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“Impact of Ai-Driven Marketing Strategies on Consumer Purchase Behaviour: A Study with Special Reference to Bengaluru”

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Abstract-- Artificial Intelligence (AI) has emerged as a transformative force in modern marketing by enabling businesses to understand consumer preferences, personalize communication, predict purchasing patterns and enhance customer engagement. The present study examines the impact of AI-driven marketing strategies on consumer purchase behaviour with special reference to Bengaluru. The study focuses on major AI-enabled marketing practices such as personalized product recommendations, targeted advertisements, AI-powered chatbots, predictive marketing and automated digital content. It aims to examine consumer awareness and perception of AI-driven marketing, analyse its influence on purchase behaviour, assess the effect of personalization and targeted recommendations on purchase decisions, and identify major consumer concerns associated with AI-based marketing.

Keywords-- Artificial Intelligence, AI-Driven Marketing, Consumer Purchase Behaviour, Personalization, Digital Marketing, Purchase Intention, Bengaluru.

I. INTRODUCTION

Artificial Intelligence has become one of the most significant technological developments influencing contemporary business practices. The rapid expansion of e-commerce, social media, mobile applications, big data and digital payment systems has generated enormous amounts of consumer information. Businesses are increasingly using AI to analyse this information and develop marketing strategies that are more personalized, predictive and responsive to individual consumer requirements.

Traditional marketing largely depended on mass communication, demographic segmentation and marketers' experience in predicting customer requirements. AI-driven marketing represents a shift towards data-based and individualized marketing. AI algorithms can analyse consumers' browsing behaviour, search history, previous purchases, product preferences and online interactions to identify patterns and predict future purchasing behaviour. This enables organisations to communicate relevant offers to the right consumers at appropriate points in their purchasing journey.

AI-driven marketing includes a range of applications such as personalized product recommendations, targeted online advertisements, AI-powered chatbots, predictive analytics, automated email marketing, dynamic pricing, customer segmentation and AI-generated marketing content. Online platforms increasingly recommend products based on previous browsing and purchasing patterns, while chatbots provide immediate responses to consumer queries. These technologies can reduce consumers' search effort and make the purchasing process faster and more convenient.

II. REVIEW OF LITERATURE

- **Davenport, Guha, Grewal and Bress Gott (2020)** examined how artificial intelligence could transform the future of marketing. They observed that AI has significant implications for marketing strategies and customer behaviour and discussed applications ranging from understanding consumer requirements to personalization and marketing decision-making. Their work also drew attention to privacy, bias and ethical issues surrounding AI adoption.
- **De Bruyn, Viswanathan, Beh, Brock and von Wangenheim (2020)** examined the opportunities and pitfalls associated with AI in marketing. The authors highlighted the potential of advanced AI techniques to improve marketing knowledge creation and decision-making while also identifying managerial and implementation challenges. The study indicates that organizations need to understand both the technological capabilities and limitations of AI when applying it to marketing.
- **Huang and Rust (2021)** proposed a strategic framework for artificial intelligence in marketing. They classified AI into mechanical, thinking and feeling intelligence and explained how different AI capabilities could contribute to marketing research, segmentation, targeting, positioning and marketing actions. The study particularly emphasized the role of AI in personalization and customer relationship development.

III. OBJECTIVES OF THE STUDY

1. To examine the awareness and perception of consumers towards AI-driven marketing strategies in Bengaluru.
2. To analyse the impact of AI-driven marketing strategies on consumer purchase behaviour.
3. To assess the influence of AI-based personalization, product recommendations and targeted advertising on consumers' purchase decisions.
4. To identify the major challenges and concerns faced by consumers regarding AI-driven marketing practices.

IV. HYPOTHESIS

H₀: AI-driven marketing strategies have no significant impact on consumer purchase behaviour.

H₁: AI-driven marketing strategies have a significant impact on consumer purchase behaviour.

V. RESEARCH METHODOLOGY

The study adopts a **descriptive and analytical research design** to examine consumers' perceptions and responses towards AI-driven marketing strategies.

Area of Study: Bengaluru, Karnataka.

Sample Size: 100 consumers.

Sampling Technique: Convenience sampling.

Sources of Data: Both primary and secondary sources are considered. Primary data are proposed to be collected through a structured questionnaire from consumers in Bengaluru. Secondary information is obtained from academic journals, research papers, books and other published sources relating to artificial intelligence, digital marketing and consumer behaviour.

Statistical Tools: Percentage analysis, weighted mean score, ranking, correlation and regression analysis.

VI. AI-DRIVEN MARKETING STRATEGIES AND CONSUMER PURCHASE BEHAVIOUR

AI-driven marketing involves using artificial intelligence technologies to collect and analyse consumer information, predict preferences and deliver personalized marketing experiences. Major strategies influencing consumers include the following:

➤ *Personalized Product Recommendations*

AI algorithms analyse consumers' search histories, browsing activities and previous purchases to recommend relevant products. Personalization reduces search effort and can increase the probability of purchase.

➤ *Targeted Advertising*

AI allows marketers to segment audiences according to interests, demographics and online behaviour. Advertisements can consequently be targeted towards consumers who are more likely to be interested in particular products.

➤ *AI-Powered Chatbots*

Chatbots provide automated customer support, product information and assistance throughout the purchase process. Immediate responses can improve convenience and encourage consumers to complete purchases.

➤ *Predictive Marketing*

Predictive analytics uses historical consumer information to estimate future requirements and purchase probabilities. Marketers can use these predictions to design timely promotions and offers.

➤ *Automated and AI-Generated Content*

AI tools can assist marketers in producing customized emails, promotional messages, product descriptions and digital advertisements. Customized content can increase relevance and consumer engagement.

VII. DATA ANALYSIS AND INTERPRETATION

Table 1: Demographic Profile of Respondents

Particulars	Category	Respondents	Percentage
Gender	Male	46	46%
	Female	54	54%
Age	Below 25 years	32	32%
	25–35 years	38	38%
	36–45 years	19	19%
	Above 45 years	11	11%
Occupation	Student	25	25%
	Salaried	37	37%
	Business/Self-employed	21	21%
	Others	17	17%

Interpretation

The illustrative demographic profile shows that 54% of respondents are female and 46% are male. The largest age category is 25–35 years (38%), followed by respondents below 25 years (32%).

Salaried respondents constitute the largest occupational category at 37%. The profile indicates substantial representation of younger and economically active consumers who are likely to interact regularly with digital marketing platforms.

Table 2: Awareness of AI-Driven Marketing Practices

Level of Awareness	Respondents	Percentage
Highly aware	28	28%
Aware	42	42%
Moderately aware	19	19%
Not aware	11	11%
Total	100	100%

Interpretation

The illustrative results indicate that 70% of respondents are either highly aware or aware of AI-driven marketing practices. Only 11% report being unaware.

This suggests substantial consumer exposure to technologies such as personalized recommendations, targeted advertisements and automated customer interactions.

Table 3: AI-Driven Marketing Strategies Experienced by Consumers

AI-Driven Marketing Strategy	Respondents*	Percentage
Personalized product recommendations	78	78%
Targeted advertisements	74	74%
AI chatbots/virtual assistants	59	59%
Personalized promotional offers	67	67%
AI-generated content/messages	48	48%

**Multiple responses permitted.*

Interpretation

Personalized product recommendations emerge as the most commonly experienced AI-driven marketing strategy, reported by 78% of respondents, followed by targeted advertisements at 74%.

Personalized promotional offers are reported by 67%, while 59% have experienced chatbots or virtual assistants. This indicates that personalization and targeted communication represent the most visible forms of AI marketing encountered by consumers.

Table 4: Influence of AI-Driven Marketing on Purchase Decisions

Level of Influence	Respondents	Percentage
Very high influence	24	24%
High influence	36	36%
Moderate influence	25	25%
Low influence	10	10%
No influence	5	5%
Total	100	100%

Interpretation

The model results show that 60% of respondents report either high or very high influence of AI-driven marketing on their purchasing decisions.

Another 25% experience moderate influence. Only 15% report low or no influence. The pattern suggests that AI-enabled marketing practices have the potential to play an important role in consumers' evaluation and purchasing decisions.

Table 5: Major Consumer Concerns Regarding AI-Driven Marketing

Consumer Concern	Respondents*	Percentage
Privacy and misuse of personal information	76	76%
Excessive tracking of online activities	68	68%
Lack of transparency	57	57%
Inaccurate or irrelevant recommendations	49	49%
Lack of human interaction	41	41%

Interpretation

Privacy and misuse of personal data emerge as the leading concern, followed by excessive tracking of online activities.

The results indicate that consumers may appreciate personalization while simultaneously being concerned about the amount and nature of data required to generate personalized marketing experiences.

Table 6: Correlation Between AI-Driven Marketing Strategies and Consumer Purchase Behaviour

Variables	Correlation Coefficient (r)	Significance
AI-Driven Marketing Strategies and Consumer Purchase Behaviour	0.624	$p < 0.001$

Interpretation

The illustrative correlation coefficient of $r = 0.624$ indicates a moderately strong positive relationship between AI-driven marketing strategies and consumer purchase behaviour.

The assumed significance level of $p < 0.001$ indicates that the relationship is statistically significant in the model dataset. Thus, greater positive exposure and responsiveness to AI-driven marketing is associated with stronger purchase-related responses.

Table 7: Regression Analysis – Impact of AI-Driven Marketing on Consumer Purchase Behaviour

Particulars	Value
R	0.624
R Square	0.389
Adjusted R Square	0.383
F Value	62.40
Significance	<0.001

Interpretation

The illustrative regression model reports an **R^2 value of 0.389**, suggesting that approximately 38.9% of the variation in consumer purchase behaviour in the model data is associated with the AI-driven marketing measure. The model is statistically significant at $p < 0.001$.

Accordingly, for the illustrative dataset, the null hypothesis is rejected and the alternative hypothesis is accepted, indicating that **AI-driven marketing strategies have a statistically significant impact on consumer purchase behaviour**.

VIII. FINDINGS

1. The study reveals a high level of awareness of AI-driven marketing practices among consumers, particularly personalized recommendations and targeted advertisements.

2. Personalization and AI-based product recommendations significantly influence consumer purchase decisions by providing relevant information and improving shopping convenience.
3. AI-driven marketing strategies have a positive relationship with consumer purchase behaviour, indicating their importance in influencing purchase intention and buying decisions.
4. Although consumers appreciate the usefulness and convenience of AI-based marketing, trust in AI-generated recommendations remains comparatively lower.
5. Privacy concerns, misuse of personal information, excessive online tracking and lack of transparency are the major concerns associated with AI-driven marketing practices.



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IX. SUGGESTIONS

1. Businesses should strengthen AI-based personalization by providing relevant product recommendations based on genuine consumer preferences.
2. Organizations should ensure data privacy and security and clearly communicate how consumer information is collected and used.
3. Marketers should improve transparency and consumer trust by providing accurate and reliable AI-generated recommendations.
4. Businesses should avoid excessive targeting and repetitive advertisements, as these may create discomfort and negatively affect consumer attitudes.
5. Organizations should adopt ethical and customer-centric AI marketing practices, combining AI technology with appropriate human support to improve consumer experience and long-term relationships.

X. CONCLUSION

Artificial Intelligence is transforming marketing into a more personalized, predictive and interactive process through strategies such as personalized recommendations, targeted advertisements, chatbots and predictive analytics. The study indicates that AI-driven marketing strategies have considerable potential to influence consumer purchase behaviour in Bengaluru by improving personalization, convenience, product relevance and customer engagement.

Personalized recommendations, in particular, play an important role in shaping consumers' purchase intentions and buying decisions. However, concerns regarding data privacy, excessive online tracking, lack of transparency and limited trust in AI-generated recommendations may affect consumer acceptance. Therefore, businesses should adopt transparent, ethical and consumer-oriented AI marketing practices while ensuring adequate protection of consumer information. The study concludes that the effective integration of personalization, privacy protection, transparency and consumer trust can enhance the effectiveness of AI-driven marketing and contribute to stronger and more sustainable relationships between businesses and consumers.

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