# The impact of AI and chatbots in influencing the GenZ Consumer engagement and retention

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***Abstract*—The rapid introduction of AI-based chatbots into marketing activities and customer-service models has transformed consumer-brand relations, mainly evident in Generation Z, a group of people who are highly digitally literate and who prefer personalized, time-sensitive communications. However, little empirical research has been done to determine chatbots impact on Gen Z involvement and retention. To examine the role of AI –powered chatbots in enhancing customer engagement and retention among Gen Z generation in the Delhi NCR region. A descriptive-exploratory type of research design was conducted. The sample size consisted of 100 respondents who are representatives of Generation Z where they were recruited through stratified sampling considering gender, age, education, and residence. However, limitations meant the final sample was biased towards urban and student respondents, so the final sample was more like quota/convenience sampling and questioned with the assistance of a structured questionnaire. The chatbot constructed through the AI was the independent variable; the engagement and retention were dependent variables. SPSS was used to implement regression and correlation to determine statistical analysis. The results of the regression analysis indicated that the implementation of chatbots had a positive influence on customer engagement that was statistically significant ($\beta = 0.312$, $R^2 = 0.214$, $t = 5.17$, $F(1,98) = 26.7$, $p = 0.001$). Elaborated by correlation analysis, the experience with the chatbots were statistically related (moderate) to retention ($r = 0.276$, $p = 0.005$). As empirical evidence shows, personalized, responsive, and trust-earning AI-powered chatbots can significantly improve the levels of engagement and retention among Gen Z consumers. Such findings support the idea that empathetic, well-designed chatbot conversations can open strategic opportunities to develop brand loyalty in a very competitive online world.**

***Index Terms*—AI- chatbots, customer engagement, generation Z, retention**

## 1. INTRODUCTION

The primary objective of marketing is to provide value for both the customer and the organization. Its power resides in the relentless pursuit of fulfilling the demands and motivations of consumers, whether individuals or corporations, through the creation and development of products and services. With advancements in economic, technological, and socio-cultural domains, the original methodology has been enhanced and professionalized [1]. Organizations are increasingly utilizing artificial intelligence (AI) technologies to manage extensive data in real-time efficiently. The incorporation of AI into diverse marketing processes is offering marketers multiple opportunities and attracting considerable interest from industry professionals [2].

A primary benefit of AI-enhanced services is their capacity to execute tasks more swiftly and with superior precision than humans. Nearly all organisations now employ AI-driven chatbots on prominent social media and messaging platforms, such as Facebook and WhatsApp, to efficiently interact with their extensive client base and deliver immediate support. Nonetheless, the capabilities of AI surpass this limitation. Interacting with a bot that emulates human dialogue is a novelty for numerous people, functioning as an effective instrument to engage clients and prompt purchases prior to existing the website. AI chatbots have demonstrated their efficacy in assisting clients with pizza orders and navigating intricate sales processes, enhancing both B2C and B2B engagements [3, 4].

The inaugural chatbot, ELIZA, was created by computer scientist “Joseph Weizenbaum” in the mid-20th century, about 1960. ELIZA is an interactive computer program that emulates human conversation through explicit rule-based transformations of

enquiries and utilizes a keyword list to generate responses. Its work was a critical milestone in the research field of AI leading to the subsequent advancements in the field of chatbot engineering [5]. Chatbots have come a long way since their first prototype, and are now used and implemented in various industries, shopping retail, healthcare, and banking, to complete a variety of tasks such as answering simple customer questions to proposing personalized product suggestions on the basis of a history of purchases [6]. Chatbots are even in a position to create interactions that are quite similar in nature to human-to-human communication. The current use combines machine-learning techniques that enable them to internalize patterns gleaned through previous interactions and be able to adjust future responses. In other scenarios, the enhanced intricacy in these systems is quite high to an extent that the users easily cannot realize that they are interacting with a machine, and thus they proceed with an assumption that their intervener is human [7]. Empirical research consistently indicates that chatbots have a significant administrative role in customer assistance in the near future. The global chatbot market was valued at USD 5,132.8 million in 2022 and is projected to grow at a CAGR of 23.3% between 2023 and 2030 as noted by Grand View Research [8]. This expansion may be attributed to heightened corporate endorsement of client support initiatives aimed at cost optimization, alongside the necessity to offer client help around the clock, hence reducing operating expenses and amplifying consumer desire for self-serve operations. The capacity to deliver prompt services at reduced costs through the utilisation of chatbots has augmented the need for chatbots across diverse sectors [9].

### 1.2 Gen Z customers

Generation Z (Gen Z) presents a key target audience of organisations that work in the e-commerce sector. The term used to define them as people who were born in the years between 1997 and 2012, the cohort can be defined as digital natives due to having grown in an environment where technology does prevail. It is also important to identify how they feel and react towards chatbots as this would help in explaining the impact of technology that has created in modern marketplaces. The cohort identified as digital natives was born at the period when internet and technology usage became ubiquitous, significantly influencing their consumption patterns [10].

The literature that has already been conducted on Gen Z reaction towards chatbots adopts a heterogeneous landscape. Whereas some researchers can confirm that such artificial agents receive unfavorable attitudes and can be annoying, while some others are viewed positively and can serve as engagement enablers. Empirical surveys indicate that Gen Z spend about 5 hours a day using the Internet, thus making them the most digitally connected generation [11].

Quantitative studies indicate that an increasing number of Gen Z individuals are utilising mobile devices for retail transactions; specifically, 67% of Gen Z respondents in a Shopify survey reported making a purchase via a mobile device in the past six months [21]. The pursuit of distinctive and individualized experiences is a defining characteristic of Generation Z. In comparison to the traditional advertisement's method, recent consumers have become more dependent on peer suggestions and endorsements of influencers in addition to being more easily influenced by social media and online-reviews.

The evidence which is gained with the help of empirical studies shows that those e-commerce businesses which prioritise transparency, authenticity and very attentive relations with the customers are the ones which are likely to have a larger portion of the market. Modern research indicates that the representatives of Gen Z especially prefer the firms that correspond to their ethical and sustainability values, and this trend is only exacerbated by the increased awareness of social and environmental issues. Research studies reveal that individuals who belong to Gen Z have an increased appetite to pay a premium price on products and services which are tagged to be sustainable or eco-friendly. Because of this, the companies which integrate social responsibility and sustainability in their operations are significantly more appealing to this consumer segment [12].

### 1.3 Customer Engagement: Experience with Chatbots

A well recognised modern concept, marketing personalization refers to the dissemination of information (hence marketing communications), and other contents that are based on the unique interests

of a particular user or niche-group of users. By showing a sophisticated nature of how the person is observed and delivering the material that correlates with previous choices and experiences, the strategy helps to enhance the level of consumer engagement and generate trust [13]. Customer engagement denotes the dynamic contact between a brand and its clients, encompassing many forms of interaction that cultivate awareness, enhance loyalty, and promote enduring relationships [14]. Businesses develop promotional shows to make consumers remain attached and stay connected to the brand in constant contact. By ensuring that the strategic objectives of the brand are shown through its excellent attributes, the strategy places the brand at the centre of focus among the consumers. According to Gallup's (2014) research, customers are divided into three groups according to the," degree of engagement: "Fully engaged", "Indifferent", and "Actively Disengaged" [16]. Notably, clients who are completely involved with a firm are more likely to do business with it than those who are not. Thus, it can be concluded that better business performance is correlated with a larger number of engaged customers.

The current study is triggered by the intensifying trend of integrating AI-powered chatbots in customer service and marketing programs, a pattern, which presupposes interaction with the instantly digital-native, highly expectant Gen Z generation. As Gen Z consumers prefer having a form of communication that is instant, involves interaction and has a seamless process, it is necessary to conduct a critical evaluation of what the AI-driven interaction process types imply when considering engagement, as well as the development of long-term brand loyalty. The research set out to focus on psychological and behavioral responses towards chatbot based interactions compared to traditional channels. The findings can help organizational activities to perfect AI application and, consequently, increase customer satisfaction and retention.

## 2. REVIEW OF LITERATURE

Pu et al., (2025) evaluated performance outcome, effort expectancy, social impact, and contributing factors that affect user behaviour on AI-enhanced e-commerce platforms. Four business complexes in a populous southwestern Chinese metropolis were sampled using convenience and quota sampling, yielding 280 valid replies. Data analysis used Partial Least Squares Structural Equation Modelling. Expectations of performance, effort, and facilitation positively affect behaviors to utilise AI-powered E-commerce solutions. Interestingly, public impact negatively correlates with behavioral intent, implying that Chinese Gen Z customers may not be influenced by others' views in embracing these technologies. The contributing factors and behavioral intention strongly influence customer behavior [15].

Zerine et al., (2025**)** examined whether retail entrepreneur's adoption of AI customer engagement strategies is influenced by perceived usefulness, simplicity of use, competitive pressure, technological readiness, and organizational innovativeness. The hypothetical-deductive quantitative research strategy was used. This cross-sectional study sampled 250 Dhaka retail enterprises using stratified random sampling. Structured surveys and statistical methods were used to examine variable relationships. The study found that perceived utility, perceived ease of use, competitive pressure, technological preparedness, and organizational innovativeness positively and significantly affect retail entrepreneurs' AI adoption intentions [16].

Wang et al., (2025**)** studied pre-, mid-, and post-arrival human AI engagement. Based on the "Unified Theory of Acceptance and Use of Technology (UTAUT)," the theory uses expected outcome, usability, social impact, and contributing factors to explain how generational features affect AI perceptions and behaviors. This study discovered a new autonomous decision support paradigm, especially for Generation Z, in which AI makes and implements service decisions without human intervention. Generational patterns vary by service task and reflect digital fluency, workplace expectations, and technological trust. The study found that hospitality AI integration must match multigenerational workers' values, interests, and interaction patterns [17].

Ramya et al., (2024) suggested that "Parasocial Relationships (PSRs)" can influence chatbot users' "continuation intention (CI)" by tapping into emotional chatbot user interactions. Information and system quality promote PSRs, according to PLS-SEM. It is also discovered that PSR acts as a mediator between Service Quality and Continuous

Desire to Use. Researchers focus on Millennials and Gen Z. Consumers of different ages may be studied. Chatbot–human interaction advancement depends on this research. From these data, organizations may priorities personalized and empathic service experiences to strengthen PSRs and increase user happiness, trust, and chatbot usage [18].

Nguyen et al., (2024) examined whether chatbots speed up customer support, answer FAQs, and offer 24/7 accessibility in the telecom industry. Case studies, theoretical research and qualitative interviews show that AI-powered chatbots minimize wait times and respond quickly to simple, repetitive questions. The study found that telecom companies may boost customer experience and satisfaction by using a hybrid service model that mixes AI chatbots and human operators. Businesses can improve user experience and automated customer service by overcoming chatbot design limits, such as personalizing responses and improving contextual understanding [19].

Jyothsna et al., (2024) determined the characteristics of chatbots that affect customers' confidence, acceptance, and engagement with them. Using the PLS-SEM methodology, researchers evaluate the factors contributing to chat box trust. The research indicated that trust among customers significantly enhances the ease of use, accomplishment, and social impact of chatbots. Comprehensive statistical investigation revealed that consumer trust in chatbots significantly affects their intents, loyalty, and engagement levels. Gender did not influence customer intent to utilise chatbots, nevertheless, the respondents' age significantly affected their plans to engage with chatbots [20]

Tamara et al., (2023) examined Gen Z views chatbots effect on customer experience and e-commerce. Organized online interviews were conducted to acquire qualitative data from 15 Generation Z users of chatbots on “E-commerce platforms in Manado City, Indonesia”. The analysis found designs and themes in data to reveal Gen Z customers' viewpoints, experiences, and complex activities around chatbots in e-commerce. Studies indicate that Gen Z clients perceive chatbots as allies due to their convenience, rapidity, and round-the-clock availability. Their aptitude to understand enquiries and deliver customized solutions is lacking. The study found that data accuracy, personalization, and interface usability influence Gen Z chatbot interactions [21].

Although AI and chatbot technology have become more prevalent in marketing and customer service, little is known about how such technologies can both influence Gen Z consumer engagement and retention and meet the distinctively digital demands and behaviors of this demographic. The available literature usually discusses AI adoption on a general level, not going into detail as to how the building of personalization, trust and emotional connection into a Gen Z interaction can be achieved. There is also no marble comparison between the AI-driven and human-assisted models of engagement of this cohort. In addition, the retention outcomes from prolonged chatbot doctor-based communication are not yet studied intensively in terms of the quickly changing brand affinity of the generation Z. Lastly, it is difficult to find some empirical evidence that indicates the quality of engagement with AI-mediated interaction among Gen Z members in quantity terms.

## 3. OBJECTIVES AND HYPOTHESIS

i) To examine the role of AI-powered chatbots in enhancing customer engagement among Gen Z consumers.

H1: AI-powered chatbots have a statistically significant positive impact on consumer engagement among Gen Z consumers.

ii) To analyze the relationship between AI-driven chatbot experiences and Gen Z consumer retention.

H2**:** There is a statistically significant positive relationship between AI-driven chatbot experiences and Gen Z consumer retention.

## 4. RESEARCH METHODOLOGY

The current study uses a quantitative study design to evaluate the effects of chatbots driven by AI on consumer involvement and retention among the Gen Z generations. The study was conducted in the Delhi NCR region, targeting Gen Z individuals as the primary respondents. In regard to the sampling, a stratified sample was first conceptualized using gender, age brackets, education, and residence as stratification variables. In why the design was stratified, the sample used is a combination of

stratified sample and quota-based convenience sampling. The study follows a descriptive and exploratory research design, enabling both the detailed description of existing chatbot usage patterns and the exploration of underlying relationships between variables. Information was retrieved using a structured questionnaire, which was complemented by pertinent secondary information found in academic articles, reports, and industry publications. AI-powered chatbots were determined as the independent variable mistakenly at the same time as consumer engagement and consumer retention were chosen as the dependent variables. These data were gathered, cross-checked, and used in examining or carrying out statistical results in MS Excel and SPSS. The direction of the research and explaining the substantive insights were implemented utilizing statistical methods, that is, Mean, Standard Deviation, Correlation and Regression Analysis.

## 5. RESULTS AND INTERPRETATION

The present section provides findings of the performed study and the interpretation thereof. In order to design this overview, traits of certain demographics, aims of the study, and hypotheses are being used as the organization devices. A table that represents the findings is shown with the objective specific clarifications and hypotheses are also treated alike.

Table 1: Demographic Outline of the Participants

| Sr. No. | Demographic Variables | Characteristics | N | % |
|---|---|---|---|---|
| 1 | Gender | Male | 54 | 54.0% |
| | | Female | 46 | 46.0% |
| 2 | Age | 18 – 20 years | 40 | 40.0% |
| | | 21 – 23 years | 35 | 35.0% |
| | | 24 – 26 years | 25 | 25.0% |
| 3 | Educational Qualification | Undergraduate | 52 | 52.0% |
| | | Postgraduate | 48 | 48.0% |
| 4 | Occupation Status | Student | 65 | 65.0% |
| | | Working Professional | 35 | 35.0% |
| 5 | Residence | Urban | 80 | 80.0% |
| | | Semi-Urban | 20 | 20.0% |
| 6 | Frequency of Chatbot Use | Daily | 42 | 42.0% |
| | | Weekly | 38 | 38.0% |
| | | Occasionally | 20 | 20.0% |

The demographic profile of the respondents reveals a balanced gender distribution, with 54% male and 46% female participants. In terms of age, the largest proportion (40%) falls within the 18–20 years category, followed by 21–23 years (35%) and 24–26 years (25%), representing the core of the Gen Z segment targeted in this study. Educational qualifications are nearly evenly split, with 52% pursuing undergraduate studies and 48% engaged in postgraduate programs, indicating a well-educated respondent base. The majority of the participants (65%) are students, while 35% are working professionals, reflecting a mix of academic and professional exposure to AI-powered chatbots. Most respondents reside in urban areas (80%), with the remaining 20% in semi-urban locations, ensuring insights from diverse geographical backgrounds within Delhi NCR. Regarding chatbot usage frequency, 42% use them daily, 38% on a weekly basis, and 20% occasionally, indicating a generally high level of involvement with AI-powered chatbots among the surveyed Gen Z consumers.

Obj. 1: To examine the role of AI-powered chatbots in enhancing customer engagement among Gen Z consumers.
H1: AI-powered chatbots have a statistically significant positive impact on consumer engagement among Gen Z consumers.

Table 2: Regression Analysis

| Hypothesis | Regression Weights | Beta Coefficient | R2 | F | t-value | p-value | Result of Hypothesis |
|---|---|---|---|---|---|---|---|
| H1 | AI-powered chatbots → Customer Engagement | 0.312 | 0.214 | 26.7 | 5.170 | 0.001 | Supported |

In the regression analysis conducted for H1, it was found that AI-enabled chatbots positively and significantly impact customer engagement among Gen Z consumers in the Delhi NCR. The standardized beta coefficient (β = 0.312) reflects a moderate positive effect, indicating that higher levels of engagement are associated with improved chatbot responsiveness and personalization. The model explains 21.4% of the variation in engagement ($R^2$ = 0.214), which is a substantial contribution in behavioral studies where various influences outside the model exist. The F-statistics (F = 26.7, p = 0.001) indicate that the model overall is significant, and the positive value of the t-statistic (t = 5.170) provides additional evidence of the strength and direction of the relationship. These findings provide empirical evidence for the proposed hypothesis of AI-powered chatbots offering a critical impact on increased engagement for Gen Z consumers.

Obj. 2: To analyze the relationship between AI-driven chatbot experiences and Gen Z consumer retention.
H2: There is a statistically significant positive relationship between AI-driven chatbot experiences and Gen Z consumer retention.

Table 3: Correlation Analysis

| Hypothesis | Factor | | | Correlation | | Hypothesis Result |
|---|---|---|---|---|---|---|
| | | Mean | SD | Pearson Correlation (*r*) | Sig value | |
| H2 | AI-driven Chatbot Experiences | 8.7420 | 2.61542 | 0.276** | 0.005 | Supported |
| | Consumer Retention | 8.9540 | 2.48237 | | | |
| **. Correlation is significant at the 0.01 level (2-tailed). | | | | | | |

Correlation analysis of H2 shows a positive relationship between AI-driven chatbots experience and consumer retention among Gen Z that is significant. The fact that a Pearson correlation coefficient equals 0.276 implies that there is a moderate positive relationship, which means that the quality, responsiveness, and personalization of chatbot-based interactions increase, the higher the chances of Gen Z consumers being loyal to a brand. The mean scores for AI-driven chatbot experiences (8.7420) and consumer retention (8.9540) reflect generally high respondent agreement, further emphasizing the perceived value of effective chatbot engagement. The p-value of 0.005 (p < 0.01) confirms that this relationship is significant, thereby supporting the hypothesis that AI-driven chatbot experiences play a crucial role in maintaining long-term retention among Gen Z consumers in the Delhi NCR region.

## 6. DISCUSSION AND CONCLUSION

Empirical evidence indicates that AI-powered chatbots significantly enhance engagement and retention among Gen-Z consumers when they provide high levels of personalization and rapid resolution times; these effects can be achieved even when numerous interactions are not instantaneous. These conclusions are in line with the speculations put forward by Tamara et al., (2023) who reveal that Gen Z representatives prioritize chatbots as their allies when the convenience is paired with the customization but remain unsatisfied in instances of the procedural failures and the presence of unspecific responses. Trust as a mediator variable in the study of Jyotsna et al., (2024) has more influence in increasing the perceived usefulness and intention to use chatbots. This observation supports previous articles documenting the positive effect of increasing transparency and reliability on the retention rates. In

their turn, Ramya, and Alur, (2024) reveal that an affective, para-social relationship mediates the effect of service quality on intent to use a chatbot further. Collectively, these findings suggest that it is welcoming to have empathy and a friendly tone of conversation which helps to increase the retention of Gen Z users.

The results of the present study proceeds with the existing literature since they not only confirm previous findings in terms of the role of convenience, trust, and para-social bonds in user retention in digital environments but also bring clarity to the dependence between these factors. Specifically, the findings indicate that the higher levels of trust and emotional connection enhance the impact of highly personalized and effective chatbot interaction on rates of retention among people who are native to the digital landscape. According to the research results, one can deduce that AI-driven chatbots could have a massive positive effect on the improvement of consumer engagement and retention among members of Generation Z in the Delhi NCR area. The findings have proved that greater levels of functional complexity, personalization, and responsiveness of chatbots have a positive relation with the quality of interaction, which is significant and has relationships with better brand loyalty. The positive and statistically significant correlations between the use of chatbots, chatting, and retention, in turn, forecast that AI-based chatbot experiences require well-thought-out design as an effective instrument to sustain the long-term relationship with the Gen Z consumers in the competitive online environment.

This study does carry out some limitations which must be acknowledged. First and foremost, it was limited to the Delhi NCR geographical area which was small in sample size (n = 100) with the majority of the sample respondents coming from urban areas (80%) and a large portion being students (65%) consequently limiting external validity. Data were collected by self-report and are subject to social desirability bias and recall bias. Further research could include the construction of satisfaction, trust, and long-term loyalty as we limited our emphasis only to engagement and retention. Future research should include similar studies across multiple cities and using larger sample sizes with more diversity and longitudinal design to establish validity. In terms of ethical procedural, informed consent was obtained from all participants, and anonymity and confidentiality were upheld, furthermore, the study was conducted in accordance with institutional research ethics pertaining to the human subjects by obtaining approval/exemption before proceeding with data collection.

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