

AN EMPIRICAL STUDY ON THE INFLUENCE OF AI-DRIVEN PERSONALIZATION ON THE BUYING BEHAVIOR AND PRIVACY CONCERNS OF GEN Z CONSUMERS IN JALGAON

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Abstract

The rapid advancement of Artificial Intelligence (AI) has fundamentally altered the landscape of commerce, shifting from a "Search-based Economy" to a "Recommendation-based Economy". This study explores the influence of AI-driven personalization on Generation Z consumers in Jalgaon, focusing on the "Privacy Paradox" where consumers exchange data for convenience. The research is based on primary data collected through a structured Google Form targeting management students, analyzing their awareness of algorithmic accuracy and the shift toward impulse buying. The findings highlight the correlation between consumer trust and data privacy concerns while addressing the impact of AI "nudges" on platforms like Amazon and Instagram. The study aims to understand how AI is reshaping the socio-economic fabric of modern consumption among the first generation of "AI-Natives" in Jalgaon.

Keywords: Artificial Intelligence, Gen Z, Consumer Behavior, Personalized Recommendations, Privacy Paradox, Jalgaon City.

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Introduction:

In the contemporary digital era, Artificial Intelligence (AI) has fundamentally altered the landscape of commerce and society. We have moved from a "Search-based Economy," where consumers actively look for products, to a "Recommendation-based Economy," where algorithms predict and present products before a need is even consciously recognized. Generation Z (born between 1997 and 2012) represents the first generation of "AI-Natives".

Their purchasing journey is heavily mediated by sophisticated algorithms on platforms like Amazon, Instagram, and Myntra. While these AI-driven "nudges" offer unparalleled convenience and personalization, they also raise critical questions regarding consumer autonomy and data privacy. In Jalgaon, a city witnessing a significant shift toward digital adoption, this paper explores the "Privacy Paradox"—a phenomenon where consumers express concern over privacy yet continue to share personal data in exchange for rewards.

Background of the Study:

The transition from traditional retail to digital commerce has been accelerated by the integration of Artificial Intelligence (AI). Historically, consumer behavior was driven by active search and physical browsing; however, the modern landscape is dominated by predictive algorithms that

curate personalized shopping experiences. This shift is particularly evident in India, where digital inclusion has gained momentum following major economic shifts like demonetization.

In a growing urban center like Jalgaon, the penetration of smartphones and high-speed internet has enabled Gen Z consumers—the first generation of "AI-Natives"—to rely heavily on algorithmic recommendations for their daily needs. While these technologies offer unparalleled convenience and speed, they create a "Privacy Paradox". This paradox is a central concern for management students who are often aware of data collection practices but continue to share personal information in exchange for the rewards and ease offered by platforms like Amazon, Instagram, and Myntra.

The need for this study arises from the rapid transformation of the digital landscape in Jalgaon. As AI-driven "nudges" increasingly shift consumer behavior from planned, rational purchasing to impulsive, algorithm-driven buying, it becomes essential to examine the socio-economic implications. This research provides a localized perspective on how global AI trends are reshaping the trust, privacy concerns, and consumption patterns of the youth in Jalgaon.

Objectives of Study:

1. To assess the level of awareness and the perceived accuracy of AI-driven personalized recommendations among Gen Z consumers (individuals born between 1997 and 2012, as defined by the Pew Research Center) in Jalgaon.
2. To evaluate the impact of AI-based recommendations on the shift from planned purchasing to impulse buying behavior.
3. To identify the correlation between consumer trust in AI algorithms and their concerns regarding data privacy and intrusive marketing.

Review of Literature:

The evolution of Artificial Intelligence (AI) in the retail sector has transitioned from simple automation to sophisticated predictive personalization. The following themes represent the current state of academic discourse regarding AI, Gen Z, and consumer behavior:

1. AI-Driven Personalization and Consumer Engagement Recent studies by **Benjamin (2025)** and **Sabitha (2024)** highlight that AI-driven personalization significantly boosts consumer feelings of relevance and convenience. Research indicates that for "AI-Natives" like Gen Z, personalized recommendations on platforms such as Amazon and Instagram act as powerful digital stimuli, improving brand experience and increasing conversion rates by nearly 29% in some sectors.

2. The Impact of AI on Impulse Buying Behavior According to **Pathak et al. (2025)**, real-time AI recommendations significantly strengthen impulse purchases among Centennial consumers (Gen Z). Using the **Stimulus-Organism-Response (SOR) framework**, researchers found that personalized cues—such as "Frequently Bought Together" or urgency-based notifications—trigger an emotional "urge to buy" that bypasses planned purchasing decisions. **Jain and Gandhi (2021)** further noted that Indian shoppers are particularly responsive to customization and interactivity, which narrows the gap between consumer desire and action.

3. The "Privacy Paradox" and Data Trust A central theme in recent literature is the **Privacy Paradox**. **Singh (2025)** explored this in the Indian context, finding that while Gen Z consumers value the time-saving benefits of AI, they simultaneously express discomfort over opaque data tracking and lack of control. This "paradox" suggests a transactional view of privacy: consumers surrender data as a "cost" in exchange for the "benefit" of personalized value. **Sushma Ahire**

(2025) emphasizes that trust acts as a vital mediator; if personalization feels too intrusive or "creepy," it can lead to psychological reactance where consumers actively reject recommendations.

4. Gen Z as a Unique Consumer Cohort Literature identifies Gen Z as the first generation to demand seamless technological integration. **Turner (2022)** notes that their decision-making is heavily dependent on online social engagement and algorithmic "nudges." Unlike older generations, Gen Z has a higher threshold for AI adoption but maintains a skeptical view toward the ethical use of their personal information, making transparency a strategic imperative for brands.

Scope of the Study:

1. The level of awareness regarding AI algorithms among Gen Z in Jalgaon.
2. The impact of personalized recommendations on impulse buying behavior.
3. The overall shift in consumer behavior in Jalgaon towards AI-mediated transactions.

Research Methodology:

Research Design: This study follows a descriptive and analytical research design, as it aims to analyze the influence of AI-driven personalization on Gen Z consumers in Jalgaon. The research focuses on understanding the "Privacy Paradox," algorithmic influence, and changes in buying patterns.

Data Collection Method:

1. Primary Data: The core of this study relies on primary data collected through a **structured questionnaire**. To ensure high-quality data, the questionnaire was designed to cover four critical dimensions:

1. **Demographics & Usage:** Age, gender, degree, and daily screen time.
2. **AI Accuracy & Perception:** How well algorithms "know" the user compared to social circles.
3. **Impulse Buying Behavior:** The impact of "Frequently Bought Together" and "Personalized Discounts" on unplanned spending.
4. **Privacy & Ethics:** Trust levels, feelings of "manipulation," and the trade-off between convenience and data tracking.

2. Secondary Data: Gathered from journals, previous studies on consumer behavior, and AI-related research papers.

Sampling Method:

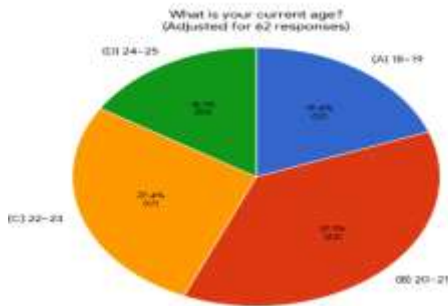
- **Sampling Technique:** **Convenience Sampling** was employed to gather responses. The researcher utilized digital platforms to reach a diverse group of respondents.
- **Data Collection Tool:** A Google Form was used to distribute the survey. This allowed for real-time data tracking and ensured an easy interface for the Gen Z demographic in Jalgaon.
- **Target Population:** The study targets Generation Z consumers (born 1997–2012) residing in Jalgaon. While focusing on the student community, the survey includes respondents from various academic backgrounds
- **Sample Size:** The study analyzed data from 62 respondents.

Data Analysis Techniques:

- **Simple Percentage Analysis:** Used to categorize demographic data and basic consumer preferences.

- **Likert Scale Analysis:** Questions regarding trust and "creepiness" were measured to find the weighted average of consumer sentiment.
- **Graphical Representation:** Data is visualized through pie charts and bar graphs for better clarity on behavioral trends

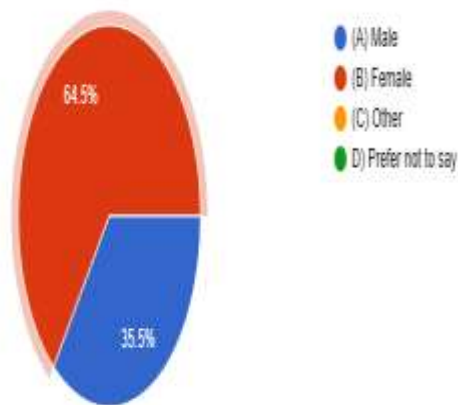
Data Analysis and Interpretation:



Age: The data shows that Out of 62 respondents, the largest group is aged 20–21 (37.1%), followed by 22–23 (27.4%), 18–19 (19.4%), and 24–25 (16.1%). This shows that the study mainly represents early Gen Z consumers who are highly active on digital platforms. Their strong presence makes the findings relevant for analyzing how AI-driven personalization influences buying behavior and privacy concerns among Gen Z consumers in Jalgaon.

Which gender do you identify as?

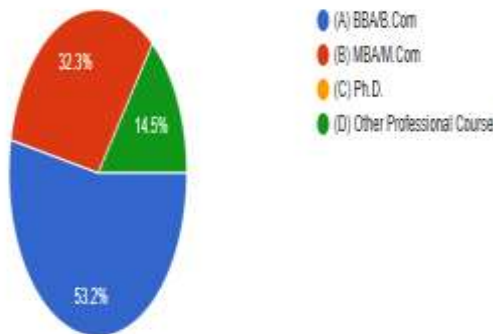
62 responses



Gender: The chart shows the gender distribution of 62 respondents in the study on AI-driven personalization and Gen Z consumers in Jalgaon. A majority of the participants are female (64.5%), while 35.5% are male, with no responses under “Other” or “Prefer not to say.” This indicates that the sample is female-dominated, and the findings may primarily reflect the buying behavior and privacy concerns of female Gen Z consumers. Therefore, gender composition should be considered while interpreting the overall results of the study.

Which degree are you currently pursuing?

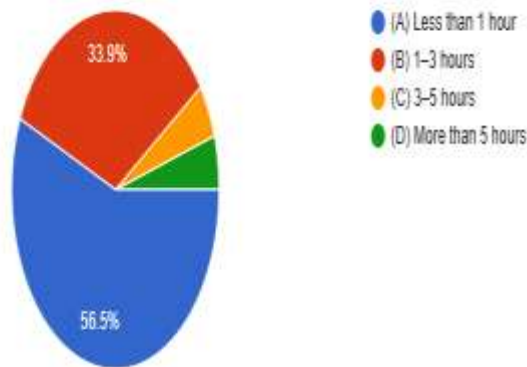
62 responses



Education: The chart presents the educational qualification of 62 respondents in the study. A majority of the participants (53.2%) are pursuing BBA/B.Com, followed by 32.3% pursuing MBA/M.Com, and 14.5% enrolled in other professional courses. No respondents are pursuing a Ph.D. This indicates that the sample mainly consists of undergraduate students, suggesting that the study's findings largely reflect the perceptions and buying behavior of undergraduate Gen Z consumers in Jalgaon.

How many hours do you spend daily on shopping or social media apps?

62 responses

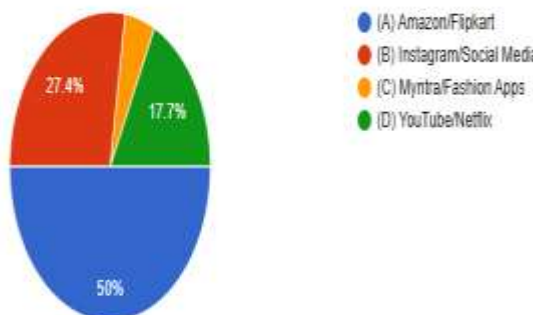


Time Spent on Shopping/Social Media Apps:

The chart shows that 56.5% of respondents spend less than 1 hour daily on shopping or social media apps, while 33.9% spend 1-3 hours. A small percentage spend 3-5 hours or more than 5 hours. This indicates that although most Gen Z consumers use these platforms regularly, the majority spend limited daily time, suggesting focused and selective engagement with digital platforms.

Which platform's "Recommendations" do you find most accurate for your taste?

62 responses

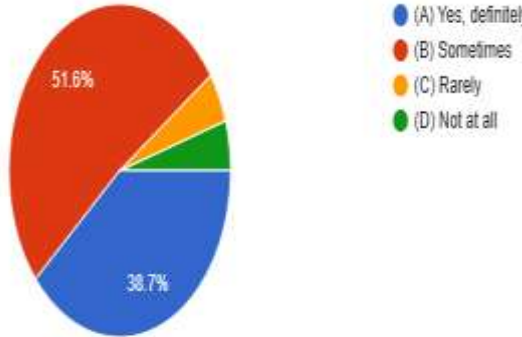


Most Accurate Recommendation Platform:

Half of the respondents (50%) find Amazon/Flipkart recommendations most accurate, followed by 27.4% who prefer Instagram/Social Media, and 17.7% who choose YouTube/Netflix, while very few select Myntra/Fashion Apps. This suggests that e-commerce platforms are perceived as more effective in AI-driven personalization compared to social or entertainment platforms.

Do you feel that shopping apps "know" your personal style better than your friends do?

62 responses

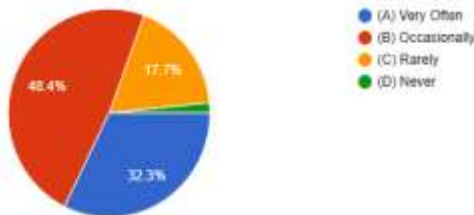


Apps Knowing Personal Style Better than Friends:

The majority of respondents believe shopping apps understand their personal style, with 51.6% responding "Sometimes" and 38.7% saying "Yes, definitely." Only a small percentage chose "Rarely" or "Not at all." This indicates a strong influence of AI-driven personalization on Gen Z consumers, highlighting their growing trust in algorithm-based recommendations over personal opinions.

How often do you notice that an ad appears for something you just talked about?

62 responses

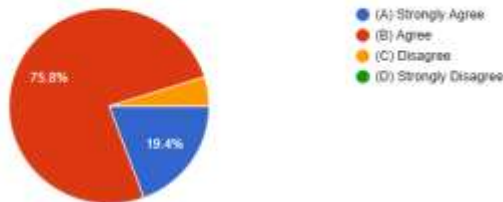


Ads Appearing After Conversations:

Most respondents notice such ads either occasionally (48.4%) or very often (32.3%), while 17.7% say rarely and very few say never. This suggests that a majority of Gen Z consumers are aware of AI-driven targeted advertising, which may raise privacy concerns.

Do you agree that AI-driven suggestions save you the effort of searching for products?

62 responses

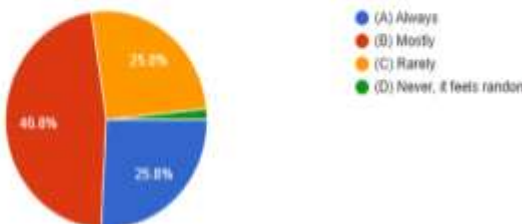


AI Suggestions Saving Effort:

A strong majority agree that AI-driven suggestions save time, with 75.8% agreeing and 19.4% strongly agreeing. Only a small percentage disagree. This indicates high acceptance of AI personalization for convenience.

When you see a "Recommended for You" section, do you feel it is truly personalized for you?

62 responses



"Recommended for You" Personalization:

Nearly half (46.8%) feel recommendations are mostly personalized, and 25.8% say always. However, 25.8% feel it is rarely personalized. Overall, most respondents perceive AI recommendations as genuinely tailored.

Do you believe AI has introduced you to brands you would have never found on your own?

62 responses

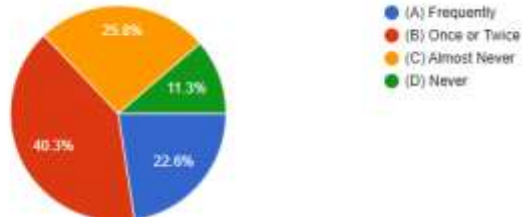


Introduction to New Brands

About 45.2% say AI introduced them to new brands a few times, and 38.7% say many times. This shows AI plays a significant role in brand discovery among Gen Z consumers.

Have you ever bought something purely because an AI "nudged" you with a recommendation?

62 responses

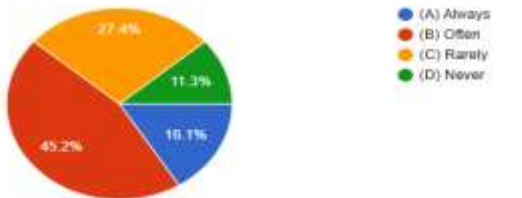


Buying Due to AI "Nudge"

40.3% have bought something once or twice due to AI recommendations, and 22.6% frequently do so. This indicates that AI nudging moderately influences purchase decisions.

Do you find yourself spending more money than planned because of "Frequently Bought Together" suggestions?

62 responses

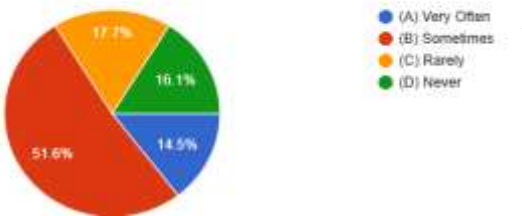


Spending More Due to "Frequently Bought Together"

45.2% say they often spend more because of such suggestions, and 16.1% say always. This highlights AI's impact on increasing consumer spending.

How often do you add items to your cart just because the AI offered a "Personalized Discount" for you?

62 responses



Adding Items Due to Personalized Discounts

51.6% sometimes add items due to personalized discounts, while 14.5% do so very often. This suggests that AI-based offers significantly influence buying behavior.

Do you trust a product more if the AI ranks it as a "Top Pick" for you?

62 responses

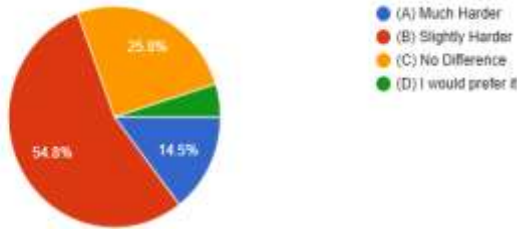


Trust in "Top Pick" Ranking

43.5% somewhat trust AI rankings, and 17.7% highly trust them, though 29% remain neutral. This indicates moderate trust in AI-curated product rankings.

If an app stopped giving you recommendations, would you find it harder or more annoying to shop?

62 responses

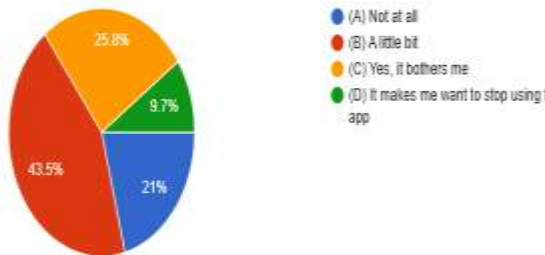


Concern About Algorithm Tracking:

While 43.5% are only a little bothered and 21% not at all, 25.8% say it bothers them, and 9.7% feel it makes them want to stop using the app. This reflects a balance between convenience and privacy concerns among Gen Z consumers in Jalgaon.

Does it bother you that algorithms are constantly tracking your clicks to predict your move?

62 responses

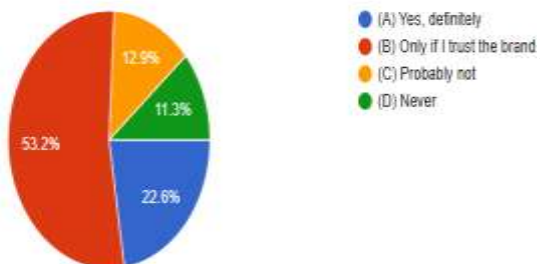


Concern About Algorithm Tracking:

43.5% of respondents are only a little bothered by constant tracking, while 21% are not bothered at all. However, 25.8% say it bothers them and 9.7% feel it makes them want to stop using the app. This shows moderate privacy concern, though most continue using apps despite discomfort

Would you give an app access to your location/contacts if it meant getting 100% perfect product matches?

62 responses

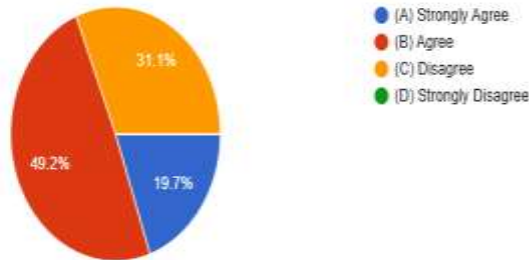


Giving Access for Better Recommendations:

A majority (53.2%) would allow access only if they trust the brand, and 22.6% would definitely allow it. A smaller group would probably not (12.9%) or never (11.3%) allow access. This indicates that trust plays a crucial role in data-sharing decisions.

Do you feel that AI-driven marketing "manipulates" you into buying things you don't really need?

61 responses

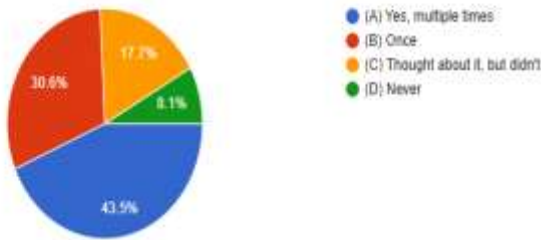


Feeling Manipulated by AI Marketing:

Nearly half (49.2%) agree and 19.7% strongly agree that AI-driven marketing manipulates them into unnecessary purchases, while 31.1% disagree. This reflects a significant perception of psychological influence in AI personalization.

Have you ever deleted an app because its personalized ads felt "too creepy" or intrusive?

62 responses

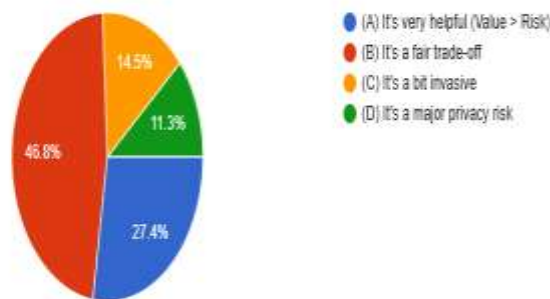


Deleting Apps Due to Creepy Ads:

43.5% have deleted apps multiple times and 30.6% have done so once due to intrusive ads. Only 8.1% have never considered it. This highlights strong privacy sensitivity among Gen Z consumers.

Overall, do you think AI makes your life as a consumer easier, or does it just invade your privacy?

62 responses



Overall Opinion on AI – Helpful or Invasive

46.8% believe AI is a fair trade-off between convenience and privacy, and 27.4% find it very helpful. However, 14.5% see it as somewhat invasive and 11.3% consider it a major privacy risk. Overall, most respondents perceive AI as beneficial, though privacy concerns remain evident.

Findings:

- 1. Demographic Concentration:** The study mainly represents early Gen Z consumers (20–23 years), with a female majority and predominantly undergraduate students, indicating that AI-driven personalization strongly influences young, digitally active learners.
- 2. High Digital Engagement:** Most respondents spend 1–3 hours daily on shopping and social media apps, reflecting regular exposure to AI-based recommendations and targeted marketing.

3. Effectiveness of AI Recommendations: E-commerce platforms are perceived as providing the most accurate personalized recommendations, showing the effectiveness of AI algorithms in influencing consumer preferences.

4. Impact on Buying Behavior: AI-driven features such as “Recommended for You,” “Frequently Bought Together,” and personalized discounts significantly influence purchase decisions and often lead to increased spending.

5. Brand Discovery Role: AI plays a key role in introducing Gen Z consumers to new brands, enhancing product awareness and expanding their purchasing choices.

6. Convenience and Time-Saving Perception: A strong majority agree that AI suggestions reduce search effort and make online shopping easier, highlighting positive acceptance of AI personalization.

7. Moderate Trust in AI Rankings: Many respondents somewhat trust AI-generated “Top Picks,” indicating growing but cautious reliance on algorithm-based product rankings.

8. Privacy Concerns and Perceived Manipulation: Despite convenience, a considerable proportion feel bothered by tracking, targeted ads, and manipulative marketing tactics, and some have deleted apps due to intrusive personalization—showing a clear tension between personalization benefits and privacy concerns.

Conclusion:

The study concludes that AI-driven personalization has a significant impact on the buying behavior of Gen Z consumers in Jalgaon. Personalized recommendations, discounts, and algorithm-based suggestions positively influence purchase decisions, increase spending, and enhance brand discovery. At the same time, privacy concerns remain prominent, as many respondents feel tracked, manipulated, or uncomfortable with intrusive advertisements. However, despite these concerns, most consumers perceive AI as convenient and helpful, considering it a fair trade-off between value and privacy risk. Therefore, trust, transparency, and ethical data usage emerge as critical factors for businesses aiming to strengthen AI-driven personalization strategies among Gen Z consumers.

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