Impact of Artificial Intelligence Driven Personalization on Consumer Purchase Decisions in Social Media

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Abstract: *The rapid integration of Artificial Intelligence (AI) into social media platforms has significantly transformed digital marketing strategies, particularly through AI-driven personalization. Social media platforms such as Facebook, Instagram, YouTube, and TikTok increasingly utilize machine learning algorithms and predictive analytics to deliver tailored advertisements and product recommendations based on user behavior, preferences, and engagement patterns. This study examines the impact of Artificial Intelligence–driven personalization on consumer purchase decisions in social media environments, with a specific focus on behavioral factors such as perceived relevance, trust, and privacy concerns.*

The primary objective of the study is to analyze how AI-based personalized content influences consumers' purchase intention and decision-making behavior. A secondary objective is to evaluate the role of perceived relevance, trust, and privacy concerns in shaping consumer buying behavior in digital platforms. The study adopted a quantitative research design, collecting primary data from 200 social media users through a structured questionnaire using a 5-point Likert scale. Statistical tools such as Percentage Analysis, Mean Score Analysis, Correlation, and Multiple Regression were employed to analyze the data. The findings reveal that AI-driven personalization has a strong positive influence on consumer purchase intention. Perceived relevance emerged as the most significant factor affecting buying behavior, followed by trust in personalized advertisements. However, privacy concerns were found to have a negative impact on consumer purchase decisions, indicating that excessive personalization may reduce consumer confidence if data usage is perceived as intrusive. The regression analysis shows that AI personalization and associated behavioral factors explain a substantial proportion of variation in consumer buying behavior.

The study concludes that while AI-driven personalization enhances engagement and purchase likelihood, businesses must balance personalization strategies with transparent data practices and ethical AI implementation. The research contributes to the growing literature on digital marketing and consumer behavior by providing empirical evidence on the psychological and behavioral implications of AI-powered marketing in social media platforms..

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