

The Use of AI-Driven Personalization for Enhancing the Customer Experience for Gen-Z

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Abstract

AI-Driven Personalization has significantly revolutionized the e-commerce industry by providing custom consumer experiences through machine learning algorithms that collect data. As both AI and e-commerce continue to progress, it is crucial to understand how Gen-Z, 40% of the consumer market, interacts with these novel AI features. Through a quantitative survey of 101 participants, this study provides market research information about Gen-Z from around the world and of all different ages. Additionally, this analysis aims to highlight Gen-Z's preferred AI features, understand AI-Driven Personalization's influence on Gen-Z brand image, and explore Gen-Z perspectives on AI ethics. Findings indicate that personalized experiences significantly enhance customer satisfaction and increase purchase decisions, with 54.4% of respondents preferring personalized recommendations. Additionally, Gen-Z expresses a strong preference for virtual try-ons, but only 6% frequently engage with this tool, emphasizing a need for more of this new feature. Furthermore, 88% of participants advocated for stricter regulations on AI-driven Personalization. This research contributes to the countless e-commerce businesses around the world and provides insight on Gen-Z perspectives to new AI technology.

Keywords

AI Personalization, Generation Z, E-Commerce, AI Ethics

1. Introduction

Generation Z, known as digital natives, refers to people born from the mid 1990's to the early 2000's. As a consumer cohort, they prioritize convenience and innovation (Wood, 2013). This study explores how AI-Driven Personalization enhances the Gen-Z customer experience, and it investigates the ethical considerations that involve the data collected. AI-Driven Personalization refers to machine learning algorithms that collect data to provide consumers with a custom

experience (Sabitha, 2024). In today's increasingly competitive market, AI-Driven Personalization is able to provide clients with personalized content and interactive experiences that maximize the chance of purchase.

Research about Gen-Z's interactions with AI marketing is imperative as Gen-Z represents the most dominant consumer group online, comprising more than 40% of the consumer market and primarily engaging with the digital world (Khadar, 2020). This study will provide a deeper understanding of Gen Z's preferences and perspectives, and it will help set a framework for the best AI-driven marketing practices. Additionally, it will help businesses around the globe refine their marketing strategies and improve their ability to engage Gen-Z customers while gaining insight into growing ethical concerns. This study will employ a survey to discuss quantitative facets in order to provide an insight into Gen-Z opinions.

Currently, there are already studies that proved that AI Driven-Personalization appeals to Gen-Z and influences their purchasing decision, therefore benefiting the company (Guerra-Tamez, Flores, Serna-Mendiburu, Robles, & Cortés, 2024). Additionally, there is abundant research in Gen-Z's interactions with AI Chatbots, an AI personalization tool, and studies say that AI chatbots also significantly increase brand trust and purchase decision (Guo & Luo, 2023). This study aims to identify the most preferred specific methods of AI personalization used, and the Gen-Z opinion about these AI tools.

2. Literature Review

2.1. The Importance of AI-Driven Personalization

In the digital era, e-commerce has emerged as a revolutionary platform and transforms the way consumers make purchases. Online platforms, becoming virtual marketplaces, demand the need for tailored and more appealing customer engagement (Raji, Olodo, Oke, Addy, Ofodile, & Oyewole, 2024). Personalization in marketing increases customer satisfaction as it reduces customer fatigue, reduces time involved in making choices and it increases brand loyalty (Gujar, 2024).

This is where AI-Driven Personalization plays a major role. AI-Driven Personalization such as personalized ads, product recommendations, virtual try-ons, personalized quizzes, customized content, AI chatbots and personalized email marketing all enhance the purchasing experience while being time-efficient and accurate.

2.2. Types of AI Personalization and Technology Associated

The first type of AI personalization includes product recommendations and customized content. With AI powered personalization, algorithms collect real-time data and dynamically adjust recommendations. The algorithms identify patterns and consequently can provide the best ads/products/content/emails. Sophisticated machine learning techniques like deep learning can be used to enable a more nuanced understanding while processing more complex data and patterns (Raji,

Olodo, Oke, Addy, Ofodile, & Oyewole, 2024). In fact, Amazon attributes 35% of its revenue to AI powered product recommendations (Nimbalkar & Berad, 2021).

Similarly, AI in email marketing and personalized ad recommendations use machine learning, deep learning and predictive analytics to predict trends and create more targeted advertisements and emails (Haleem, Javaid, Qadri, Singh, & Suman, 2022).

Furthermore, advanced technologies like Virtual Reality (VR) and Augmented Reality (AR) are also currently empowering e-commerce companies. This technology allows for virtual try-ons, which increases engagement rates and helps customers make more educated choices therefore decreasing the return rate (Joshi, 2024).

Like other personalized AI marketing, chatbots increase conversion rates, user engagement, customer engagement and enhance brand loyalty (Singh & Singh, 2023). Using Natural Language Processing (NLP), AI chatbots can decode messages, communicate with customers and consequently provide targeted and personalized offers (Nimbalkar & Berad, 2021).

Chatbots also offer personalized, gamified quizzes that increase cognitive engagement which in turn increases purchase intention (Elmashhara, De Cicco, Silva, Hammerschmidt, & Silva, 2024).

2.3. Introduction to Generation Z

Brand loyalty is known to significantly impact purchase decisions. As a generation, Gen-Z consumers are very comfortable with technology, which makes AI integration a perfect facilitator for establishing brand trust. It is found that Gen-Z's brand trust is significantly influenced by AI, which suggests that marketers focus on AI integration to build brand trust (Guerra-Tamez, Flores, Serna-Mendiburu, Robles, & Cortés, 2024). Furthermore, creating engaging, innovative and convenient experiences are found to appeal to Gen-Z consumers (Wood, 2013).

2.4. Ethical Considerations and Gen-Z Views on AI

Studies find that Gen-Z views on AI are extremely diverse, as perspectives range from uncertain, enthusiastic and fearful (Betriana, Tanioka, Gunawan, & Locsin, 2022). Gen-Z also has heightened expectations for AI transparency and ethical conduct because of their awareness of technology applications (Guerra-Tamez, Flores, Serna-Mendiburu, Robles, & Cortés, 2024).

3. Methodology

3.1. Research Design and Data Collection

To study Gen-Z views on AI-Driven Personalization, a 3-minute multiple-choice questionnaire, with questions ranging from participant backgrounds to preferred personalization to AI and data collection ethics, was distributed.

The survey was distributed through SurveySwap, SurveyCircle and a local high school research teacher to ensure a diverse sample. The survey has 101 respondents. In order to enrich the sample, through distributing the survey through

SurveySwap and SurveyCircle, this survey reached people around the globe with different experiences and backgrounds.

3.2. Ethical Considerations

Participants were informed about the purpose of the study and how the data would be used. Furthermore, this study ensured the anonymity of the study by not collecting any personal information including name and email address.

4. Presentation, Analysis and Discussion of Findings

4.1. Diversity of Survey Participants

Figure 1 displays the demographic characteristics of the participants. The majority, 49.5%, of the cohort are ages 12 - 17, 30.7% are ages 18 - 23 and 19.8% are ages 24 - 27. In regard to Ethnicity, the majority, 52.5% are Asia, 28.7% are White or Caucasian, 6.9% are Hispanic or Latino and 4% are Black or African. In regard to gender, females are the majority as they make up 55.4% of the cohort, males make up 41.6% and non-binary individuals make up 3%. The 52.5% of participants reside in North America, 27.7% from Europe, 12.9% from Asia, 2% from South America, and 5% from other unspecified locations.

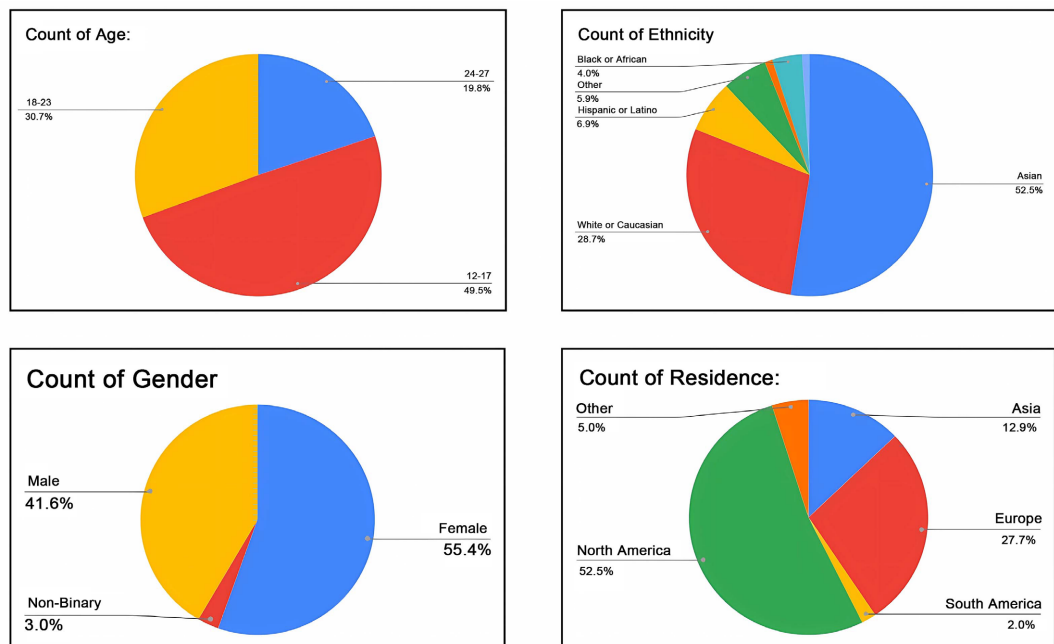


Figure 1. Age, ethnicity, gender and residence of participants.

4.2. Shopping Habits of Survey Participants

Figure 2 illustrates the shopping habits of survey participants. 37.3% of this cohort use the internet to shop 1 - 2 times a month, while 62.7% of this cohort use the internet more than weekly. Additionally, the entirety of this cohort uses Amazon, 55% uses Instagram, 30% uses Pinterest and 20% uses TikTok.

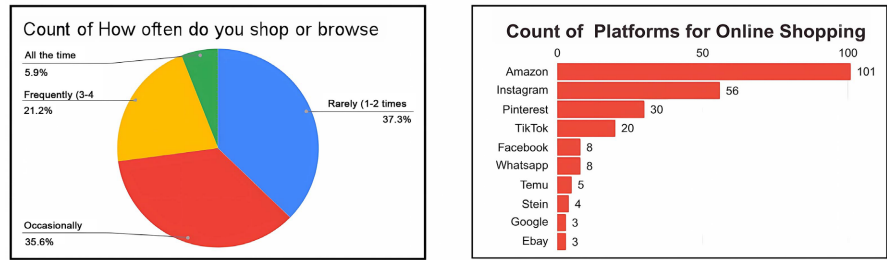


Figure 2. Frequency of online shopping and popular online shopping platforms of participants.

4.3. Gen-Z Opinion on Different AI-Driven Personalization Tools

Figure 3 displays Gen-Z opinion on different AI-Driven personalization tools. The most significant and relevant AI-Driven Personalization tools today include product recommendations, customized content, virtual try-ons, personalized ads, personalized quizzes, AI chatbots and personalized email marketing. Results display that while customized content, product recommendations and personalized quizzes are the most common and popular, virtual try-ons, AI chatbots and personalized email marketing are significantly less common. Additionally, it suggests that Gen-Z finds customized content, product recommendations, virtual try-ons most useful and those are all features that participants would like to see more in e-commerce.

Specifically, 68% of participants express their desire to see more of a presence of virtual try-ons and 69% believe it is very useful, however 94% of the cohort say that they interact with this tool the least. Through these results, it is apparent that product recommendations and customized content are the most effective AI-Driven Personalization tools. However, it is also suggested that e-commerce companies increase virtual try-ons as the majority of the cohort find these features useful and want to see more of these features online.

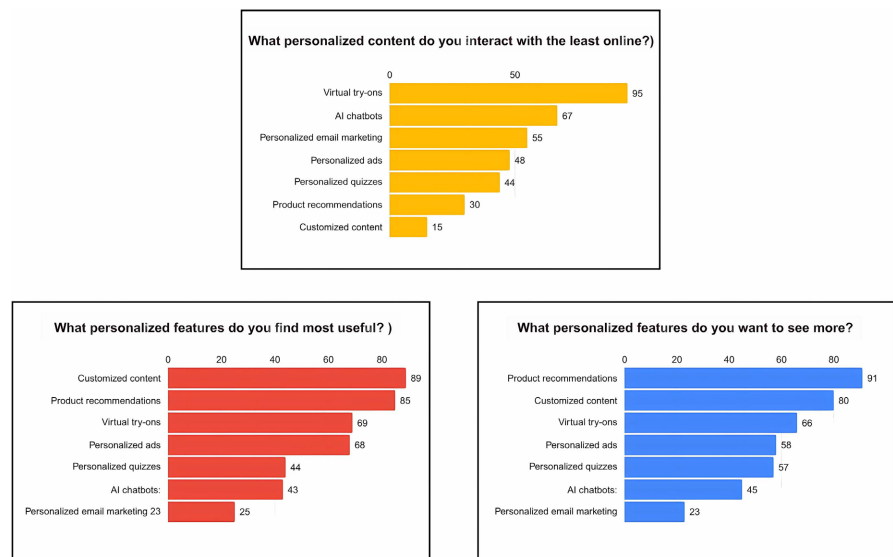


Figure 3. Gen-Z opinions on AI-driven personalization participants.

4.4. Impact of AI-Driven Personalization Gen-Z Perspectives on Brand

Figure 4 illustrates the impact of AI-Driven personalization for Gen-Z perspectives on brand image. In order to survey Gen-Z on their opinions on AI-Driven Personalization, I have assigned phrases that each represent a numerical value on a scale of 1 - 5 on how much AI impacts that specific factor.

- 1) Strongly Dislike/Not at all
- 2) Dislike/Not much
- 3) Neutral/Somewhat
- 4) Like/A lot
- 5) Strongly Like/Very much

Gen-Z displays a liking to AI-Driven personalization as shown in the results below. 54.4 percent like personal recommendations and 12.7% strongly like them. Only about 6.8% dislike personalized recommendations, the remaining 27.1% are neutral. Furthermore, 49.2% express that personalized experiences “somewhat” improves their overall satisfaction with a brand. 28% say it improves satisfaction “a lot” and 4% say it improves satisfaction “very much”. 47.5% of participants expressed that it made it “somewhat” likely to purchase with the brand, 22.9% said it made it “a lot” more likely to purchase with the brand and 7.6% said it made it “very much” likely to purchase with the brand. These results show the extent of AI-Driven Personalization, and its impact on satisfaction and purchase decisions. Furthermore, 65% of Gen-Z think brands that use AI are more innovative.

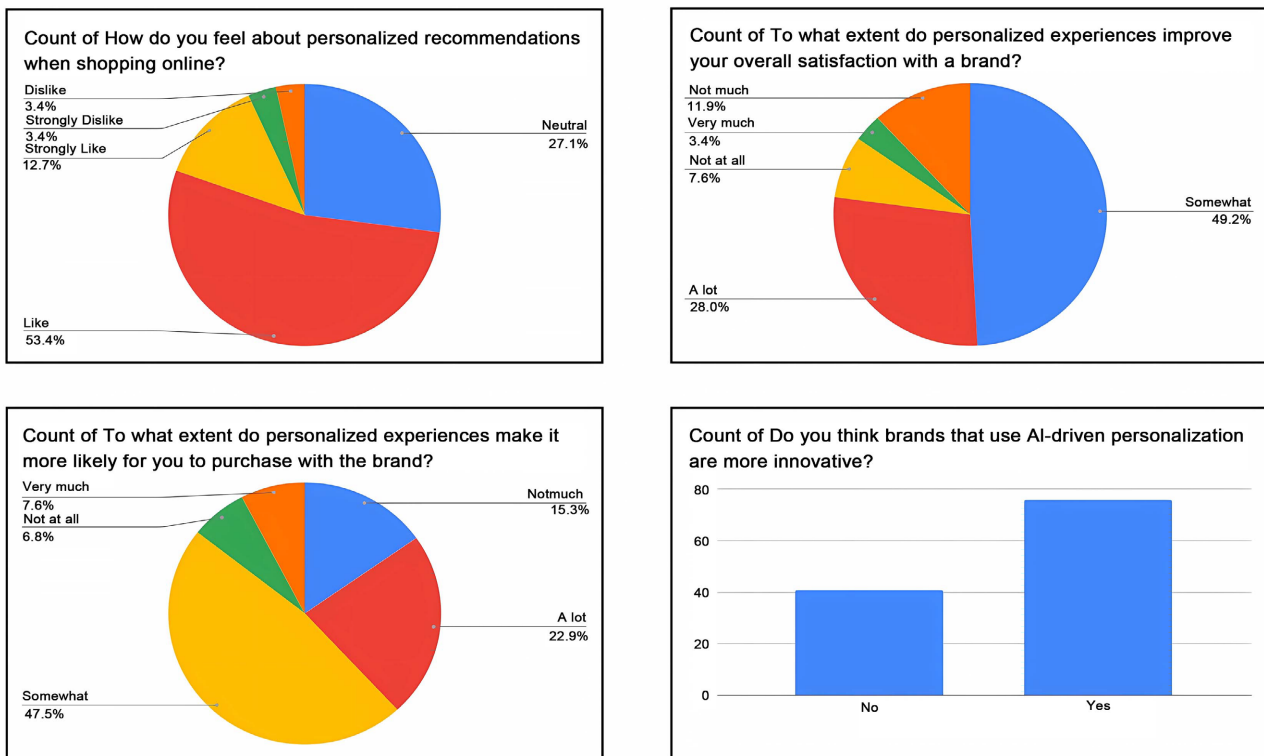


Figure 4. Impact of AI-driven personalization on Gen-Z perspectives.

4.5. Gen-Z Opinion on Different AI-Driven Personalization Ethics

Figure 5 presented Gen-Z opinions on different AI-Driven personalization ethics. 79.7% of participants are aware the AI tracks browsing history to deliver personalized content, however 20.3% are not. That said, only 8.5% of the cohort is not concerned about data collection. 29.7% are slightly concerned, 34.7% are moderately concerned, 17.8% are very concerned and 9.3% are extremely concerned. 88% of participants believe that AI-Driven Personalization should be regulated more strictly. Furthermore, 42.4% of the cohort believes that full control should be given to the consumer and 26.2% believe that moderate control should be given to the consumer. The trend of this data displays that the Gen-Z cohort is worried about the current AI situation, and they believe that AI should be regulated more with at least some control given to the consumer.

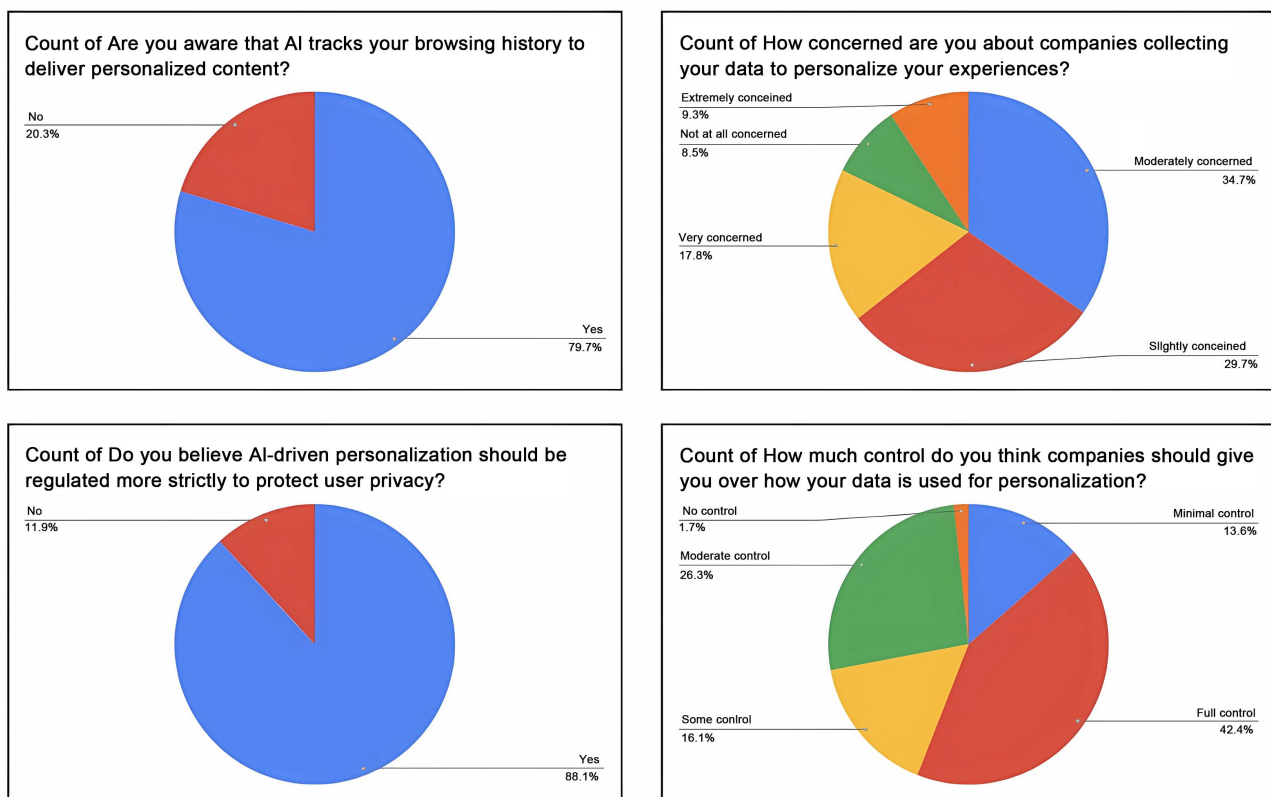


Figure 5. Gen-Z opinions on AI-driven personalization participants.

4.6. Potential Limitations

Some limitations of the research survey include social desirability bias and legal frameworks that impact certain countries. Additionally, as the survey focuses on current trends, these opinions and perspectives could change as trends and policies change in the future.

4.7. Potential Confounding Factors

Potential confounding factors include social influence including current events

that influence participant behavior. Additionally, participants could have different types and levels of exposures to different AI-driven personalization tools depending on their age, demographic and geographic location. Furthermore, the sample size is relatively small compared to the entire population of the study, which may affect the statistical power of the study.

5. Conclusion

5.1. Summary of Findings

These findings reveal that Gen-Z's most preferred AI-Driven Personalization features include customized content, product recommendations and virtual try-ons. However, it is also revealed that virtual try-ons are the least common online. Additionally, personalized email marketing, personalized quizzes and AI chatbots are the least preferred features online as Gen-Z views these features as not useful. Additionally, the majority of the cohort likes personalized recommendation, and the majority states that AI-Driven Personalization "somewhat" influences overall satisfaction and purchase decision. Furthermore, most of this Gen-Z cohort is aware of AI tracking browsing history and most believe there should be moderate-full control on how the data is used. The majority of this cohort is somewhat concerned about company data collection. The majority of participants also believe that AI-Driven Personalization should be regulated more strictly.

5.2. Comparative Analysis

This study shows similar results to studies in the past. This study proves and supports that AI positively influences Gen-Z overall satisfaction and purchase decision (Guerra-Tamez, Flores, Serna-Mendiburu, Robles, & Cortés, 2024; Guo & Luo, 2023). Additionally, this study supports the notion that the majority of Gen-Z are concerned with the future of AI ethics and collecting data, but still have mixed opinions on ethical debates. However, this study does add that the majority of Gen-Z would like full to moderate control on how their data is used (Jeffrey, 2022). This study diverges from other studies as it finds that Gen-Z doesn't prefer Chatbots as much (Holendova, Svoboda, & Seric, 2024). Additionally, it displays that innovations like virtual-try-ons and product recommendations are more preferred rather than personalized email marketing. This quantitative research provides insight on what specific tools are preferred by Gen-Z, it provides detailed insights on AI ethics, and it supports concepts about AI influence on purchase decision and brand satisfaction.

5.3. Implications of Study

The implication of this study is that it reveals how e-commerce businesses, especially targeted towards Gen-Z consumers, should focus their money and effort for maximum results. The study shows that AI-Driven Personalization positively impacts overall satisfaction with the brand and purchase decision. Additionally, increasing customized content, personalized recommendations and virtual try-ons

will benefit e-commerce companies focused on Gen-Z markets. Additionally, e-commerce companies focused on Gen-Z markets that have AI chatbots and personalized email marketing should reconsider their effectiveness as the majority of this cohort does not think these features are useful. Additionally, it reveals how most Gen-Z consumers are actively concerned about data collection ethics and believe full-control and discretion should be given to them. Based on this data, companies should focus on being transparent and giving clear options for data control to appeal to Gen-Z.

5.4. Future Research

Future research could include AI-Driven Personalization beyond e-commerce and in other industries including healthcare, entertainment and education. Research could also include focuses on other Generations like Gen-X, Millennials and Baby Boomers, and how that differs from Gen-Z. Further research could also involve the emotional and psychological effects of AI-Driven Personalization on consumers. Additionally, research could focus on different regions and how they differ from each other because of different AI regulatory frameworks.

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Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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