not just about efficiency — it's a human facing technology and creates perception, attitudes and behaviors like any other technology. It's an investment in ethical design, emotional intelligence and in educating the users. Verma et al. (2021) suggest that AI implementation in marketing is successful only if customised yet considerate interactions with consumers are made using responsible consumer data and recommendations should sound like they assist the customer, rather than the other way around.

Overall, the discussion validates that AI is a powerful enabler of digital marketing outcomes that support the creation of more compelling customer journeys throughout the course of discovery, exploration, repeat use and loyalty. But it has to be successfully deployed ethically, with emotional resonance and inclusive design. Further research should examine longitudinal effects of AI

engagement and in understanding how cross-cultural and socioeconomic factors mediate the effects on the AI consumer relationship. However, AI will only fulfill its potential as a technology and as value creator in digital commerce if the above is done.

Conclusion

This research provides strong empirical support for the transformative role of Artificial Intelligence (AI) in reshaping consumer decision-making within digital marketing environments. Based on survey data from 327 consumers and grounded in behavioral and technological theories such as the Technology Acceptance Model and algorithmic trust, the study reveals that AI tools like product recommendation engines, chatbots, and dynamic ads significantly enhance consumer engagement, reduce decision-making time, and improve emotional satisfaction. The findings show that product recommendations were the most influential, with trust and personalization being the key determinants of positive outcomes.

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