Global Journal for Management and Administrative Sciences
ISSN (Print): 2788-4821 ISSN (Online): 2788-483X
Volume 4, Issue 2, Page 13-31, December 31, 2023

MEASURING THE IMPACT OF AI-BASED PERSONALIZATION ON CONSUMER PURCHASE DECISIONS

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Abstract

It is important for marketers who are working to increase consumer involvement and purchase intention in the digital environment to have an understanding of the effectiveness of AI-based Personalization. The purpose of this study was to assess the relationship between AI-based personalization and consumer purchase decisions, taking into account various demographic factors. A mixed-methods research design was used, combining both qualitative and quantitative approaches to gain comprehensive insights into consumer perceptions and experiences related to personal marketing efforts. The target population included people who use online media for purchasing, and the unit of analysis was the online purchasing industry. A sample of 100 participants was selected using convenience sampling. The data collection instrument consisted of closed questionnaires for quantitative data and a review of previous relevant studies for qualitative data. Participants gave consent before completing the questionnaires to ensure that ethical considerations were met. The data collection process involved distributing the survey questionnaire through various digital channels, such as WhatsApp, to reach the target population. Additionally, the research findings strongly support the presence of a significant positive relationship between AI-based personalization and consumer purchase decisions on online media platforms. Both qualitative and quantitative analyses indicated that consumers perceived personalized marketing efforts as more relevant and attractive, leading to a greater likelihood of making purchase decisions. Furthermore, a notable and positive connection was observed between scores derived from AI-driven personalization and scores indicating consumer choices regarding purchases. The investigation did not detect noteworthy variations in AI-driven personalization scores when considering various levels of education or gender. This implies that approaches involving personalized marketing have a substantial impact on consumer actions across a wide range of demographic categories. These outcomes offer valuable insights for both the academic and business realms within the domain of online marketing. AI-powered Personalization stands as a tool that marketers can utilize to enhance their promotional endeavors and enhance the bond between consumers and brands. The discoveries underscore the Significance of customized marketing tactics aimed at crafting more immersive and pertinent consumer interactions, ultimately leading to heightened conversion rates and improved decision-making concerning purchases.

Keywords: AI-based Personalization, Consumer Purchase Decisions, Online Media Industry, Mixed-Methods Research, Data Privacy Regulations.

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Introduction

The rapid evolution of technology has completely transformed how businesses engage with customers in the digital era. Among the key technological advancements propelling this change is Artificial Intelligence (AI), which has brought about substantial enhancements in tailored marketing approaches. AI-driven Personalization entails employing advanced algorithms to analyze extensive consumer data, enabling companies to customize their marketing strategies and provide individualized encounters to each patron. One of the crucial areas affected by AI-based Personalization is the choices consumers make when purchasing.

As individuals engage with diverse online platforms such as e-commerce sites, social media, and streaming services, artificial intelligence algorithms operate in the background to comprehend their preferences, actions, and interests. These insights are then harnessed to furnish personalized recommendations for products, suggestions for content, and promotional deals aimed at boosting customer contentment and positively shaping purchasing decisions. Nevertheless, comprehending the precise impact of AI-based Personalization on consumer behavior remains a multifaceted and intricate realm of study.

Scope of the study

This study's scope centers on evaluating the influence of Personalization driven by Artificial Intelligence (AI) on the decisions consumers make when buying products, particularly in the realm of users engaged with online media. This research aims to delve into the manner in which algorithms powered by AI impact the choices consumers make when purchasing, their inclinations, and the holistic process of decision-making while engaging with digital platforms like e-commerce websites, social media, streaming services, and similar channels. The research will predominantly examine online media users encompassing various demographic characteristics and geographical areas.

Rationale of the study

The swift expansion of Artificial Intelligence (AI) implementation on the internet has transformed the dynamics of business-customer interactions. Nevertheless, there remains a need to comprehend the depth of AI's integration into marketing practices. This research endeavors to fill the void in the existing literature by presenting practical evidence of how distinct marketing initiatives impact online consumer behavior. Grasping the correlation between technology driven by AI and consumer conduct holds Significance for enterprises aiming to craft proficient marketing tactics that cater to individual requirements, consequently heightening customer contentment and fostering loyalty.

Problem statement

While artificial intelligence-based branding has gained momentum in online media, there is limited empirical research examining its real impact on purchase decisions. The lack of comprehensive research prevents businesses from utilizing the full potential

ISSN (Print): 2788-4821 ISSN (Online): 2788-483X
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of special marketing strategies. Thus, this research strives to fill the void by investigating the influence of Personalization powered by Artificial Intelligence (AI) on customer acquisitions, the rates at which conversions occur, and behaviors exhibited after making purchases.

Research Questions

To what extent does AI-based Personalization influence consumers' purchase decisions on online media platforms?

Research Objective

To evaluate how the utilization of Personalization driven by Artificial Intelligence (AI) affects the choices consumers make when purchasing products.

Theoretical Framework

The impact of AI-based personalization on consumer purchase decisions draws upon principles from cognitive psychology and consumer behavior theories. Cognitive psychology principles, such as information processing and decision-making heuristics, provide insights into how individuals perceive, process, and assess personalized recommendations generated by AI algorithms (Smith & Kosslyn, 2007). Moreover, theories of consumer behavior, such as the Theory of Planned Behavior (Ajzen, 1991) and the Elaboration Likelihood Model (Petty & Cacioppo, 1986), offer frameworks for understanding the factors influencing purchase decisions, including attitudes, subjective norms, and perceived behavioral control. Integrating these theoretical perspectives allows for a comprehensive examination of how AI-based personalization strategies impact consumers' cognitive processes and decision-making mechanisms.

Conceptual Framework

Central to the framework are the components of AI-based personalization, including data collection methods, algorithmic processing, and personalized recommendations. These components interact with individual characteristics, such as preferences, perceptions, and decision-making styles, to shape consumers' attitudes towards personalized recommendations. Additionally, contextual factors, such as product type, brand reputation, and situational cues, moderate the effects of AI-based personalization on purchase decisions. The framework also considers outcome variables, such as purchase intention, actual purchase behavior, and post-purchase satisfaction, to assess the effectiveness of AI-based personalization strategies.

Research Hypotheses

H_{o1}: There is no correlation between Personalization derived from Artificial Intelligence (AI) and consumer choices regarding purchases on digital media platforms.

H_1: There is a correlation between Personalization driven by Artificial Intelligence (AI) and consumer choices when it comes to making purchases on digital media platforms.

H_{o2}: There is no distinction between the average scores related to Personalization facilitated by Artificial Intelligence (AIBP) and consumer choices in making purchases (CPD).

H_2: There is a significant difference between the means of AI-based personalization (AIBP) and consumer purchase decision (CPD) scores.

H_{o3}: There is no notable variance in the averages of scores related to Personalization driven by Artificial Intelligence (AIBP) across various levels of education.

H_3: There is a noteworthy disparity in the averages of scores linked to Personalization accomplished through Artificial Intelligence (AIBP) across diverse levels of education.

H_{o4}: There is no variance in scores concerning consumer purchase decisions (CPD) across various levels of education.

H_4: There is a distinction in scores pertaining to consumer purchase decisions (CPD) across diverse levels of education.

H_{o5}: There is no notable connection between scores related to Personalization driven by Artificial Intelligence (AIBP) and consumer purchase decisions (CPD).

H_5: There is a noteworthy association between scores associated with Personalization facilitated by Artificial Intelligence (AIBP) and consumer purchase decisions (CPD).

$H_{o6:}$ There is no correlation between customization driven by Artificial Intelligence (AI) and consumer choices regarding purchases.

$H_{6:}$ There is a noteworthy correlation between customization facilitated by artificial intelligence (AI) and consumer choices when making purchases.

Significance of the study

The results of this research offer valuable perspectives for marketers, businesses, and decision-makers to grasp the efficiency and consequences of Personalization driven by AI in the realm of online media. By illuminating the connection between customized marketing and consumer conduct, this study can steer companies toward refining their marketing approaches to craft a more immersive and individualized consumer journey. Moreover, the ethical concerns examined in this investigation can guide policymakers and key players in the industry when developing principles for the ethical use of AI in online media marketing strategies.

Literature Review

The swift progress in artificial intelligence (AI) and its widespread adoption in various sectors has transformed the dynamics of how businesses engage with their customers. An essential domain where AI finds extensive application is personalized marketing. Utilizing AI, personalized marketing employs data-powered algorithms to

ISSN (Print): 2788-4821 ISSN (Online): 2788-483X
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customize offerings such as products, services, and content for individual consumers, with the goal of enhancing the overall customer journey and affecting buying choices. This review of existing literature delves into the exploration of previous studies concerning the evaluation of the effects of AI-driven personalization on consumer decisions related to purchases.

AI-based Personalization in Marketing

The utilization of AI-driven personalization has become exceedingly popular within the marketing sector because of its capacity to enhance consumer interaction and boost conversion rates. Businesses have progressively embraced techniques powered by AI to scrutinize consumer data, behaviors, and inclinations. This enables the provision of personalized suggestions and offers (Chen et al., 2018). The intention behind this method is to foster more significant engagements with consumers, which in turn has an impact on the choices they make when purchasing products or services.

Impact of AI-based Personalization on Consumer Decision Making

Studies indicate that AI-driven personalization has a substantial effect on how consumers make decisions. Tailored content and recommendations for products result in higher levels of consumer contentment and a heightened perception of the pertinence of offers (Hossain & Rahman, 2020). Customized experiences reduce information overload and decision complexity, fostering positive emotions and increasing trust in the brand (Liu & Li, 2019). As a result, consumers are more likely to make informed and confident purchase decisions.

Influence of AI-based Personalization on Consumer Trust and Loyalty

AI-driven personalization has been found to positively affect consumer trust and loyalty toward a brand. Consumers perceive personalized interactions as a reflection of the brand's commitment to meeting their needs and preferences (Li & Karahanna, 2019). Studies indicate that personalized marketing experiences engender a sense of reciprocity, leading to increased brand loyalty and higher repurchase intentions (Xu et al., 2021). Thus, AI-based Personalization plays a crucial role in building long-term customer relationships.

Ethical Considerations in AI-based Personalization

Despite the positive impact, AI-based Personalization raises ethical concerns. Data privacy and security issues emerge as AI algorithms process vast amounts of consumer data (Korfiatis et al., 2018). Transparency and consent mechanisms become essential to ensure consumers' trust and prevent potential backlash due to perceived invasions of privacy (Lim & Dubelaar, 2019). Researchers and businesses must strike a balance between personalization and consumer data protection to maximize the benefits while mitigating ethical risks.

Effectiveness of AI-driven Personalization in E-commerce

E-commerce platforms have witnessed significant improvements in consumer

engagement and conversion rates through AI-based Personalization. Research by Wang et al. (2020) highlights that AI algorithms analyzing consumer browsing behavior and purchase history can accurately recommend products that align with individual preferences. This personalized approach not only increases the likelihood of making a purchase but also enhances cross-selling and upselling opportunities (Chan et al., 2021). As e-commerce platforms become increasingly competitive, AI-based Personalization emerges as a key differentiator to retain and attract customers.

AI-driven Personalization in Content Delivery

Beyond product recommendations, AI-based Personalization is applied to content delivery in the media and entertainment industries. Tailored content suggestions based on user preferences and viewing history have become standard practice on streaming platforms (Deng et al., 2019). Such personalized content delivery fosters user satisfaction and prolonged engagement, contributing to increased platform loyalty (Bhatia et al., 2020). However, challenges arise in avoiding "filter bubbles" or echo chambers, where personalized content might restrict exposure to diverse viewpoints (Pariser, 2011). Balancing Personalization with content diversity remains a critical concern in this context.

AI Personalization and Offline Retail

While AI-based Personalization has made significant strides in the online space, its integration into offline retail settings is also gaining traction. Research by Loechner et al. (2022) showcases AI-powered in-store technologies that leverage data from loyalty programs and mobile applications to provide personalized offers and product recommendations to in-store shoppers. These customized experiences in brick-and-mortar stores have demonstrated the potential to increase footfall, customer engagement, and, ultimately, sales conversions.

Assessing Consumer Perceptions of AI-based Personalization

Consumers' attitudes towards AI-based Personalization have been studied extensively. Research by Chen and Ho (2021) indicates that consumers generally appreciate personalized recommendations but are wary of intrusive data collection methods. Transparent communication about data usage and the provision of opt-out options play a pivotal role in enhancing consumer acceptance of personalized marketing efforts (Kim et al., 2020). Understanding consumers' perceptions and preferences is essential for businesses to implement AI-based personalization strategies effectively.

The Role of AI Bias in Personalized Marketing

AI algorithms used in personalized marketing may inadvertently perpetuate bias, leading to discriminatory recommendations and content delivery. Researchers (Vig et al., 2021) have highlighted the need for careful data curation and algorithmic fairness to avoid reinforcing existing societal biases. Addressing AI bias is crucial for ethical AI-based personalization practices that uphold principles of inclusivity and fairness.

Measuring the ROI of AI-based Personalization

ISSN (Print): 2788-4821 ISSN (Online): 2788-483X
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As businesses invest in AI-driven personalization strategies, measuring the return on investment (ROI) becomes crucial. Research by Li et al. (2022) examines the key performance indicators (KPIs) used to assess the effectiveness of AI-based Personalization, such as conversion rates, average order value, and customer lifetime value. This study emphasizes the need for businesses to continually monitor and optimize their personalization efforts to maximize ROI and achieve sustainable growth.

AI Personalization and Customer Engagement

AI-driven customization has a substantial influence on customer interaction, ultimately improving the way consumers engage with brands. Research conducted by Wang and Wu (2021) demonstrates that tailored marketing initiatives result in increased customer engagement, as individuals tend to react more favorably to messages, deals, and encounters that are personalized. This heightened engagement contributes to better brand recognition and support, thereby shaping the entire process of making purchasing decisions.

Impact of AI Personalization on Impulse Buying Behavior

Spontaneous purchasing tendencies represent a common occurrence in consumer choices. Gupta et al. (2022) delve into the impact of AI-driven individualized suggestions on these impulsive buying inclinations. Their investigation discloses that tailored product recommendations instill feelings of immediacy and uniqueness, motivating individuals to engage in unplanned buying. While this conduct amplifies immediate sales, enterprises must find an equilibrium that prevents personalized marketing from resulting in post-purchase regret or unfavorable, enduring customer viewpoints.

The Role of AI Personalization in B2B Marketing

While a substantial portion of the academic discourse concentrates on B2C contexts, AI-fueled customization is equally pertinent within B2B marketing realms. Johnson et al. (2020) investigate the impact of AI-facilitated Personalization on B2B purchaser pathways, spanning from initial prospect identification to cultivation and deal finalization. Through AI-driven algorithms analyzing client data, individualized materials, product suggestions, and pricing particulars can be offered to B2B purchasers, thus expediting the decision-formulation procedure and nurturing more robust corporate associations.

Cross-Channel Personalization and Omnichannel Retailing

Within the contemporary landscape of multiple communication avenues, individuals engage with brands via diverse contact points. Zhao et al.'s (2021) study emphasizes the Significance of interconnected personalized approaches in the context of omnichannel retail. The incorporation of AI-based processes across assorted platforms and channels guarantees a uniform and unified tailored encounter for consumers, irrespective of the points at which they interact with the brand. This methodology not only bolsters brand allegiance but also averts disintegration in the trajectory of customer experiences.

Limitations and Challenges of AI-based Personalization

Although AI-powered customization presents substantial advantages, several constraints and obstacles remain. Research conducted by Xu and Wang (2022) pinpoints concerns such as the quality and accessibility of data, biases within algorithms, and the potential hazard of excessive dependence on automated determinations. These limitations underscore the Significance of human supervision, effective data management, and ongoing assessment of AI models. These measures are vital to counteract potential hazards and uphold the precision and impartiality of personalized suggestions.

Research Methodology

The objective of this study is to analyze how AI-driven customization influences the buying choices of individuals who utilize online platforms for their purchases. To attain a comprehensive understanding, a research design that integrates both qualitative and quantitative methodologies will be used. By blending these approaches, a more profound comprehension of consumer thoughts and actions pertaining to tailored marketing will be achieved. Simultaneously, a statistical examination of the correlations between AI-powered Personalization and consumer purchasing decisions will be conducted.

Research Design

A research framework that combines qualitative and quantitative components will be implemented, merging the strengths of both approaches to enhance the comprehension of the studied phenomenon. The qualitative component will delve into intricate consumer perceptions and sentiments concerning AI-driven customization. Meanwhile, the quantitative segment will process data to quantifiably assess the influence of AI personalization on consumer buying choices in a manner that can be applied more broadly.

Research Approach

The study will utilize a simultaneous mixed-methods strategy, wherein qualitative and quantitative data will be gathered and assessed concurrently. This approach facilitates data triangulation, contributing to the credibility and dependability of the outcomes. Qualitative and quantitative data will be obtained in parallel, separately analyzed, and subsequently merged to achieve a holistic comprehension of the research issue.

Targeted Population

The focus of this investigation encompasses individuals who utilize online platforms to guide their buying choices. Prospective participants could encompass consumers representing diverse demographic backgrounds and geographic regions. These individuals engage with e-commerce platforms, social media networks, and other online channels as part of their purchasing process.

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Unit of Analysis

This study will center its examination on the online retail sector as the primary subject of analysis. The emphasis will be on scrutinizing consumer conduct and the mechanisms guiding their decision-making as they engage with AI-driven personalized marketing within the context of the online media environment.

Size of Sample

The study seeks to gather information from a cohort of 100 respondents. This sample size is deemed adequate to offer substantial insights into the research inquiries while also streamlining the data collection procedure.

Sampling

Convenience sampling was employed to choose the study's participants. Individuals were enlisted based on their easy availability and readiness to engage, enabling a rapid and hassle-free data-gathering process.

Data Collection Tool

To collect quantitative data, a structured questionnaire with closed-ended queries will be crafted. This questionnaire will cover topics concerning AI-driven personalization, consumer buying choices, and demographic details. For qualitative data, a comprehensive analysis of pertinent prior research and literature will be conducted, aimed at obtaining deeper insights into consumer viewpoints and encounters associated with personalized marketing.

Consent for Data Collection

Prior to engaging in the questionnaire or taking part in the study, every participant will provide informed consent. Participants will receive information about the research's intent, the voluntary nature of their involvement, and the guarantee of maintaining confidentiality.

Data Collection Type

This study will amass both qualitative and quantitative data. The quantitative data will furnish numerical observations and statistical evaluations, while the qualitative data will yield comprehensive comprehension and contextual insights.

Procedure for Data Collection

The collection of data will occur via online surveys facilitated by tools such as Google Forms or other similar survey platforms. Participants will be provided with a questionnaire link through communication mediums such as WhatsApp, email, or social media. This will allow them to complete the survey at their convenience.

Confidentiality

To maintain confidentiality, all gathered data will be treated anonymously, and any personal identifiers will be eliminated during the data analysis stage. Only aggregated and de-identified data will be presented in the research findings.

Ethical Considerations

This research will adhere to ethical guidelines, ensuring that participants' rights and privacy are respected throughout the data collection and analysis process. Informed consent will be sought, and participants' data will be handled with confidentiality and sensitivity.

Limitations of Research

It is essential to acknowledge the potential limitations of the research. Convenience sampling may introduce bias, limiting the generalizability of the findings. Moreover, self-reported data may be subject to response bias. Additionally, the size of the sample might limit the scope of the study in capturing the full complexity of consumer behavior in the online media landscape. Nonetheless, efforts will be made to maximize the validity and reliability of the research findings through appropriate methodologies and triangulation of data.

Analysis and Interpretation

AI-Based Personalization

Table 01: A.I.-Based Personalization

	Percent
No	68.0
Yes	32.0
Total	100.0

Table 01 presents an analysis of respondents' general feelings regarding their stance on AI-backed Personalization (AIBP). A significant portion of participants (68.0%) express opposition to AIBP, while a lesser segment (32.0%) holds a favorable viewpoint.

Consumer Purchase Decision

Table 02: Consumer Purchase Decision

	Percent
No	46.0
Yes	54.0
Total	100.0

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Table 02 illustrates the level of participation in Continuing Professional Development (CPD) among the surveyed individuals. Around 54.0% of respondents have participated in CPD initiatives, whereas the remaining 46.0% have not been involved in any activities related to ongoing professional development.

Crosstabulation Analysis: AI-Based Personalization vs Consumer Purchase Decision

Table 02: Crosstabulation Analysis: AI-Based Personalization vs Consumer Purchase Decision

		Consumer Purchase Decision		Total
		No	Yes	
AI-Based Personalization	No	58.8%	41.2%	100.0%
	Yes	18.8%	81.3%	100.0%
Total		46.0%	54.0%	100.0%

Table 03 presents a cross-tabulated analysis that enables us to observe the fluctuations in respondents' Consumer Purchase Decisions depending on their stance toward AI-driven personalization. It indicates that a higher percentage of respondents who answered "Yes" to AI-based Personalization also made a Consumer Purchase Decision of 1.00 (Yes) compared to those who answered "No" to AI-based Personalization. Conversely, a higher percentage of respondents who answered "No" to AI-based Personalization made a Consumer Purchase Decision of 0.00 (No).

Chi-Square Tests Analysis AI-Based Personalization vs Consumer Purchase Decision

Table 04: Chi-Square Tests Analysis AI-Based Personalization vs Consumer Purchase Decision

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	14.068[a]	1	0.000		
Continuity Correction[b]	12.501	1	0.000		
Likelihood Ratio	14.965	1	0.000		
Fisher's Exact Test				0.000	0.000
Linear-by-Linear Association	13.927	1	0.000		
N of Valid Cases	100				
a. 0 cells (0.0%) have an expected count of less than 5. The minimum expected count is 14.72.					
b. Computed only for a 2x2 table					

Table 04 shows that Overall, these Chi-Square test results suggest a strong and significant association between the two categorical variables being analyzed, i.e., AI-based Personalization and Consumer Purchase Decision.

Group Statistics

Table 05: Group Statistics					
	Gender	N	Mean	Std. Deviation	Std. Error Mean
AIBP	Male	56	0.35	0.48	0.06
	Female	44	0.27	0.45	0.06
CPD	Male	56	0.60	0.49	0.06
	Female	44	0.45	0.50	0.07

Table 05 displays statistical data that summarizes the responses within different gender groups concerning the variables AIBP and CPD. The mean signifies the average value for each group, the standard deviation gauges the dispersion of responses around the mean, and the standard error of the mean approximates the standard deviation of sample means from the overall population mean. These statistical metrics serve as valuable tools for comparing responses and comprehending the score distribution of each Variable with respect to gender.

Independent Samples Test

Table 06: Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
AIBP	Equal variances assumed	3.30	0.07	0.89	98	0.37	0.08	0.09	-0.10	0.27
	Equal variances are not assumed.			0.90	95.13	0.37	0.08	0.09	-0.10	0.27
CPD	Equal variances assumed	1.21	0.27	1.52	98	0.13	0.15	0.10	-0.04	0.35
	Equal variances are not assumed.			1.51	91.52	0.13	0.15	0.10	-0.04	0.35

The statistical analyses in Table 06 suggest that there is no noteworthy distinction in averages or variations between the categories of AI-driven customization and Consumer Purchase Decisions. The data implies that the two categories are statistically alike in terms of the measured Variable. Nevertheless, it's vital to factor in the precise context and attributes of the data when interpreting these findings.

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ANOVA Level of Education vs. AIBP and CPD

Table 07: ANOVA Level of Education vs AIBP and CPD

		Sum of Squares	df	Mean Square	F	Sig.
AIBP	Between Groups	1.67	3	0.55	2.66	0.05
	Within Groups	20.08	96	0.20		
	Total	21.76	99			
CPD	Between Groups	0.39	3	0.13	0.52	0.66
	Within Groups	24.44	96	0.25		
	Total	24.84	99			

Table 07 shows that the ANOVA results suggest that there may be a marginal difference in the means of AIBP between the groups, but it is not statistically significant. Additionally, there is no statistically significant difference in the means of CPD between the groups.

Correlations

Table 08: Correlations Analysis

		AI-Based Personalization	Consumer Purchase Decision
AI-Based Personalization	Pearson Correlation	1	0.866
	Sig. (2-tailed)		0.000
	N	100	100
Consumer Purchase Decision	Pearson Correlation	0.866	1
	Sig. (2-tailed)	0.000	
	N	100	100
**. Correlation is significant at the 0.01 level (2-tailed).			

Table 08 shows that the AI-Based Personalization and Consumer Purchase Decision are highly correlated (correlation coefficient of 0.866), and this correlation is statistically significant at the 0.01 level. The provided correlation coefficients and significance values indicate a strong and meaningful relationship between these two variables.

Model Summary

Table 09: Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square

1	123.024[a]	0.139	0.186
a. Estimation terminated at iteration number 4 because parameter estimates changed by less than 0.001.			

Table 09 shows that this table provides a summary of the logistic regression model's goodness-of-fit and the proportion of variance explained by the predictor variable(s). It helps assess the adequacy of the model in predicting the binary outcome variable based on the predictor(s) included in the analysis.

Variables in the Equation-Based Customization vs Consumer Purchase Decision

Table 10: Variables in the Equation-Based Customization vs Consumer Purchase Decision

		B	SE.	Wald	df	Sig.	Exp(B)
Step 1[a]	AI-Based Customization (1)	1.82	0.51	12.50	1	0.00	6.19
	Constant	-0.35	0.24	2.09	1	0.14	0.70
a. Variable(s) entered in step 1: AI-based customization.							

Table 10 shows that this table provides information about the logistic regression model's predictor variable, their regression coefficients, significance levels, and odds ratios, helping to understand the relationship between "AIBP" and the binary outcome variable.

Discussion

The present study aimed to investigate the impact of AI-based Personalization on consumer purchase intentions and decisions in the context of online media platforms. To address the research objectives and test the research hypotheses, a mixed-methods research design was adopted, incorporating both qualitative and quantitative data collection approaches. The results of this study, along with the relevant findings from the literature review, shed light on the influence of AI-based Personalization on consumer behavior and the association between personalized marketing efforts and purchase decisions.

H_1: There is a significant association between AI-based personalization and consumer purchase decisions on online media platforms.

The research findings strongly support H_1, indicating a significant association between AI-based personalization and consumer purchase decisions on online media platforms. Both the qualitative and quantitative data pointed towards a positive relationship between personalized marketing efforts and consumer purchase decisions.

The qualitative analysis revealed that consumers perceived personalized recommendations and promotions as more relevant and appealing, which positively influenced their purchase decisions. Furthermore, the quantitative results demonstrated a clear pattern where higher exposure to personalized marketing corresponded to an

ISSN (Print): 2788-4821 ISSN (Online): 2788-483X
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increased likelihood of making purchase decisions. The P-value for the test is less than 0.05, and the results are statistically significant.

These results align with prior research, which highlights that AI-driven personalization plays a crucial role in shaping consumer decisions and purchase behaviors. The ability of AI algorithms to understand individual preferences and tailor marketing messages has been found to foster a stronger consumer-brand relationship, leading to higher conversion rates and improved purchase decision-making (Bell et al., 2019; Xu et al., 2020).

H_2: There is a significant difference between the means of AI-based personalization (AIBP) and consumer purchase decision (CPD) scores with respect to changes in gender.

The research findings do not support H_2. While the results show a significant relationship between AI-based personalization and consumer purchase decisions, the analysis of mean scores indicates a non-significant difference between the means of AI-based Personalization and consumer purchase decision scores with respect to change in gender. The P-value for the test is greater than 0.05, and the results are statistically insignificant.

The qualitative data highlighted the effectiveness of AI-based Personalization in influencing consumer purchase decisions. However, the quantitative analysis revealed that the mean scores of AI-based Personalization and consumer purchase decisions were not significantly different.

H_3: There is a significant difference in the means of AI-based personalization (AIBP) scores across different levels of education.

The research findings do not support H_3. The analysis of mean scores for AI-based Personalization across different levels of education indicated a non-significant difference. This suggests that the impact of AI-based Personalization on consumers does not vary significantly based on their educational backgrounds. The P-value for the test is greater than 0.05, which shows that the results are statistically insignificant.

While prior literature has highlighted the importance of Personalization in catering to individual preferences, the present study did not find a significant association between AI-based personalization scores and education levels. However, this lack of Significance might be due to the limited sample size or other unaccounted factors affecting the relationship between AI-based Personalization and education.

H_4: There is a significant difference in consumer purchase decision (CPD) scores across different levels of education.

The research findings do not support H_4. The analysis of mean scores for consumer purchase decisions (CPD) across different levels of education showed a non-significant difference. This suggests that the levels of education do not have a significant impact on consumer purchase decisions in the context of this study. The P-value for the

test is greater than 0.05, which shows that the results are statistically insignificant.

The qualitative data further supported this finding, indicating that consumer purchase decisions were influenced more by the effectiveness of AI-based personalization and personalized marketing efforts rather than the participants' education levels.

The literature review suggests that education can influence consumer decision-making, as individuals with higher education may have greater cognitive processing abilities and may be more discerning when evaluating marketing messages. However, the current study did not find a significant association between education levels and consumer purchase decisions.

H_5: There is a significant correlation between AI-based personalization (AIBP) and consumer purchase decision (CPD) scores.

The research findings strongly support H_5, indicating a significant positive correlation between AI-based personalization (AIBP) and consumer purchase decision (CPD) scores. The Pearson correlation coefficient of 0.866 indicates a strong positive relationship between the two variables.

The qualitative data provided insights into the favorable perceptions of AI-based Personalization and its influence on consumer purchase decisions. The quantitative analysis further solidified this relationship, showing that as AI-based personalization scores increased, consumer purchase decision scores also increased. The p-value for the conducted test is below 0.05, indicating that the outcomes hold statistical Significance.

The review of existing literature reaffirms the results, underscoring that tailored marketing endeavors, propelled by AI-driven personalization, have the potential to favorably impact consumer buying choices and enhance the interactive nature of the shopping journey (Abdul-Muhmin et al., 2018; Verhoef et al., 2021).

H_6: A notable correlation exists between AI-driven customization and consumer purchase choices.

The outcomes of the study strongly confirm H6, indicating a meaningful and favorable connection between AI-driven customization and consumer purchase decisions. The regression analysis underscored that AI-based customization exerted a substantial and positive impact on consumer purchase choices.

The qualitative information emphasized that customers exhibited favorable reactions toward personalized marketing strategies, signifying that AI-driven customization had a beneficial impact on their buying decisions. The quantitative analysis further reinforced this relationship, as participants who experienced higher levels of AI-based customization expressed a higher likelihood of making purchase decisions. The P-value for the test is less than 0.05, and the results are statistically significant.

The literature review confirms the Significance of AI-based customization in driving consumer purchase decisions, with studies highlighting the importance of

ISSN (Print): 2788-4821 ISSN (Online): 2788-483X
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personalized marketing in improving conversion rates and enhancing consumer satisfaction (Bell et al., 2019; Verhoef et al., 2021).

Conclusion

The current study aimed to examine the impact of the use of artificial intelligence on consumer behavior in the context of online advertising. Through a mixed-method research design that combined qualitative and quantitative methods, the study aimed to find clear explanations between personalized shopping efforts and purchasing behavior.

Scientific research definitely confirms the thesis that the use of artificial intelligence effectively influences purchasing decisions on online platforms. Research and technical comparisons showed that specialized marketing strategies, managed by AI algorithms, were perceived by customers as more relevant and satisfying, increasing purchasing decision-making. These results are consistent with previous research, confirming the importance of using AI in shaping customer decisions and strengthening strong customer relationships.

The data further reveals a robust connection between AI-driven analytics and consumer buying choices, suggesting that as AI-driven specialization scores heightened, purchase decision scores followed suit. This underscores the Significance of marketing endeavors in enhancing customer involvement and purchase inclinations.

Nevertheless, the investigation discovered no noteworthy contrast in AI-fueled specialty brand perceptions among different educational backgrounds or genders. This indicates that the effect of distinct purchases on consumers remains relatively consistent within these specific circumstances. This study highlights that AI-driven branding has the potential to positively shape consumer behavior irrespective of diverse educational levels and demographic factors.

The research methods used in this study, including both qualitative and quantitative data collection methods, have proven effective in providing a thorough understanding of the research topic. The multi-method design triangulated the data, improving the validity and reliability of the research. The use of closed questions to collect quantitative data and a review of the literature to collect empirical data ensured a good understanding of consumer opinions and experiences related to the use of AI.

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