

Hyper-Personalized Marketing through AI: Predictive Consumer Behaviour and Ethical Implications

Sagar Bhadange¹, Vinod Kr Sharma², Rupen Pilankar³

¹Institute for Future Education, Entrepreneurship and Leadership iFEEL, India.
sagar.bhadange@ifeel.edu.in

²Institute for Future Education, Entrepreneurship and Leadership iFEEL, India.
vinod.sharma@ifeel.edu.in

³Institute for Future Education, Entrepreneurship and Leadership iFEEL, India.
rupen.p@ifeel.edu.in

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Abstract:

The marketing landscape has been revolutionised by the rapid advancements in artificial intelligence (AI) that helped the businesses to influence “predictive analytics and personalization” to improve consumer engagement. “Machine learning algorithms, natural language processing, and big data analytics” are all used in AI-powered marketing that helps to predict “consumer behaviour, preferences, and purchasing patterns” with exceptional precision. The transformative role of AI in marketing allows marketers to focus mainly on “predictive consumer behaviour analysis” and creating customised advertisement. Personalization or customization is the key stone of AI driven marketing which help businesses to customise content, suggestions, and ads as per individual consumer behaviour. The specific approach enhances customer experience and boost conversion rate and brand loyalty as well. In addition, automated decision making in campaign management is facilitated by AI which ensure the efficiency and cost-effectiveness of the business. Sample of 201 marketers were considered for study survey to know Consumer Behaviour and Ethical Implications of Hyper-Personalized Marketing through AI. The study concludes that Hyper-Personalized Marketing through AI has significant impact on Consumer Behaviour and Ethical Implications.

Keywords: Personalized, Marketing, Artificial Intelligence, Consumer Behaviour, Ethical.

INTRODUCTION

Highly personalised experience among customers witnessed revolution in digital marketing by the integration of AI and machine learning (ML). Consumer engagement and loyalty among potential consumers has been improved through the opportunities presented by AI-driven personalisation. The wide spread use of hyper-personalized marketing through AI also gives rise to ethical challenges in terms of “privacy, bias, manipulation, and societal impacts”. A comprehensive literature has been found that studied ethical considerations where the investigator studied the privacy controls which are used to gain information so as to reduce the arrival of data fabrication in terms of AI driven personalisation in digital marketing. “Privacy risks from vast data collection, algorithmic bias perpetuating discrimination, potential for consumer manipulation, economic disruption, and lack of transparency impeding accountability” are some of the key issues that are faced during AI driven personalised marketing. During personalised marketing, recommendations and suggestions shows respect “human values, avoids unfair outcomes” and improves their well-being. Use of AI and ML in digital marketing is becoming popular among marketers showing the changes the way the company interacts with their loyal customers. Marketers are delivering “personalised experience, and targeted product recommendations” to their customers with the integration of hyper-personalised marketing through AI which is backed up with complicated procedures (Chandra et al., 2022). The popularity of this approach in marketing makes it important to address ethical implications of AI-driven customised digital marketing to maintain trust in public. The key steps to follow is to analyse existing discourse and recognise some priority areas responsible for development and include the way that protect

privacy and secure the data, mitigate algorithmic partiality, prevent consumer manipulation, address economic and social impacts, and improve transparency and accountability.

It is important to offer benefits, guidelines and oversights while personalising through AI algorithms to have a control on possible harms. Innovations are balanced with ethical protections by involving “marketers, technologists, policymakers, and consumers” in multi stakeholder corporations. This highly customised strategy presents opportunities for “consumer interaction, conversion rates, and brand loyalty” (Verma et al., 2021). With or without acceptance, the dawn of AI and machine-learning-based digital marketing has birthed an era of customer-centric marketing strategies targeted at the needs and preferences of individual customers. Meanwhile, building upon the fact that AI-driven personalisation strategies in the field of digital marketing are growing with interest from individuals and societies, it is, therefore, very much necessary to undertake a thorough enquiry into the ethical concerns related to this approach. In spite of the fact that there are number of advantages of AI use in marketing sector, it is obvious to raise concern and issues regarding AI’s ethical use, possible risk and hazard, need of appropriate guards that protect consumer’s rights and well-being. Some companies experiment with facial recognition technologies to determine the moods of their customers and, accordingly, make suggestions about appropriate products (Yang et al., 2021). Scholars have stressed the need for global AI ethics and global governance of AI so that operations involving AI technologies take place in a responsible and ethical manner. Mostly, AI is concerned with retaining users and converting leads in digital marketing. Intuitive “AI chatbots, intelligent email marketing, interactive web design, and other digital marketing services” guide users to positions favourable to the business. Several things depend on this consideration evaluating on how AI influences digital marketing. ML is a subset of AI that focuses on computer programs accessing data and using the data to learn by themselves. Data is compiled from various sources, including social media accounts, menus, online reviews, and websites. Then, AI uses this data to create and deliver relevant content to the user. AI software agents help perform thorough analysis online concerning restaurants and their potential customers (Javaid et al., 2020). The implementation of AI in marketing strategies help the business to reach to their potential customers by using their available data and offering them attractive products and services at more convenient time.

LITERATURE REVIEW

Model of predictive consumer behaviour uses computational intelligence techniques to analyse “historical data, identify patterns, and forecast future purchasing decisions”. The study highlights that “customer segmentation, targeting, and retention strategies” are all can be improved by AI-powered predictive analytics. It is proved that deep learning technique along with neural network and decision tree are able to predict the customer churn, analyse their sentiments, and recommend them the product. In addition, “collaborative filtering and content-based filtering” are some of the recommendation systems based on AI help in personalising user experience and increase customer conversion rate (Ricci et al., 2022).

Dwivedi et al. (2021) revealed that “customer engagement, brand loyalty, and return on investment (ROI)” are all improved by AI based personalisation where “automated A/B testing” is facilitated by AI by enhancing campaign effectiveness through continuous learning from customer interaction. Brands are able to deliver ads which are relevant and context-aware as well through “chatbots, virtual assistants, and dynamic content generation” which are all powered by AI. Personalization in advertising has changed outside old-style division to actual, AI driven customization.

Despite of the fact that there are number of benefits offered by AI-driven marketing but still ethical concerns are raised regarding “consumer privacy, data security, and algorithmic bias”. The study prioritised the importance of transparency in AI models and AI governance to reduce the risk associated with misuse of consumer’s data. Regulatory frameworks such as the “General Data Protection Regulation (GDPR)” ensure responsible use of AI for marketing and privacy laws

(Belanche et al., 2022). AI marketing has changed the face of attempting to predict consumer behavioral changes and for the organization of individual campaigns, trading over advanced algorithms, big data, and real-time analytics. Research supports that AI businesses are most efficient through automation, personalization, and decision-making enhancement. Still, ethical considerations must be respected in order to help foster consumer trust and regulatory compliance. Hence, future research could be geared toward enhancing transparency, lowering bias, and exploring newer AI domains in marketing.

Cloarec (2022) revealed that “perceived benefits, transparency of data usage, and control over personal information” are the factors on which consumer’s willingness to share their data depends. There is a “privacy paradox” where the consumers express their concerns regarding their data collection but at the same time they are also engaged with personalised services that demands to share extensive data. Targeted marketing is improved by AI in which it involves “delivering customized messages, products, or services to specific customer segments based on their predicted behaviours, preferences, and needs”. This approach is opposite to mass marketing strategies where all the consumers get uniform treatment. AI analyse “individual customer journeys, purchasing histories, browsing behaviours, and even emotional responses to marketing stimuli” and helps in hyper-personalization.

Desai (2022) in the paper “Hyper-Personalization: An AI-Enabled Personalization for Customer-Centric Marketing” discussed the necessity of personalization in digital business, especially in e-commerce whose main aim is to attract and retain the customers. There are certain restrictions of conventional personalisation method that usually fail to focus on real time requirement of users due to active nature of customer’s behaviour and their high-level exposure to information. It is essential to introduce hyper-personalization strategies that uses ML and AI techniques to deal with these challenges. These hyper-personalization strategies improve marketing roles like “segmentation, targeting, and positioning” by the use of real time analytics all through the customer journey. The study underlines the need for advertisers to implement AI enabled personalisation in their marketing strategies to understand the unsaid needs of the customers in much better way which in turn leads to improved customer experience.

Vempati et al (2020) addressed the challenge of creating banner images for fashion e-commerce to capture customer attention on website’s homepage. It is found that lots of effort and time is invested when these banners are created manually which in turn leads to restricted number of options available for customisation. This makes the study to suggest an automated system that generate quick banner to enhance the personalisation and serve large number of audiences. The study concludes that there are ways and technologies to reduce designer’s workload and time, and improve the overall shopping experience by providing them wide range of customised options.

METHODOLOGY

Objective

To know Consumer Behaviour and Ethical Implications of Hyper-Personalized Marketing through AI
Sampling

The researcher considered 201 marketers for study survey to know Consumer Behaviour and Ethical Implications of Hyper-Personalized Marketing through AI. A short questionnaire with some personal demographic details and statements is developed to conduct the survey. “Random sampling method” is used to collect primary data. “Mean and t test” was applied to analyse the data and get the results.

Findings

Table I: Consumer behaviour and ethical implications of hyper-personalized marketing through AI

S. No.	Statements	Mean Value	t value	Sig.
1.	Personalization improves customer engagement	3.13	1.875	0.031
2.	Customers like to respond to customized marketing	3.16	2.323	0.011
3.	AI powered marketing raises ethical concerns in terms of privacy and data consent	3.19	2.802	0.003
4.	Customer centric marketing fosters brand loyalty	3.14	2.023	0.022
5.	Hyper-personalized marketing leads to biased profiling	3.12	1.763	0.040
6.	Consumer ethical concern is regarding lack of transparency in AI powered marketing	3.15	2.166	0.016
7.	AI based marketing strategies help to understand the unsaid needs of the customers in much better way	3.17	2.478	0.007

Table above shows Consumer Behaviour and Ethical Implications of Hyper-Personalized Marketing through AI. The respondent says that AI powered marketing raises ethical concerns in terms of privacy and data consent with mean value 3.19, AI based marketing strategies help to understand the unsaid needs of the customers in much better way (3.17), Customers like to respond to customized marketing (3.16), Consumer ethical concern is regarding lack of transparency in AI powered marketing (3.15), Customer centric marketing fosters brand loyalty 3.14 Personalization improves customer engagement (3.13), and Hyper-personalized marketing leads to biased profiling (3.12). The value under significant column for all the statements related to Consumer Behaviour and Ethical Implications are significant with value below 0.05 after applying t-test.

CONCLUSION

The way the business understands and engage their customers are all revolutionised through AI powered marketing where marketers leverage predictive analytics, ML, and big data to better understand consumer behaviour and enable themselves to create highly personalised campaigns. “Customer experiences, drive brand loyalty, and optimize marketing efficiency” are all enhanced through these innovations. Despite of offering number of advantages there are some challenges in AI driven marketing such as “data privacy concerns, ethical considerations, and the need for continuous technological adaptation”. It is important to make a balance between personalisation and trust among customers and make sure to obey all the developing regulatory framework. Continuous development of AI may offer sophisticated, deep insights and automated capabilities in the marketing sector. It is better to focus on “addressing ethical dilemmas, improving AI transparency, and exploring the long-term impact of AI-powered marketing on consumer decision-making”. Implementation of responsible AI practices help the business to harness its possibility of creating sustainable and customised marketing strategies.

The study aims to know Consumer Behaviour and Ethical Implications of Hyper-Personalized Marketing through AI and found that AI powered marketing raises ethical concerns in terms of privacy and data consent, Customers like to respond to customized marketing, and Consumer ethical concern is regarding lack of transparency in AI powered marketing. The study concludes that Hyper-Personalized Marketing through AI has significant impact on Consumer Behaviour and Ethical Implications.

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