

# Role of Artificial Intelligence in Sustainable Marketing: Trust, Engagement, and Ethical Branding with Generation Z in Mumbai

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## Abstract

Marketing is an art as well as a science. It is imperative to marketize the products and services to stay competitive and ensure sustainable development. The globalization, digitalization and Gen Z have influenced the marketplaces to the great extent. The firms have focused on using the high-end technologies to build long-lasting trust and develop ethical brands for better consumer engagement. The present study aims to explore how AI-driven marketing strategies influence trust, perceived authenticity, and engagement levels among Generation Z an emerging customer base known for its digital fluency and social consciousness. The study is empirical in nature. The primary data collected Gen Z consumers through online survey with the help of structured questionnaire. The research finds that AI plays a crucial role in designing in brand perception, building trust when aligned with environmental sustainability and ethical transparency. These findings emphasise the importance of complementing ethical messaging with AI personalization to foster trust and engagement among younger consumers.

**Keywords:** *Sustainable Marketing, Artificial Intelligence, Branding, Gen Z Consumers Behaviour, Digital Trust, Ethical Advertising*

## 1. Introduction

Technology is the key to success in the digital and Gen Z era. This works well in order to adopt quick changes, innovate the products and ensure sustainable marketing for the target consumers. The landscape of marketing is undergoing one of its most profound transformations, shaped by two parallel forces such as technological innovation and ethical consciousness (Choudhury et al., 2024). The Artificial Intelligence (AI) is redefining how brands connect with audiences by enabling real-time personalization, predictive insights, and seamless digital interactions (Gaikwad, 2024). At the same time, the growing urgency around sustainability, climate change, and social responsibility is reshaping consumer expectations, particularly among Generation Z. Unlike previous generations, Gen Z has been raised in an environment of constant digital connectivity while simultaneously confronting global crises such as climate disruption, economic uncertainty, and social inequality. This dual exposure has cultivated a consumer group that is highly informed, socially aware, and far more demanding of the brands they choose to associate with. For them, loyalty is no longer a matter of price advantage or convenience; it hinges on authenticity, transparency, and alignment with deeper ethical and environmental values.

India is the highly populated country with good number of youths. Gen Z population is highly technosavvy than previous ones. As organizations increasingly integrate AI into their marketing strategies ranging from intelligent chatbots and hyper-personalized recommendations to data-driven predictive analytics, new opportunities arise to connect with consumers at an unprecedented scale. However, these same technologies raise critical questions: Can AI be harnessed to strengthen trust and reinforce sustainable brand narratives? Or does the very automation of human communication risk erode the authenticity that Gen Z demands? This paper attempts to study the ethical and technological dimensions of marketing from sustainable development perspectives. Many researches indicate that the knowing your customer (KYC) helps in business policies and strategic management. This research sets out to examine intersection of AI and sustainability within marketing, with a particular focus on emerging markets. By exploring how Gen Z perceives AI-enabled strategies that emphasize ethical responsibility and environmental consciousness, the study seeks to uncover whether these innovations genuinely enhance engagement or inadvertently create scepticism. The outcomes to provide actionable insights for marketers helping them design campaigns that are not only technologically advanced but also socially accountable, thereby redefining brand building in an era of intelligent automation and purpose-driven consumption.

## **2. Literature Review**

The convergence of Artificial Intelligence (AI), sustainability, and ethical branding has significantly reshaped the way organizations approach modern marketing. For Generation Z often described as digitally native and socially conscious the value of AI in marketing extends far beyond personalization. Instead, its effectiveness is judged through the lens of transparency, authenticity, and ethical alignment. The following review synthesizes key literature under four interconnected themes: AI in marketing and personalization, sustainable and ethical branding, Gen Z consumer behaviour, and the role of trust in AI-driven communication.

- **AI in Marketing and Personalization**

AI technologies such as recommendation engines, predictive analytics, and conversational chatbots have transformed digital marketing by offering hyper-personalized experiences. Chatterjee et al. (2020) demonstrated that AI-powered personalization can enhance customer satisfaction and engagement by delivering content that is contextually relevant and timely. Expanding on this, Huang and Rust (2021) proposed the “AI Marketing Framework,” which positions AI as a tool that strengthens the sensing, thinking, and acting capabilities of brands in digital communication. However, personalization comes with a trade-off. While consumers appreciate relevance, concerns around privacy and data exploitation remain pressing. Kaplan and Haenlein (2019) highlighted that AI-driven interactions, though efficient, may inadvertently undermine consumer trust if perceived as manipulative or intrusive. This tension suggests that the success of AI in marketing relies not only on technological sophistication but also on ethical design, transparency, and consumer consent.

- **Sustainable and Ethical Branding**

Sustainability has evolved from being a corporate add-on to becoming a strategic imperative in marketing. Leonidou et al. (2013) emphasized that green marketing contributes positively to brand equity, particularly when messages are consistent and credible. Nguyen et al. (2021) observed that authentic integration of sustainability into brand strategy rather than superficial claims—strengthens consumer loyalty, especially among younger demographics. Nonetheless, the risk of greenwashing continues to challenge brands. Delmas and Burbano (2011) warned that insincere claims of environmental responsibility can backfire, eroding consumer trust rather than enhancing it. Hartmann et al. (2005) further argued that emotional appeals resonate with audiences only when backed by genuine environmental efforts. Taken together, these studies highlight that ethical storytelling and

purpose-driven branding are central to building meaningful consumer relationships in an era where sustainability is non-negotiable.

- **Gen Z Consumer Behaviour**

Generation Z exhibits distinct consumption patterns compared to previous cohorts. As Francis and Hoefel (2018) suggest, Gen Z is shaped by a strong sense of identity, leading them to favour brands that reflect their personal values and social commitments. Beyond consumption, these demographic views digital platforms as spaces for self-expression which Priporas et al. (2017) identified as a critical driver of their engagement with brands. Furthermore, Williams et al. (2020) demonstrated that Gen Z responds positively to brands that invite participation in meaningful dialogue, particularly on issues such as climate change, diversity, and ethical practices. This indicates that traditional, one-directional marketing is insufficient for this cohort; rather, transparency, interactivity, and co-creation of narratives are essential for building authentic engagement.

- **Trust, Ethics, and AI in Marketing**

The ethical use of AI has emerged as a defining factor in establishing brand trust. Shin (2020) proposed a trust framework that identifies fairness, explainability, and transparency as foundational principles for consumer confidence in AI systems. Similarly, Paschen et al. (2020) argued that while AI enables new marketing opportunities, it simultaneously introduces ethical risks that require governance and accountability. Mikalef et al. (2021) found that consumer perceptions of AI vary considerably, with trust being enhanced when AI use is transparent and jeopardized when it is concealed or poorly explained. Dwivedi et al. (2021) reiterated this view, urging marketers to design AI strategies that bridge the human–AI gap through responsible implementation. Supporting this, the “PwC Global Consumer Insights Survey (2024) reported that while personalization is valued, 76% of Gen Z respondents demanded full disclosure when AI technologies are used in advertising. This statistic underscores the growing expectation for openness and ethical clarity in digital communication.

### **3. Research Gap**

The reviewed literature highlights that while AI offers various competitive advantages in terms of customization, profitability and scalability in marketing. Its effectiveness lies in driving sustainable consumption is strongly dependent on ethical transparency and consumer trust. The present study primarily deals with the Generation Z which is likely to rule the marketplaces in India including rural and urban. Additionally, the authenticity and accountability are other aspects of study. This study seeks to address this gap by examining how Generation Z perceives AI-enabled marketing strategies designed to promote sustainability. Specifically, it explores key variables such as customization, automation, ethical marketing, and their impact on brand engagement. By doing so, the research aims to contribute to the emerging discourse on ethically responsible AI in marketing, offering insights that can guide organizations in building both meaningful connections and accountable brand practices in the digital era.

### **4. Objectives of Study**

This study aims to investigate the intersection of AI-driven marketing, sustainability, and ethical brand communication, with a particular emphasis on the perceptions of Generation Z consumers. The research is guided by the following objectives:

- To analyse how Gen Z perceives AI-driven marketing practices, with specific attention to dimensions such as personalization, authenticity, and trust
- To evaluate the influence of AI-enabled ethical and sustainable branding on Gen Z’s consumer engagement and long-term brand loyalty

- To examine the extent of trust that Gen Z places in AI-generated content when it communicates sustainability and ethical values
- To explore the relationship between AI transparency and brand credibility within the broader context of sustainable marketing communication

### 5. Research Methodology

The study employs a quantitative research design using survey-based primary data collection to evaluate Gen Z’s response to AI-driven sustainable marketing. It explores the perceptions and perceptions of the target respondents in the changing times and generations.

- **Research Design:** A descriptive and causal research design was used to examine the relationships between AI-driven marketing practices and key constructs such as trust, engagement, and brand perception in the context of sustainable and ethical marketing.
- **Target Population:** Gen Z consumers (aged 18–26), primarily college/university students, young professionals, and marketing faculty members across emerging markets such as India.
- **Sample Size:** Total 54 valid responses are targeted to ensure statistical reliability.
- **Sampling Technique:** A non-probability purposive sampling method was employed to target Gen Z college students enrolled in business management studies. Professors/academicians in the field of marketing. Young marketing professionals with 1–5 years of experience.
- **Data Collection:** A structured questionnaire was developed and divided into five key sections with a 5-point Likert scale was used (1 = Strongly Disagree to 5 = Strongly Agree). The survey was administered both online (Google Forms) and offline (in-campus sessions) to ensure wider reach.

**Table 1: Variables of Study**

Section	Content
<b>A. Demographics</b>	Age, gender, education, professional background, awareness of AI and sustainability.
<b>B. AI Awareness &amp; Perception</b>	Familiarity with AI in marketing (chatbots, personalization, ads), perceived utility and transparency.
<b>C. Sustainable &amp; Ethical Branding</b>	Attitudes toward eco-conscious and ethically responsible brands.
<b>D. Brand Trust &amp; Engagement</b>	Trust, perceived authenticity, emotional connection, and engagement levels.
<b>E. Behavioural Intentions</b>	Purchase intention, brand loyalty, and advocacy.

- **Tools for Data Analysis:** The author has used Google Form, MS-Excel and other tools for tables, graphs and analyzed the data through percentile method.

### 6. Data Analysis & Inference:

Table 2: Demographic Profile of Respondents

	Criteria	Count	Percentage
<b>Age</b>	18-21 years	12	22%
	22-25 years	40	74%
<b>Gender</b>	Male	31	57.40%
	Female	23	42.60%
<b>Education</b>	Post Graduate	35	65%
	Under Graduate	13	24%
	Graduate	9	11%
<b>Field of study/work</b>	Management	24	53%
	Engineering	14	22%
	Working	5	11%
	Others	9	14%

The survey largely represents young adults in their early professional or higher education stage as majority of respondents fall within the 22–25 years age group (74%). As per Chart 1 sample shows male dominance of 57.4 % compared to females 42.60%. The data suggests that the respondent base is predominantly young, postgraduate-level students in management, with a slightly higher male representation. This demographic profile aligns well with research focusing on Gen Z and early career professionals, particularly in the fields of management and engineering.

**A) Awareness & Perception of Gen Zs towards AI in Marketing & its effectiveness**

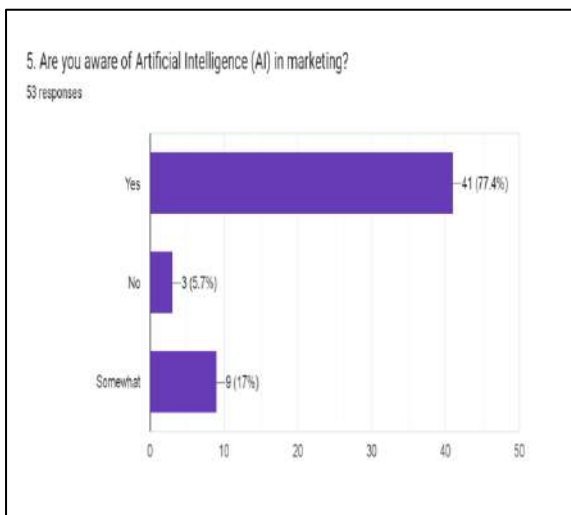


Figure 1: Gen Z Awareness toward AI

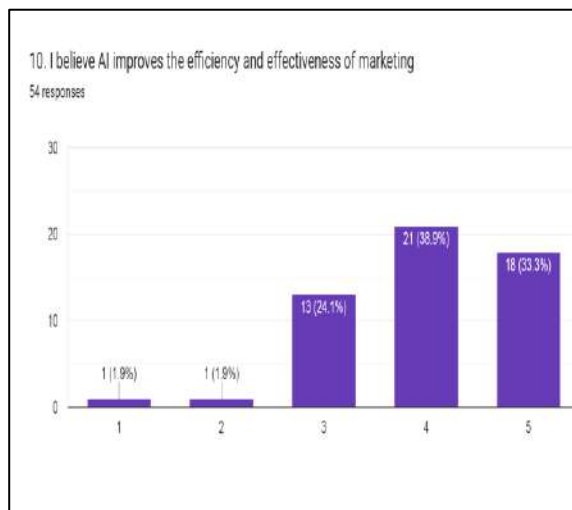


Figure 2: Gen Z Perceptions towards AI Efficiency

The above data as highlighted in Figure 1 and 2 represents the awareness and perceptions of Gen Z consumers respectively. It is found that 77.40% responded positively towards the awareness that they know AI and its usage in marketing domain. 5.70% stated that they are not aware about the same while confirms over 17% respondents are somewhat aware of AI in marketing. Figure 2 indicates that the

respondents agreed with the statement supporting AI can improve marketing efficiency rating 3 (24.10%), 4 (38.90) and 5 (33.30) respectively.

**C) Perception of sustainable & ethical branding that uses eco-friendly packaging & promotes sustainability effectively**

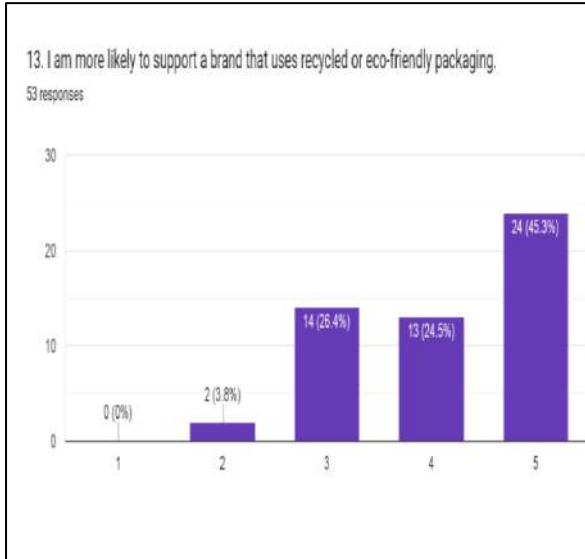


Figure 3: Eco-Friendly Packaging

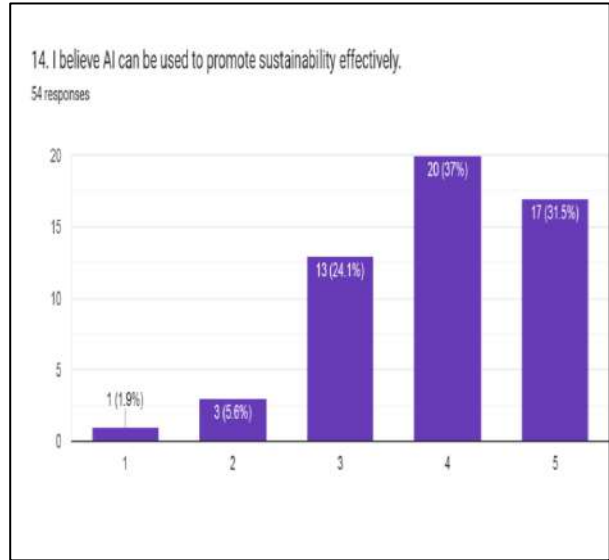


Figure 4: AI and Sustainability

The figure 3 illustrates respondents’ agreement with the statement “eco-friendly packaging.” Nearly half (45.3%) strongly agreed and 24.5% agreed, showing that most participants have a strong preference for sustainable packaging practices. Around 26.4% remained neutral, while only 3.8% disagreed and none strongly disagreed. Overall, the results suggest that consumers demonstrate a clear inclination toward environmentally responsible brands that adopt eco-friendly packaging. Figure 4 deals with AI use for sustainable promotion. 37% agreed and 31.5% strongly agreed, indicating that a majority recognize AI’s role in advancing sustainability initiatives. Around 24.1% remained neutral, while only 7.5% expressed disagreement and 1.9% strongly disagreed. Overall, the data suggests a predominantly positive perception toward AI as a key enabler of sustainable development and environmental efficiency.

**D) Trust & Engagement of brands using AI & human interaction:**

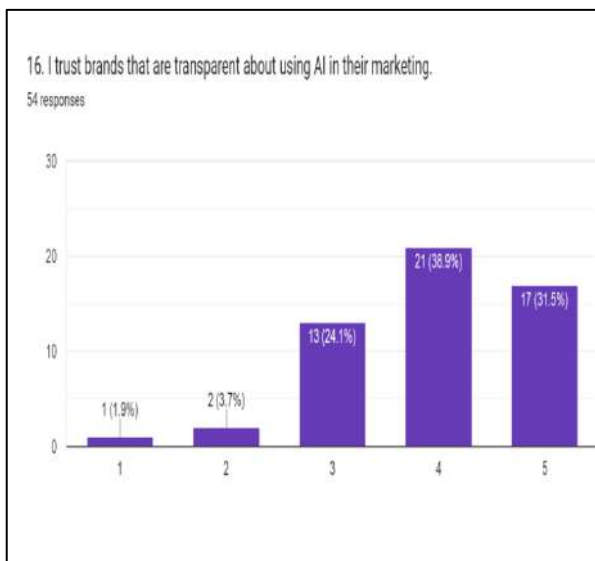


Figure 6: AI, Transparency and Branding

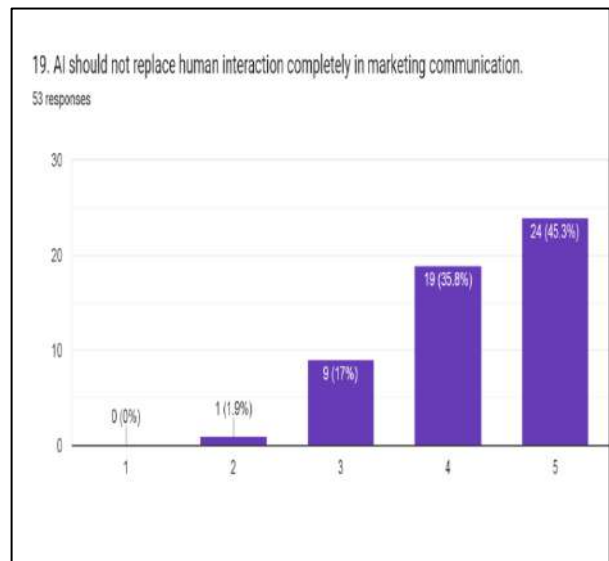


Figure 7: AI-Human Interactions

Strong positive correlation shows transparency in AI builds trust, which translates into higher engagement with data as shown in Figure 6 and 7 supporting 70% while 80% of respondents agree that AI should not completely replace human interaction in marketing communication.

**E) Purchase intentions & Brand Loyalty for using AI ethically & supporting ethical causes**

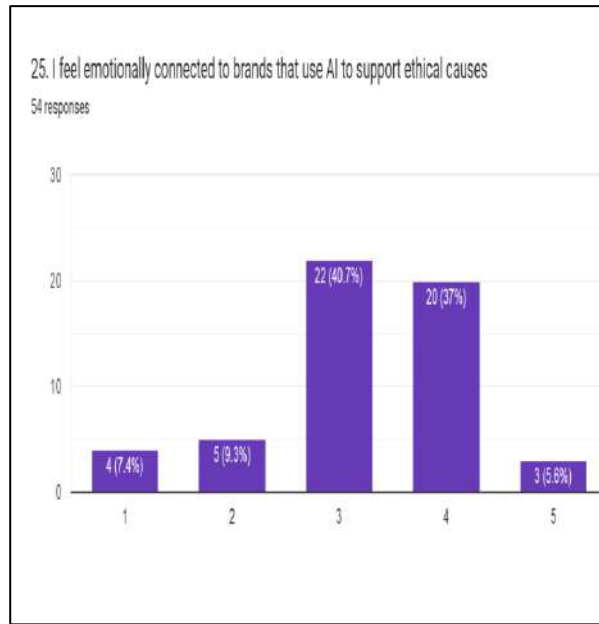
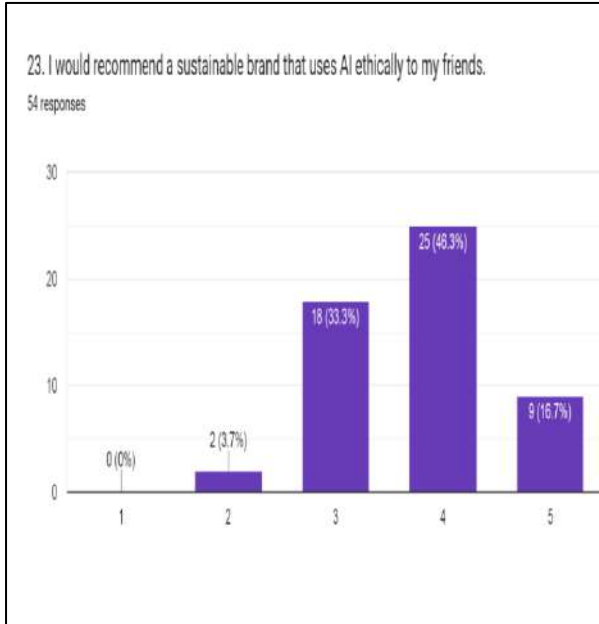


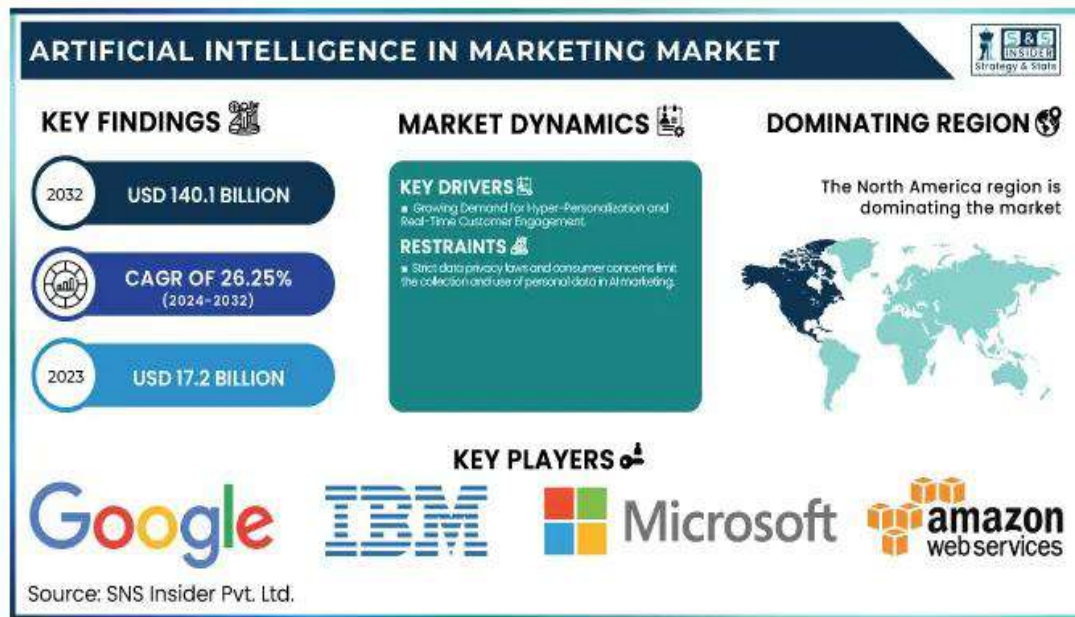
Figure 8: Sustainable Brand Recommendation

Figure 9: Emotional Connection with Branding

The above figures 8 and 9 indicate that Gen Z (97%) shows greater brand loyalty when AI is ethically combined with sustainability & feel emotionally connected to brands that use AI to support ethical causes. The analysis demonstrates a moderately strong positive correlation ( $r = 0.65$ ) between consumer trust in brands that disclose their use of AI and their likelihood to engage with brands communicating sustainability goals. Neutral sentiments observed in the responses often referenced personalized AI campaigns, indicating that participants perceive personalization as a trust-building element in marketing. Age-based patterns further reinforce this finding: respondents aged 22–25, a key segment of Gen Z, expressed more favourable attitudes toward AI in marketing, with particularly high levels of agreement among those with postgraduate education. The recurring emphasis on transparency and personalization as critical themes strengthens the argument that AI-driven personalization can indeed foster trust.

The survey results revealed a significant positive association between consumers’ perception of AI and the importance they place on sustainability across demographic groups. A clear majority of respondents also agreed that AI should complement rather than fully replace human interaction, highlighting the importance of maintaining authenticity in AI-enabled communication. The correlation data indicate that consumers who value transparency and sustainability show stronger engagement with brands that communicate these values clearly and ethically through AI platforms. This demonstrates that ethical storytelling and sustainability-focused communication resonate effectively when supported by responsible AI practices. To conclude, the data supports H2 by showing that AI-powered platforms enhance engagement when they convey sustainability and ethical values in a transparent and balanced manner, preserving a human element alongside technological innovation.

Figure 10: AI-Based Marketing Growth Potential



(Source: SNS Insider Pvt. Ltd.)

The above figures are projected by the reputed firm SNS Insider Pvt. Ltd. It is estimated that AI-based marketing is likely to grow with 26.25% CAGR from 2024 to 2032. It will be worth \$140.1 Billion by the year 2032. Currently, it is concentrated in the North America region. However, the market penetration is like to experience in the Asia-Pacific, Europe and other parts of the globe.

## 7. Findings & Conclusion

The use of artificial intelligence in marketing remains the top priority for the firms. Additionally, the Gen Z consumers are likely to follow, prefer the sustainable marketing practices. They are sensitive and accountable towards the environment and eco-friendly products. This study confirms that ethically transparent AI-driven marketing fosters trust and engagement among Generation Z in Mumbai. Personalization, aligned with sustainability and ethical principles, can help brands establish authentic relationships with young consumers. The findings underscore the importance for marketers to leverage AI responsibly—disclosing data practices, fostering transparency, and communicating sustainability efforts authentically. By doing so, brands can build long-term loyalty and contribute to more sustainable consumer behaviours. All of these can create win-win situations for several stakeholders.

## 8. Limitations & Future Scope of Study

- The study is geographically confined to Mumbai, and perceptions may vary across other Indian cities or emerging markets.
- Due to paucity of time sample size was limited to 54 respondents in Mumbai local areas
- Quantitative methods, while comprehensive, lack the depth to explore the nuanced emotional and cognitive drivers behind consumer trust.

## 9. Future Scope of Study:

- **Geographical Expansion:** Extending studies beyond Mumbai to other regions and countries will help understand cultural and socio-economic influences on perceptions of AI and sustainability.
- **Longitudinal Research:** Tracking consumer perceptions over time will reveal how trust evolves with technological advances and increased awareness.

- **Qualitative Investigations:** Conducting interviews and focus groups can uncover nuanced emotional and cognitive drivers behind trust and engagement.
- **Sector-Specific Studies:** Analysing how different industries such as fashion, technology, or fast-moving consumer goods deploy ethical AI strategies to influence brand loyalty.

## 10. Conclusion:

This study illuminates the pivotal role of artificial intelligence in advancing sustainable marketing practices among Generation Z consumers in Mumbai, a demographic renowned for its digital nativity and strong ethical consciousness. The findings reveal that AI-driven tools personalized recommendations, chatbots, and predictive analytics—significantly enhance consumer trust and engagement when transparency and data privacy are prioritized. Moreover, AI-enabled ethical branding initiatives, such as blockchain-verified sustainability claims and eco-friendly content curation, resonate deeply with Gen Z's values, fostering long-term brand loyalty. However, the research also highlights persistent concerns regarding algorithmic bias and greenwashing, underscoring that unchecked AI deployment can erode trust rather than build it. In the context of Mumbai's dynamic urban market, where sustainability intersects with rapid digital adoption, these insights demonstrate that AI is not merely a technological enabler but a strategic imperative for authentic, value-driven marketing. In conclusion, organizations aiming to capture the Gen Z segment must integrate AI responsibly into sustainable marketing frameworks, emphasizing ethical governance, human oversight, and continuous stakeholder dialogue. By doing so, brands can transform AI from a perceived threat into a powerful ally for genuine environmental and social impact. Future research should extend this inquiry to comparative analyses across Indian metros and rural areas, explore longitudinal effects of AI maturation, and investigate emerging technologies such as generative AI in sustainability communication. Ultimately, the harmonious convergence of artificial intelligence and sustainable marketing holds transformative potential—not only for commercial success but for accelerating India's transition toward a more equitable and environmentally conscious future.

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