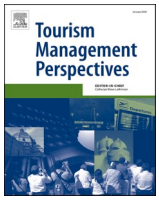
Tourism Management Perspectives 60 (2026) 101442

Contents lists available at ScienceDirect

Tourism Management Perspectives

journal homepage: www.elsevier.com/locate/tmp



Can generative artificial intelligence enhance brand performance in tourism? A mixed-methods study integrating service-dominant logic, social exchange theory, and uncanny valley theory

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ARTICLE INFO

Keywords:
Anthropomorphism
Brand performance
Generative artificial intelligence
Service design
Service expectation
Tourist engagement

ABSTRACT

Generative artificial intelligence (GAI) holds transformative potential for the tourism industry, though its effects on brand performance, a critical driver of competitive advantage, remain underexplored. This study investigates the impact of GAI on brand performance in tourism, drawing on service-dominant (S-D) logic, social exchange theory, and uncanny valley theory as theoretical lenses and employing a mixed-methods approach involving interviews and surveys. Qualitative themes include GAI service design, GAI service expectation, tourist engagement, and brand performance, which collectively provide a comprehensive view of GAI's role in tourism. Quantitative results further reveal that GAI positively influences brand performance, which evidences its impact in tourism, and that anthropomorphism moderates tourist engagement, such that GAI with greater humanlike attributes engages tourists more effectively. In turn, these insights enrich the tourism literature and offer practical guidance for tourism managers in developing future strategies involving GAI.

1. Introduction

Major technology companies, including Google, Meta, and Microsoft, are actively integrating generative artificial intelligence (GAI)[1] into their product offerings to empower individuals and organizations to become more efficient and effective at delivering and leveraging value

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[1] To avoid conflation, three concepts are distinguished. Generative artificial intelligence (GAI) refers to large-scale models that create novel content across modalities such as text, images, audio, and code, enabling dialogic personalization and content synthesis in real time (Grewal, Satornino, Davenport, & Guha, 2025). Service robots are embodied systems that perform service tasks in physical environments, often in hospitality and tourism settings (Tussyadiah, 2020), where autonomy, sensing, and actuation matter; they may incorporate AI, yet embodiment and task execution define the category (Wirtz et al., 2018). Digitalized services are software-mediated delivery of existing or redesigned service processes, relying on platforms, data pipelines, and rule-based automation rather than content generation or embodiment (Lusch & Nambisan, 2015; Tilson, Lyytinen, & Sørensen, 2010). Distinguishing these mechanisms clarifies theorized outcomes and measurement, wherein GAI alters content and interaction quality, robots expand physical service capability and human–robot interaction, and digitalization improves channel efficiency and data integration.

https://doi.org/10.1016/j.tmp.2025.101442
Received 2 January 2025; Received in revised form 30 November 2025; Accepted 1 December 2025
Available online 30 December 2025

(Dwivedi et al., 2023; Dwivedi, Pandey, Currie, & Micu, 2024), and this trend, coupled with significant investments from non-technology firms such as Adidas, Amazon, Disney, and Nike suggests that GAI will play a complementary yet essential role across industries (Lim, Bansal, Nangia, & Singh, 2025). In response to these opportunities, tourism service providers like Airbnb, Booking.com, MakeMyTrip, and TripAdvisor are increasingly exploring GAI to elevate customer service (e.g., automating operations such as itinerary planning and offering personalized recommendations on accommodations, activities, and cuisine) to streamline processes and deliver relevant information efficiently (Ali, Yasar, Ali, & Dogan, 2023). Such improvements foster positive tourist experiences, which can drive further adoption of GAI technologies across the industry (Buhalis, O'Connor, & Leung, 2023). Moreover, the potential of GAI to enhance brand performance is closely linked to its ability to meet customer needs effectively, as satisfied customers are more likely to engage with a brand, which is a critical factor in tourism, where service design hinges on customer preferences (Li & Lee, 2025). Noteworthily, GAI's humanlike communication abilities, capacity to understand customer preferences, and problem-solving skills position it as a powerful tool for advancing brand performance beyond what traditional approaches can achieve (Cai, Li, & Law, 2022; Cui, van Esch, & Phelan, 2024). Yet, significant challenges remain.

First and foremost, while leading travel companies are investing in GAI, its benefits for the tourism industry remain unclear, and its future impact is uncertain. Existing literature suggests that prior experiences, as per expectation disconfirmation theory, shape expectations, with positive outcomes when expectations are met and negative outcomes when they are not (Liu, Lim, Li, Tan, & Cyr, 2020). Hence, whether travel companies can meet tourist expectations with GAI is yet to be determined. This uncertainty is particularly critical because failing to meet these expectations could lead to tourist dissatisfaction, potentially undermining trust in GAI technologies. Such outcomes may not only hamper the adoption and effectiveness of GAI within the tourism industry but also result in significant reputational risks for travel companies that are early adopters. Consequently, understanding and managing tourist expectations are essential for ensuring that GAI investments translate into tangible benefits, including enhanced brand performance for sustained competitive advantage in the tourism industry.

Furthermore, the strategic objectives of GAI adoption in the tourism industry remain ambiguous. For travel companies to realize a meaningful return on value (ROV) from GAI, they must clearly define how these technologies can enhance brand performance. Unlike traditional return on investment (ROI), which focuses primarily on financial gains, ROV encompasses a wider spectrum of benefits, including customer satisfaction, brand loyalty, and long-term engagement (Lim, 2023). Current studies have primarily addressed preliminary aspects of GAI's impact, such as the conceptualization of GAI within tourism (Hsu, Tan, & Stantic, 2024), GAI-induced hallucinations (Christensen, Hansen, & Wilson, 2025), and tourists' decision-making processes involving GAI (Wong, Lian, & Sun, 2023). In addition, extant research has examined the adoption of ChatGPT and similar GAI technologies by heritage destinations (Jia, Chi, Martinez, & Lu, 2025) and the influence of ChatGPT interactions on tourists' visit intentions (Tosyali, Tosyali, & Coban-Tosyali, 2025), whereas other studies have explored future directions for tourism in the context of GAI (Dogru et al., 2025; Shin & Kang, 2023). However, these studies have not fully explored critical aspects, such as how GAI can engage tourists more effectively and contribute to enhancing brand performance for travel companies. These aspects are particularly crucial because the success of GAI adoption hinges not only on its technological capabilities but also on its ability to drive meaningful engagement and foster loyalty. Without a deep understanding of how GAI influences these customer-centric outcomes, travel companies risk underestimating the full potential of GAI, potentially leading to suboptimal implementation strategies that fail to achieve the desired impact on brand performance.

Moreover, there is no consensus among researchers regarding the impact of GAI's humanlike communication on human behavior. Some studies suggest that anthropomorphism, the attribution of human characteristics to AI, positively influences tourist behavior (Dogru et al., 2025; Gursoy, Li, & Song, 2023). Conversely, other researchers argue that excessive humanlike behavior may lead to adverse evaluations and unmet expectations, resulting in disconfirmation (Zhou, Li, Han, & Jou, 2023). This conflicting evidence highlights the critical need for further investigation into the role of anthropomorphism in shaping tourist perceptions and behaviors within the context of GAI-enabled interactions. Understanding how anthropomorphism affects tourist behavior is essential because it directly impacts the effectiveness of GAI as a tool for enhancing engagement and performance. If GAI interactions are perceived as too artificial or too humanlike, it could either alienate customers or lead to disappointment, undermining the brand's credibility and the customer's overall experience. Therefore, resolving these ambiguities is not just a matter of academic interest but also a strategic imperative for travel companies seeking to harness GAI's full potential in fostering positive and meaningful customer relationships.

Last but not least, empirical research on GAI in the tourism industry has predominantly relied on quantitative analysis. While quantitative methods are invaluable for identifying patterns and measuring outcomes (Lim, 2025b), an overreliance on them can overlook the granular insights that qualitative data provide (Lim, 2025a). These qualitative insights are essential for understanding the complexity of tourist experiences and the emotional responses that GAI technologies elicit throughout the tourism journey (Gursoy et al., 2023). Without integrating these qualitative perspectives, research risks offering an incomplete picture of GAI's impact, potentially leading to strategies that fail to address the deeper, experiential aspects of engagement with GAI. This holistic understanding is crucial for developing more effective, customer-centric approaches that can truly enhance brand performance in the tourism industry.

Given these complexities and the existing gaps in understanding GAI's impact on tourism, this study *aims* to provide a comprehensive exploration of the factors that drive successful GAI adoption and its influence on brand performance in tourism. Specifically, this study seeks to clarify the pathways through which GAI can engage tourists, meet their expectations, and contribute to the brand performance of travel companies by adopting the theoretical lenses of service-dominant logic (Vargo & Lusch, 2004) and social exchange theory (Homans, 1958) and employing a mixed-methods approach that combines qualitative and quantitative analyses to provide a comprehensive understanding of the relationships under investigation (Lim, 2025a, 2025b).

2. Literature review

2.1. Generative artificial intelligence (GAI) and tourism

Generative artificial intelligence (GAI) refers to a subset of AI that generates novel outputs by identifying and applying patterns in data, rather than simply replicating existing inputs (Lim, Gunasekara, Pallant, Pallant, & Pechenkina, 2023). The tourism industry has rapidly adopted GAI to improve service delivery across several critical areas, including value co-creation, marketing, operations, and strategic management (Wang, 2025). Analyzing previous customer interactions allows GAI to tailor personalized experiences that enhance service quality as well as customer engagement and satisfaction (Dogru et al., 2025). For example, Sora, a GAI tool developed by OpenAI, illustrates the potential of GAI by converting text into video content, offering innovative ways to engage tourists (Werner, 2024). In addition, GAI plays a crucial role in efficiently addressing customer queries, strengthening customer relationships, and supporting service recovery in tourism (Kim & So, 2023). Tools like ChatGPT also demonstrate how GAI can accurately understand customer preferences and support tourism brands in expanding into new markets (Carvalho & Ivanov, 2024), wherein this

technology allows brands to deliver precise information and create memorable experiences, thereby fostering long-term customer engagement and loyalty (Pandey, Currie, & Micu, 2024).

2.2. Service-dominant (S-D) logic

2.2.1. Overview of S-D logic and value co-creation

S-D logic is a theoretical lens that views consumers as active co-creators of value within a brand (Vargo & Lusch, 2004). In the service industry, value creation is not the sole responsibility of the service provider; instead, it requires active consumer participation to effectively enhance brand performance (Datta, 2020). The engagement of consumers is central, as consumer engagement serves as an explicit form of co-creation: when consumers contribute and consume content (Moriuchi, Hollebeek, & Lim, 2025; Muntinga, Moorman, & Smit, 2011), they directly shape and enrich the value proposition (e.g., sharing and using travel itineraries; Xu, Wang, & Kim, 2025), and when they comment, like, or share (Bastrygina & Lim, 2023), they collectively refine and extend that value through social interaction (e.g., liking and resharing destination posts on social media; Bastrygina, Lim, Jopp, & Weissmann, 2024). When extrapolated to GAI, traveler input via AI-powered tools, such as preference-driven chatbots and dynamic itinerary generators, creates a real-time co-creation loop, allowing service providers to integrate those insights into personalized offerings and refine them continuously. S-D logic thus offers a foundation for understanding how consumers perceive and interact with services, positioning them as valuable sources of ideas and innovation for brands (Becker et al., 2023).

2.2.2. GAI-enabled value co-creation

Service providers can also leverage consumer feedback to refine and improve their offerings. Many gather this feedback through social media platforms like Facebook, Instagram, and YouTube, which also serve as tools for enhancing consumer engagement (Lim & Rasul, 2022), and increasingly via GAI-powered feedback systems that analyze user sentiment and generate tailored follow-up prompts (Limantara, 2024). This strategic representation of the brand through consumer engagement is a form of value co-creation (Hasan, Chang, Lim, Kalam, & Shamim, 2024), as the manifestations of such engagement in the form of user-generated content and interactions help brands co-construct and continuously evolve their offerings (Basile, Brandão, & Ferreira, 2024; Marchowska-Raza & Rowley, 2024). To elaborate, when consumers share creative content and experiences (e.g., insider tips, unboxing videos), they not only promote the brand but actively co-create its value by shaping community norms, product improvements, and marketing narratives. Indeed, companies like Apple, Samsung, and Xiaomi are increasingly establishing direct relationships with customers, exchanging information to involve them more deeply with the brand, wherein researchers have highlighted the critical role of these exchanges in improving brand performance (Cheung, Pires, Rosenberger, Leung, & Salehhuddin Sharipudin, 2021; Liu, Choi, & Kim, 2025). Moreover, by leveraging GAI-driven analytics to synthesize consumer feedback into strategic service enhancements, providers can scale personalized improvements and anticipate emerging needs (Ooi et al., 2025). This GAI-enabled co-creation loop accelerates innovation and deepens consumer-brand relationships by continuously aligning offerings with real-time insights.

GAI further enhances the process of value co-creation by facilitating seamless communication between consumers and service providers (Abadie, Chowdhury, & Mangla, 2024). GAI overcomes language barriers, allowing consumers to easily share their feedback, experiences, and expectations, wherein its collaborative capabilities enable GAI to bridge the gap between consumer expectations and the strategic objectives of service design. In this sense, the efficiency and advanced skills of GAI contribute meaningfully to value co-creation, and, in turn, improving brand performance.

2.2.3. Distinction between value co-creation and value-in-use

Although value co-creation, which entails the joint integration of consumer and provider resources through ongoing interactions across touchpoints that shape and refine the offering and its outcomes, is a cornerstone of S-D logic, its complementary concept, value-in-use, emphasizes that value emerges in use as consumers engage the service, guided by expectations and service design (Vargo & Lusch, 2004). In practice, value-in-use is the benefit realized during consumption, as experienced by the beneficiary, for example, the convenience, fit, and confidence a traveler feels when following an AI-generated itinerary, and thus, value-in-use is contextual, idiosyncratic, and experiential (Chandler & Vargo, 2011; Vargo & Lusch, 2008). This distinction, in turn, means that value co-creation is an interactive resource-integration process that adapts the offering through engagement and feedback, whereas value-in-use is the outcome realized in context and determined by the consumer (Grönroos & Voima, 2013; Payne, Storbacka, & Frow, 2008). Recent work shows that service design and organizational capabilities shape engagement and the conditions under which value-in-use is achieved (Datta, 2020; Karpen, Gemser, & Calabretta, 2017; Lusch & Nambisan, 2015). Nevertheless, value-in-use pathways remain comparatively underexamined in tourism relative to the extensive co-creation literature (John & Supramaniam, 2024), although emerging work has begun to frame conceptually (Rehman, Muhammad, & Rather, 2023) and test empirically (Sadighha, Pinto, Guerreiro, & Campos, 2025). This study addresses this gap and builds on these insights by examining how dynamic service design and clear service expectations (value-in-use) via interactions with GAI (value co-creation) drive tourist engagement, and, in turn, enhance brand performance in tourism.

2.3. Social exchange theory

Social exchange theory emphasizes the reciprocal exchange of resources between parties, which fosters positive emotions and strengthens social relationships (Homans, 1958). The theory is grounded in the rational choice paradigm, where individuals assess the benefits and costs of interactions (Cook & Hahn, 2021).

Social exchange theory has been applied to hotel service robots in Kim, So, and Wirtz (2022) by showing that guests treat robots as exchange partners: when robots demonstrate high intelligence, social presence, and interactivity, guests perceive clear benefits, such as faster service, personalized assistance, and a sense of being understood, while costs, such as effort or privacy concerns, remain low. Guests then reciprocate by developing rapport and trust and by expressing stronger intentions to use the robots. This example illustrates how technology-mediated exchanges deliver value that consumers repay through positive attitudes and behaviors, confirming social exchange theory's emphasis on reciprocal benefit-cost evaluations.

Extending from physical (service) to virtual (chat) robots, this study applies social exchange theory to examine how GAI-enabled service design and expectations drive tourist engagement and, in turn, enhance brand performance. From this perspective, GAI tools such as AI concierges and itinerary generators (George & Atluri, 2024) serve as resource exchanges: tourists gain clear benefits (personalized recommendations, instant responses, 24/7 support) while bearing minimal costs (low cognitive effort), thus creating a positive net value. Under the norm of reciprocity, tourists who perceive these net gains feel compelled to reciprocate by engaging more deeply, whether through interactive inquiries, user-generated content, or advocacy behaviors, which aligns with evidence that dialogue-based technology interactions boost engagement (Youn & Jin, 2021). Heightened engagement then translates into stronger brand performance outcomes (e.g., higher loyalty, positive word-of-mouth, and brand equity), mirroring patterns observed in online brand communities (Zhu, Sun, & Chang, 2016).

2.4. Uncanny valley theory

The uncanny valley theory suggests that while humanlike behavior (e.g., adaptive learning, conversational tone, emotional nuance) in robots like GAI can create positive impressions, a deviation beyond a certain threshold can lead to discomfort and negative emotions (Mori, 1970).[2] A balanced level of anthropomorphism in AI agents has been shown to improve their acceptance by making them appear more realistic (Balakrishnan & Dwivedi, 2024; Tojib, Sujan, Ma, & Tsarenko, 2023). This phenomenon has been observed not only with humanoid robots but also with digital avatars, for example, virtual influencers that look almost human tend to elicit negative reactions, reflecting an uncanny valley effect (Arsenyan & Mirowska, 2021).

Recent tourism scholars have extended the uncanny valley theory to text-based AI, arguing it is "the most suitable theory" to understand what tourists experience when interacting with GAI like ChatGPT (Jin & Han, 2025, p. 2). Even without a physical form, GAI can trigger anthropomorphism through lifelike dialogue and social cues, for instance, ChatGPT's fluent, friendly tone and playful humor can create an emotional connection, causing users to subconsciously treat the AI as a quasi-human travel advisor (Xu, Li, Lovett, & Cheung, 2025). Tourists may thus initially feel high familiarity and comfort when ChatGPT's responses closely mimic human guidance, yet if the system exhibits subtle non-human flaws or errors, they can suddenly feel uneasy or "creeped out," consistent with the uncanny valley effect (Jin & Han, 2025; Mulcahy, Riedel, Keating, Beatson, & Letheren, 2024). In this regard, the present study utilizes uncanny valley theory to examine how GAI's humanlike attributes influence the relationships between service design, service expectations, and tourist engagement. Specifically, this study explores whether GAI's humanlike qualities might evoke discomfort, potentially reducing engagement and, consequently, impacting brand performance. The logic is that anthropomorphic cues in GAI cultivate social presence and rapport that raise perceived service quality and satisfaction (Kim, Kim, & Baek, 2025), but when near-human cues or conversational errors cross the uncanny threshold and disconfirm expectations (Mori, 1970), consumers feel eeriness that breaks rapport, lowers social presence, and reduces perceived service quality, which in turn dampens engagement and downstream performance outcomes (Grazzini, Viglia, & Nunan, 2023; Mende, Scott, Van Doorn, Grewal, & Shanks, 2019; Prentice, Weaven, & Wong, 2020).

2.5. Hypothesis development

2.5.1. Service design, service expectation, tourist engagement and brand performance

Service design in tourism requires a deep understanding of travelers' future needs and behaviors, coupled with the ability to enhance their experiences based on feedback (Sangiorgi, 2009). To meet these evolving demands, tour operators must draw on cultural knowledge and contextual awareness to craft meaningful and relevant experiences, a process in which GAI plays a crucial role (Sarantou, Kugapi, & Huhmarniemi, 2021). GAI enhances this process through its *action orientation* by transforming static, one-size-fits-all services into dynamic, responsive, and personalized offerings that resonate with diverse traveler profiles. This shift toward innovation is anchored in a *human-centered* approach, where service designs are shaped around tourists' preferences, thereby fostering more fulfilling experiences. Achieving this alignment between service features and user expectations is inherently *collaborative*, and GAI functions as an enabler of that collaboration by mediating between user input and provider adaptation (Koskela-Huotari et al., 2021). Through real-time responsiveness and personalized interactions, GAI fosters a sense of connection between tourists and providers by reinforcing the perception that the service is attentive and relationally aware, and its capacity to anticipate needs, deliver tailored suggestions, and adapt to user feedback positions it as an essential component of effective service design (Bilgihan et al., 2024). In tourism, this contributes directly to more engaging service encounters, as travelers interpret these features as signs of care, relevance, and responsiveness (Dwivedi et al., 2024). Therefore, this study identifies three key aspects of service design (i.e., action orientation, human-centeredness, and collaboration) as central to tourist engagement. Based on this reasoning, the following hypothesis is proposed:

H1. GAI service design is positively related to tourist engagement.

Quality service design naturally leads to heightened expectations. A well-designed service fosters positive experiences, which, in turn, create strong expectations (Berry, Parasuraman, & Zeithaml, 1988). Previous studies have shown that chatbots, as early forms of AI, effectively set and meet customer expectations, with users perceiving them as competent service providers (Nath, Devlin, & Reid, 2018). Measurement items for service expectation in the context of GAI, adapted from the literature, include appealing facilities, dependability of the tour operator, friendly and helpful communication, and service quality (Jeong & Jang, 2011; Wang, Hung, & Li, 2018). Consequently, we propose the second hypothesis:

H2. GAI service design is positively related to GAI service expectation.

Engagement in tourism refers to how deeply tourists interact with and connect to a brand (Rasul et al., 2025), measured through factors such as identification, enthusiasm, attention, absorption, and interaction (So, King, & Sparks, 2014). Engaged tourists tend to align with brands that match their perceptions and are likely to engage more deeply, even becoming absorbed in their interactions with GAI (Harrigan, Evers, Miles, & Daly, 2017). Tourist engagement has a direct link to sales growth, as engaged tourists spend more and exhibit brand loyalty (Bijmolt et al., 2010; Casidy, Wymer, & O'Cass, 2018). Given this, the third and fourth hypotheses are proposed:

H3. GAI service expectation is positively related to tourist engagement.

H4. Tourist engagement is positively related to brand performance.

2.5.2. Moderating role of anthropomorphism

Anthropomorphism, or the attribution of human characteristics to AI, can serve as a moderating factor in the relationship between GAI and engagement. Humanlike communication from GAI enhances the realism of interactions, making the experience more engaging compared to interactions with purely machine-like systems (Whang & Im, 2021; Zhang et al., 2024). However, according to the uncanny valley theory (Mori, 1970), while humanlike attributes can enhance satisfaction, excessive resemblance to humans may lead to discomfort (Kim, Schmitt, & Thalmann, 2019). To address this, the present study investigates the influence of anthropomorphism on the relationships between GAI service design and tourist engagement, as well as between GAI service

[2] In contrast, algorithm aversion theory (an alternative theory) focuses on consumers' reluctance to trust algorithmic decisions, describing how individuals often prefer human judgment over AI outputs, especially after an algorithm missteps or produces a negative outcome (Jussupow, Benbasat, & Heinzl, 2020). While algorithm aversion highlights general distrust in automated decision-making, uncanny valley theory speaks to the nature of the human-AI interaction itself, that is, the emotional push-pull as users engage with an almost-human agent. Given our study's focus on tourists' GAI engagement and the feelings during these interactions, the uncanny valley remains, as Jin and Han (2025, p. 2) put it, "the most suitable theory" to capture anthropomorphic cues in GAI, which can simultaneously foster familiarity and spark discomfort, whereas algorithm aversion mainly addresses whether users trust or reject the AI's recommendations (Mahmud, Islam, Ahmed, & Smolander, 2022). This distinction, in turn, clarifies why uncanny valley theory is adopted, as it illuminates the experiential dimensions of engaging with humanlike AI in tourism, complementing (rather than opposing) the concern that some may be hesitant to rely on algorithms.

expectation and tourist engagement, leading to the final hypotheses:

$H5_a$. Anthropomorphism moderates the relationship between GAI service design and tourist engagement.

$H5_b$. Anthropomorphism moderates the relationship between GAI service expectation and tourist engagement.

3. Methods and results

This study employed the methodology recommended by Churchill Jr. (1979) to assess the impact of GAI adoption on brand performance in the tourism industry. The process was conducted in three stages. First, measurement items were generated through content analysis of interviews conducted with a focus group, followed by an initial purification of the scale. Next, a panel of experts was selected, and a pilot test was conducted to revise and refine the items. Finally, the reliability and validity of the survey measures were tested. After finalizing the scale, the hypotheses were tested, and the moderating effect of anthropomorphism was examined.

3.1. Item generation and scale purification

The qualitative research was conducted in two phases.

In the *first phase*, measurement items were generated through content analysis of 44 interviews (Table 1). Generation of items is a foundational step in qualitative research (Hinkin, 1995). Previous studies have shown that interviews are effective in capturing measurement items that are difficult to obtain from surveys (Malhotra, Hall, Shaw, & Oppenheim, 2006). In this study, an interview guide with 15 open-ended questions was developed with support from the literature and posed to the focus group, allowing participants to share their perceptions and experiences freely. The focus group was selected using a non-probability snowball sampling method, ensuring that all members had used at least one type of GAI, such as ChatGPT.

Table 1
Interview guide.

Area	Question	Supporting literature
GAI service design		Koskela-Huotari et al. (2021)
Action oriented	Can GAI help you to collect required information for travel, if so, how?	
Human centeredness	Is GAI human-centered for travel, if so, how?	
Collaboration	Did GAI incorporate your suggestion for travel, if so, how?	
GAI service expectation		Jeong and Jang (2011), Nath et al. (2018)
Service quality	Are you satisfied with using GAI for travel, if so, why?	
Appealing facilities	Could GAI impress you for travel, if so, why?	
Dependable tour operator	Can you depend on GAI as your tour operator, if so, why?	
Friendly and helpful	What was tone of conversation with GAI for travel, and how did it make you feel?	
Tourist engagement		Harrigan et al. (2017)
Identification	Can you describe the benefits that attracted you during your last trip?	
Enthusiasm	Do you plan your travel by your own choice or by compulsion?	
Attention	Do you follow all travel information carefully?	
Absorption	How often do you follow travel updates?	
Interaction	Was the interaction with GAI for travel worthwhile?	
Brand performance		Casidy et al. (2018)
Revisit intention	Will you choose the same travel brand that you used last time?	
Share of wallet	Are you ready to spend more for your favorite travel brand?	
Consideration set size	How many travel brands are on your list that you would consider revisiting in the future?	

Notes: While the supporting literature informed the thematic areas, it did not specify the exact questions or items. Instead, the literature guided the development of the interview protocol, which subsequently enabled the study to generate items for operationalizing and testing the focal concepts.

The content analysis of the interviews followed Braun and Clarke (2006) and Lim (2025a), which began by importing the 44 interview transcripts into the NVivo *v.*14 software after verifying content accuracy. Initial codes were then identified. Participants described various dimensions of GAI service design, GAI service expectation, tourist engagement, and brand performance, facilitated by the open-ended nature of the questions. Next, specific words, phrases, and sentences within the transcripts were coded to highlight features of the qualitative data relevant to the questions. Codes were generated based on the semantic and latent meanings within the data, capturing the content closely. These codes were then reviewed to identify patterns in the data. The identified patterns were further analyzed using word clouds and hierarchy charts generated by the NVivo *v.*14 software, enabling the clustering of related codes into subthemes. Word clouds validated the clustering of codes while hierarchy charts illustrated the distribution of items within subthemes and themes. The word cloud performs content analysis on the source material (i.e., interview transcripts) by identifying exact or similar patterns in the text and generating frequency queries for these patterns. In the word cloud, more frequently used words appear in larger fonts, providing a visual representation of key themes (Jayawardena et al., 2023). The hierarchy chart visualizes data patterns in the source material through nested rectangles of varying sizes. These rectangles represent the comparative weight of first-order codes within each second-order code, with larger rectangles indicating patterns that were more frequently mentioned by respondents (Bapat, 2022). The clusters of codes or subthemes provided meaningful coherence to the data, and the themes were identified based on these clusters. The distinctiveness of the themes and their interrelations provided a comprehensive narrative of the qualitative data (Bapat, 2022; Jayawardena et al., 2023).

Validation checks consistent with qualitative research conventions were undertaken to strengthen credibility, dependability, and confirmability (Lincoln & Guba, 1985). The research team held coder meetings to reconcile interpretations and refine the codebook by consensus (Miles, Huberman, & Saldaña, 2014). Theme stability was assessed by monitoring saturation and stopping criterion once additional interviews yielded minimal new information (Guest, Namey, & Chen, 2020; Lim, 2026a).

In the *second phase*, the initial purification of the scale was conducted through a literature review and a discussion involving nine members from the focus group. The literature review covered service design (Koskela-Huotari et al., 2021), service expectation (Jeong & Jang, 2011; Nath et al., 2018), tourist engagement (Harrigan et al., 2017), and brand performance (Casidy et al., 2018). The focus group included four tourists who regularly use GAI for tourism planning and five research scholars in marketing management who also use GAI for tour planning. The discussion endeavored to validate the 67 items generated from the content analysis in the first phase (Wang et al., 2018). The group evaluated the appropriateness of the initial items and assessed additional items not covered in previous studies. Eight items were removed due to ambiguity and lack of association with the themes (Kim, Tang, & Bosselman, 2018). After refining, 59 items were finalized in the second phase using the NVivo *v.*14 software. Similarly, using the word cloud and hierarchy chart functions in the NVivo *v.*14 software, which were based on word similarity methods, responses regarding the influence of GAI on brand performance were systematically categorized into items, subthemes, and

overarching themes (Bapat, 2022; Jayawardena et al., 2023). This qualitative analysis resulted in the identification of four primary themes, 17 second-order codes, and 59 first-order codes. The four themes identified were GAI service design, GAI service expectation, tourist engagement, and brand performance. Appendix Tables A1, A2, A3, and A4 present the detailed breakdown of these themes, including the second-order and first-order codes derived from the content analysis.

3.2. Scale refinement

A draft questionnaire was developed based on the 59 items generated after the initial purification of the first pool of items. The questions were designed to accurately reflect the inherent meaning of each item. Responses were measured using a five-point Likert scale, ranging from "strongly disagree" (1) to "strongly agree" (5). A panel of experts, as detailed in Table 2, was assembled to engage in a pretest and evaluate the questionnaire (Lim, 2024, 2025b). The panel members were asked to correlate their experiences with GAI to the generated items and assess the relevance of these items in relation to the study's objectives. Additionally, the quality of the questions was reviewed by the panel to ensure their clarity and alignment with the study goals (Wang et al., 2018). The panel retained all 59 items and introduced two new items, namely compatibility for users and maintaining privacy. After finalizing the study measures, a conceptual model was developed (Figure 1).

Following expert validation, a pilot study was conducted with 30 respondents selected through purposive sampling. The purpose of the pilot study was to identify and eliminate any redundant statements and to enhance the clarity of the questions, ensuring that they comprehensively represented all the intended items (Lim, 2024, 2025b). Based on feedback, certain terms in the questionnaire were modified to improve understanding.

3.3. Scale validation and hypothesis testing

3.3.1. Approach: data collection and analysis

A purposive and snowball sampling approach (Lim, 2025b) was used by distributing the link to an online questionnaire to Indian tourists through tour operators (as an amalgamation point-of-contact for travel services) registered with the Indian Association of Tour Operators (2024). These tourists were also encouraged to share the link within their own social networks. Participation in the survey was voluntary and not incentivized. The questionnaire included initial screening questions to ensure that respondents had experience using GAI (e.g., ChatGPT) for tour planning or travel-related queries (e.g., do you use GAI, have you used GAI to plan your tour, have you used GAI for travel queries). Only those who confirmed such use were included in the final analysis. Responses to items in the questionnaire were evaluated using a five-point Likert scale, with "strongly disagree" coded as "1" and "strongly agree" coded as "5." Respondents were informed that their responses were anonymized as we did not collect any personal information and that there were no right or wrong answers. This approach, which is in line with recommendations to mitigate common method bias (CMB) (Lim, 2025b), yielded a total of 432 completed questionnaires. Cook's distance was used to identify outliers and 14 responses with a distance value greater than one were excluded from the analysis (Stevens, 2012). This left a final sample size of 418 respondents for the quantitative analysis.

Table 2
Panel of experts for questionnaire and item review

Expert	Position	Field	Interest	Years of experience
1	Full professor	Tourism and hospitality management	Consumer behavior	40+
2	Full professor	Marketing management	Scale development	40+
3	Associate professor	Tourism and hospitality management	Consumer behavior	30+
4	Associate professor	Marketing management	Consumer behavior	30+
5	Associate professor	Psychology	Scale development	30+
6	Assistant professor	Tourism and hospitality management	Consumer behavior	10+
7	Assistant professor	English	Questionnaire review	20+
8	Retired professor	General management	Scale development	40+
9	Professional editor	English	Questionnaire review	30+

The demographic profile of the 418 respondents is detailed in Table 3. The majority of respondents (48.33%) were between the ages of 26 and 40, followed by those aged 41 to 60 (24.64%), and those under 25 (21.53%). The gender distribution was skewed toward male respondents (62.68%), with females making up 37.32%. Regarding income, 40.43% of respondents earned less than INR 500,000 annually, while 25.36% earned between INR 500,000 and 1,500,000. The majority of respondents were students (39.23%), followed by those who were self-employed (26.08%) and those in service roles (23.21%). In terms of educational qualifications, 41.87% of respondents held postgraduate degrees while 35.41% were undergraduates.

Data analysis was conducted in two stages using structural equation modeling (SEM) with the SPSS and AMOS *v.*28 software. In the first stage, the measurement model was used to test the reliability and validity of the constructs through confirmatory factor analysis (CFA). This ensured that the first-order constructs were congruent with the second-order constructs. In the second stage, a structural model was applied to evaluate the model fit and test the hypotheses (Anderson & Gerbing, 1988). Finally, a moderation analysis was conducted using the PROCESS Macro Model 1, a basic moderation model with one moderator between the independent and dependent variables, employing a 95% confidence interval and 5,000 bootstrap samples (Hayes, 2013).

3.3.2. Assessment of skewness and kurtosis

Data screening was conducted to ensure the suitability of the dataset for SEM. All constructs demonstrated acceptable values of skewness ($-3 < \text{Skewness} < +3$) and kurtosis ($-10 < \text{Kurtosis} < +10$), indicating that the data distribution was appropriate for SEM analysis (Hair, Black, Babin, & Anderson, 2010). Additionally, the absence of multicollinearity issues was confirmed by calculating tolerance and the Variance Inflation Factor (VIF). Both metrics were within the acceptable threshold limits, further supporting the validity of the dataset for analysis (O'Brien, 2007).

3.3.3. Assessment of non-response bias and common method bias

Non-response bias was investigated by comparing the first 100 respondents to the last 100 respondents across key demographic variables (Armstrong & Overton, 1977; Zeng, Chen, Dong, & Chi, 2016). A paired-samples *t*-test revealed no significant differences between the groups in terms of age and income ($p>0.05$). Additionally, a chi-square test indicated no significant differences in gender, occupation, and qualification between the groups ($p>0.05$), suggesting that non-response bias was not a concern in this study (Liang, Xue, Pinsonneault, & Wu, 2019).

Whereas, in order to determine if CMB exists, Harman's single factor test was performed (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). The findings indicated that a single factor explained 18.627% of the variance, which was much less than the threshold value of 50%. Confirmatory factor analysis was used in Harman's one-factor test to further verify the existence of CMB. The results ($\chi 2/df=12.16 \geq 3$, $CFI = 0.39 \leq 0.90$, $GFI = 0.65 \leq 0.90$, $NFI = 0.37 \leq 0.90$, $TLI = 0.29 \leq 0.90$, $RMSEA = 0.16 \geq 0.08$) indicated a very poor model fit, which confirmed that

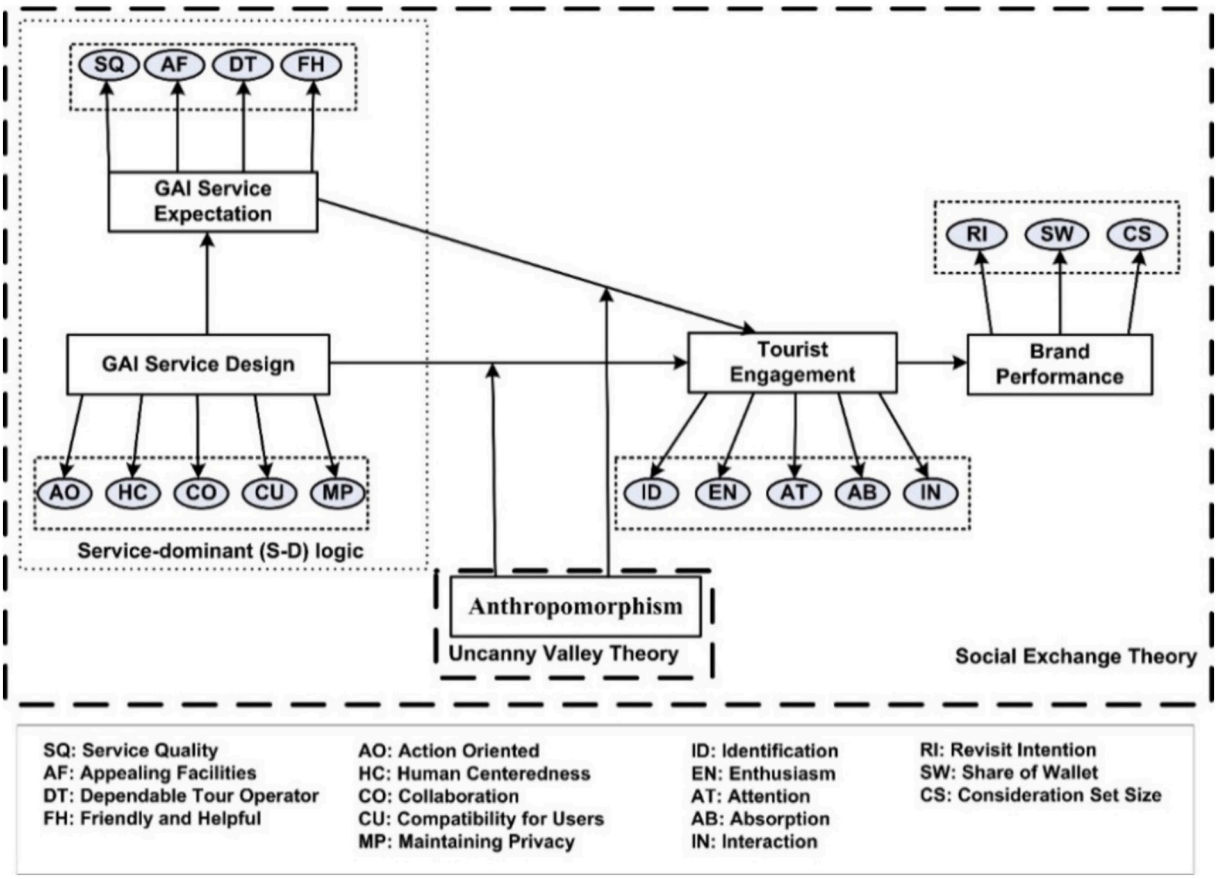

Fig. 1. Conceptual model of GAI and brand performance in tourism

Table 3
Profile of participants: frequency and percentage

Demographic	Characteristic			
Age	<25 years	26–40 years	41–60 years	> 60 years
	90 (21.53%)	202 (48.33%)	103 (24.64%)	23 (5.50%)
Gender	Female	Male		
	156 (37.32%)	262 (62.68%)		
Individual income per annum	<INR500,000	INR500,000–1,500,000	INR1,500,000–2,500,000	>INR2,500,000
	169 (40.43%)	106 (25.36%)	98 (23.44%)	45 (10.77%)
Occupation	Service	Self-employed	Student	Others
	97 (23.21%)	109 (26.08%)	164 (39.23%)	48 (11.48%)
Qualification	Doctorate	Postgraduate	Undergraduate	Others
	44 (10.53%)	175 (41.87%)	148 (35.41%)	51 (12.20%)

Notes: USD1 = ± INR85 as of 20 April 2025.

CMB was not a problem in our study.

3.3.4. *Assessment of measurement model: Model fit, reliability, and validity of first-order constructs*

The study demonstrated a strong fit for the measurement model of first-order constructs, with *model fit indices* within the prescribed benchmark values (χ^2/df = 2.78 ≤ 3, CFI = 0.93 ≥ 0.90, GFI = 0.89 ≈ 0.90, NFI = 0.90 ≥ 0.90, TLI = 0.92 ≥ 0.90, RMSEA = 0.06 ≤ 0.08) (Lim, 2025b). Additionally, *internal consistency* or *reliability* was demonstrated, with Cronbach's alpha values ranging from 0.800 to 0.992 and composite reliability (CR) values ranging from 0.832 to 0.993 (Table 4), both exceeding the recommended benchmark of 0.70 (Nunnally, 1978). Furthermore, *convergent validity* was established, with factor loadings above 0.60 and the average variance extracted (AVE) for each factor more than 0.50 (Hair et al., 2010). Moreover, *discriminant validity* was presented, with AVE values exceeding both the average shared variance (ASV) and maximum shared variance (MSV) for each construct, while the square root of AVE values (diagonal values in Table 5) were higher than the squared inter-factor correlations (SIC) (Fornell & Larcker, 1981).These findings confirm the robustness of the measurement model for first-order constructs.

3.3.5. *Assessment of measurement model: Model fit, reliability, and validity of second-order constructs*

The study has also shown a strong fit for the measurement model of second-order constructs, with *model fit indices* within the recommended threshold limits (χ2/df= 2.17 ≤ 3, CFI = 0.94 ≥ 0.90, GFI = 0.93 ≥ 0.90, NFI = 0.89 ≈ 0.90, TLI = 0.93 ≥ 0.90, RMSEA = 0.05 ≤ 0.08) (Lim, 2025b). Additionally, the Cronbach's alpha values ranged from 0.760 to 0.822 while the CR values ranged from 0.764 to 0.823 (Table 6), which were within the threshold limit of 0.70, indicating *internal consistency* or *reliability* (Nunnally, 1978). Furthermore, the factor loading and AVE

Table 4
Measurement model statistics for first-order constructs.

Construct	Item	Convergent validity		Discriminant validity		Internal consistency or reliability	
		Loading	Average variance extracted	Average shared variance	Maximum shared variance	Cronbach's alpha	Composite reliability
GAI service design	Action oriented (AO)		0.927	0.069	0.315	0.973	0.974
	AO1. ChatGPT collects tourism information as per my requirement.	0.85					
	AO2. ChatGPT helps me to get information that may not be readily available.	0.86					
	AO3. ChatGPT customizes the tour as per my requirement.	0.87					
	Collaboration (CO)		0.938	0.063	0.253	0.978	0.978
	CO1. ChatGPT allows me to share my good past experiences that I would like to have again in future.	0.89					
	CO2. ChatGPT recognizes my tourism needs, including age, medical condition, accommodation preference, etc.	0.91					
	CO3. ChatGPT incorporates my suggestions while designing my travel itinerary.	0.90					
	Compatibility for users (CU)		0.921	0.055	0.276	0.972	0.972
	CU1. ChatGPT interacts with me in a way I am comfortable.	0.91					
	CU2. ChatGPT interacts in whatever language I am comfortable with.	0.90					
	CU3. ChatGPT interaction was well-matched with my digital skill.	0.91					
	Human centeredness (HC)		0.956	0.061	0.315	0.984	0.985
	HC1. ChatGPT allows me to share my previous experiences and feedback while planning a tour.	0.91					
	HC2. ChatGPT is capable enough to recognize my personal needs and limitations.	0.89					
	HC3. ChatGPT involves me in designing my travel plan.	0.90					
	Maintaining privacy (MP)		0.932	0.055	0.253	0.976	0.976
	MP1. ChatGPT keeps tourist information confidential.	0.92					
	MP2. ChatGPT is careful about the information I shared to ensure my privacy.	0.90					
	MP3. ChatGPT won't save my information and it'll help to protect my privacy.	0.91					
GAI service expectation	Appealing facilities (AF)		0.629	0.072	0.364	0.890	0.868
	AF1. ChatGPT is highly appealing to me as it could understand my choices and preferences properly.	0.60					
	AF2. ChatGPT service is highly impressive.	0.61					
	AF3. ChatGPT took all my worries and I felt much relaxed while planning the tour.	0.94					
	AF4. ChatGPT provides a really awesome experience when chatting with it.	0.94					
	Dependable tour operator (DT)		0.731	0.069	0.388	0.875	0.890
	DT1. ChatGPT provides authentic travel information.	0.89					
	DT2. ChatGPT provides highly effective travel information.	0.84					
	DT3. ChatGPT provides information that can be depended upon for future travel planning.	0.77					
	Friendly and helpful (FH)		0.633	0.050	0.218	0.800	0.832
	FH1. ChatGPT is friendly platform as it always entertains my travel queries.	0.83					
	FH2. ChatGPT troubleshoots travel issues by giving advice instantly.	0.79					
	FH3. ChatGPT is helpful in resolving travel queries.	0.78					
	Service quality (SQ)		0.787	0.070	0.388	0.909	0.916
	SQ1. ChatGPT helps out the tourism industry to enhance its service quality.	0.79					
	SQ2. ChatGPT gets me all required travel information whenever I need them.	0.84					
	SQ3. ChatGPT personalized approach helps me to plan my trip that suits my preferences.	0.81					
Tourist engagement	Absorption (AB)		0.940	0.068	0.339	0.988	0.987

(*continued on next page*)

Table 4 (*continued*)

Construct	Item	Convergent validity		Discriminant validity		Internal consistency or reliability	
		Loading	Average variance extracted	Average shared variance	Maximum shared variance	Cronbach's alpha	Composite reliability
	AB1. I get absorbed when I go through the tour operator's tourism site.	0.90					
	AB2. I get engrossed when I go through the tour operator's tourism site.	0.91					
	AB3. I forget about everything else when I go through the tour operator's tourism site.	0.92					
	AB4. I feel addicted to updates and reviews on the tour operator's tourism site.	0.91					
	AB5. I check in from time to time on the tour operator's tourism site.	0.87					
	Attention (AT)		0.881	0.072	0.432	0.967	0.967
	AT1. I check for updates on the tour operator's tourism site.	0.88					
	AT2. I feel interested going through videos on the tour operator's tourism site.	0.85					
	AT3. I go through the detailed descriptions on the tour operator's tourism site.	0.85					
	AT4. I focus on ratings on the tour operator's tourism site.	0.87					
	Enthusiasm (EN)		0.920	0.066	0.339	0.978	0.979
	EN1. I enjoy the experience searching for information on the tour operator's tourism site.	0.89					
	EN2. I regularly follow the tour operator's tourism site.	0.87					
	EN3. I always wait for new tour package announcements on the tour operator's tourism site.	0.85					
	EN4. I feel excited whenever I search on the tour operator's tourism site.	0.88					
	Identification (ID)		0.907	0.082	0.432	0.974	0.975
	ID1. I get attached to the tour operator's tourism site during travel planning.	0.85					
	ID2. I can incorporate unexpected changes in my travel plan with the tour operator.	0.84					
	ID3. I receive cooperation and understanding of my budget, choices, and limitations with the tour operator.	0.82					
	ID4. It means a lot to travel with this tour operator.	0.83					
	Interaction (IN)		0.904	0.078	0.318	0.974	0.974
	IN1. Interacting with ChatGPT gives me new ideas for travel planning with a tour operator.	0.84					
	IN2. Interacting with ChatGPT clears my doubt when travel planning with a tour operator.	0.87					
	IN3. Interacting with ChatGPT makes me confident about the perceived success of my travel plan.	0.87					
	IN4. Interacting with ChatGPT creates expectation about my forthcoming travel.	0.88					
Brand performance	Consideration set size (CS)		0.949	0.045	0.332	0.983	0.983
	CS1. There aren't many good branded tour operators around.	0.90					
	CS2. There are only few established branded tour operators who are maintaining their performance consistently.	0.91					
	CS3. The number of branded tour operators that consistently fulfil expectations are limited.	0.92					
	Revisit intention (RI)		0.978	0.056	0.371	0.992	0.993
	RI1. The tour operator's tourism site is my top choice because it reflects good brand performance.	0.86					
	RI2. The tour operator's tourism site is the one I revisit for travel planning as I rely on their brand performance.	0.87					
	RI3. The tour operator's tourism site's good brand performance makes me think of revisits.	0.86					
	Share of wallet (SW)		0.928	0.048	0.371	0.981	0.981
	SW1. I have spent with this tour operator because they have performed excellently.	0.93					
	SW2. I believe this tour operator ensures value for money.	0.92					

(*continued on next page*)

Table 4 (*continued*)

Construct	Item	Convergent validity		Discriminant validity		Internal consistency or reliability	
		Loading	Average variance extracted	Average shared variance	Maximum shared variance	Cronbach's alpha	Composite reliability
	SW3. I don't mind spending with this tour operator because of their good brand performance.	0.93					
	SW4. I think this tour operator charges are justified because of their good brand performance.	0.92					
Anthropomorphism	AN1. ChatGPT made me feel as if I am interacting with a person while communicating with it.	0.94	0.952	0.064	0.174	0.989	0.990
	AN2. ChatGPT answered my travel queries as efficiently as a human travel executive.	0.92					
	AN3. Interacting with ChatGPT is like interacting with a person who never loses patience.	0.93					
	AN4. ChatGPT is highly skilled in providing information as per requirement.	0.92					
	AN5. ChatGPT is intelligent enough to understand what I want, even when I am not able to set my query methodically.	0.93					

Notes: Items were curated based on the process of item generation, scale purification, and scale refinement. Items on anthropomorphism, which was not part of the process, were adapted from Park et al. (2021).

Table 5
Correlation matrix for first-order construct.

Construct	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. GAI service design: Action oriented	**0.96**																
2. GAI service design: Collaboration	0.48	**0.97**															
3. GAI service design: Compatibility for users	0.53	0.35	**0.96**														
4. GAI service design: Human centeredness	0.56	0.39	0.50	**0.98**													
5. GAI service design: Maintaining privacy	0.39	0.50	0.38	0.39	**0.97**												
6. GAI service expectation: Appealing facilities	0.14	0.22	0.17	0.11	0.19	**0.79**											
7. GAI service expectation: Dependable tour operator	0.09	0.11	0.12	0.09	0.11	0.60	**0.85**										
8. GAI service expectation: Friendly and helpful	0.15	0.16	0.10	0.12	0.08	0.46	0.45	**0.79**									
9. GAI service expectation: Service quality	0.15	0.21	0.13	0.10	0.15	0.58	0.62	0.45	**0.88**								
10. Tourist engagement: Absorption	0.16	0.12	0.06	0.14	0.13	0.12	0.05	0.14	0.12	**0.97**							
11. Tourist engagement: Attention	0.02	0.11	-0.01	0.06	0.13	0.06	0.14	0.03	0.09	0.36	**0.94**						
12. Tourist engagement: Enthusiasm	0.09	0.11	0.06	0.09	0.14	0.08	0.07	0.16	0.10	0.58	0.37	**0.96**					
13. Tourist engagement: Identification	0.09	0.18	0.01	0.08	0.15	0.07	0.12	0.11	0.11	0.43	0.65	0.46	**0.95**				
14. Tourist engagement: Interaction	0.10	0.12	-0.01	0.07	0.07	0.09	0.11	0.15	0.12	0.47	0.56	0.44	0.56	**0.95**			
15. Brand performance: Consideration set size	0.03	0.11	0.06	0.08	0.09	0.07	0.07	0.06	0.03	0.16	0.11	0.15	0.12	0.17	**0.97**		
16. Brand performance: Revisit intention	0.02	0.08	0.01	0.08	0.05	0.14	0.13	0.12	0.07	0.15	0.13	0.12	0.13	0.23	0.57	**0.98**	
17. Brand performance: Share of wallet	-0.01	0.08	0.01	0.02	0.11	0.08	0.12	0.01	0.01	0.16	0.16	0.14	0.10	0.17	0.49	0.60	**0.96**

Notes: Bold-diagonal values indicate square root of average variance extracted.

values were above the recommended limit of 0.60 and 0.50, respectively, indicating *convergent validity* (Hair et al., 2010). Moreover, the AVE values were higher than both ASV and MSV values and the square root of AVE (the diagonal values in Table 6) were greater than the corresponding SIC values, indicating discriminant validity (Fornell & Larcker, 1981). These results underscore the robustness of the measurement model for second-order constructs.

3.3.6. Assessment of structural model: hypotheses testing

The structural model also demonstrated a good model fit ($\chi 2/df = 2.18 \leq 3$, CFI $= 0.93 \geq 0.90$, GFI $= 0.93 \geq 0.90$, NFI $= 0.89 \approx 0.90$, TLI $= 0.92 \geq 0.90$, RMSEA $= 0.05 \leq 0.08$). The results in Table 7 show that

Table 6
Measurement model statistics and correlation matrix for second-order constructs.

Second-order construct	First-order construct	Convergent validity		Discriminant validity		Internal consistency or reliability		Correlation			
		Loading	Average variance extracted	Average shared variance	Maximum shared variance	Composite reliability	Construct reliability	GAI service design	GAI service expectation	Tourist engagement	Brand performance
GAI service design	Action oriented	0.79	0.541	0.040	0.078	0.795	0.796	**0.73**			
	Collaboration	0.69									
	Compatibility for users	0.75									
	Human centeredness	0.77									
	Maintaining privacy	0.67									
GAI service expectation	Appealing facilities	0.74	0.552	0.053	0.078	0.760	0.764	0.28	**0.74**		
	Dependable tour operator	0.80									
	Friendly and helpful	0.66									
	Service quality	0.81									
Tourist engagement	Absorption	0.70	0.584	0.051	0.071	0.822	0.823				
	Attention	0.77						0.18	0.22	**0.76**	
	Enthusiasm	0.71									
	Identification	0.82									
	Interaction	0.76									
Brand performance	Consideration set size	0.80	0.652	0.037	0.071	0.783	0.786	0.09	0.18	0.27	**0.81**
	Revisit intention	0.85									
	Share of wallet	0.82									

Notes: Bold-diagonal values indicate square root of average variance extracted.

GAI service design positively and significantly influenced tourist engagement ($\beta = 0.128$, $p < 0.05$) and GAI service expectation ($\beta = 0.280$, $p < 0.01$), which also positively and significantly influenced tourist engagement ($\beta = 0.193$, $p < 0.01$), which positively and significantly influenced brand performance ($\beta = 0.272$, $p < 0.01$). Thus, H_1, H_2, H_3, and H_4 are supported.

The moderation analysis was conducted using the PROCESS macro, where anthropomorphism was taken as the moderator. The results in Figure 2 and Table 8 show that anthropomorphism positively and significantly moderated the relationship between GAI service design ($\beta = 0.565$, $p < 0.01$) and GAI service expectation ($\beta = 0.174$, $p < 0.01$) with tourist engagement, such that the effects of these relationships are enhanced with a higher degree of anthropomorphism. Thus, $H5_a$ and $H5_b$ are supported (Table 8).

4. Discussion and conclusion

Existing literature acknowledges that the impact of GAI remains underexplored, with researchers emphasizing the need to understand how GAI shapes travel and tourism experiences (Gursoy et al., 2023). The ability of GAI to resolve queries quickly and efficiently suggests a potential to significantly enhance visitor experiences (Harvey et al., 2020). Additionally, Shin and Kang (2023) have highlighted the necessity for more studies to improve managerial capabilities within the tourism industry. This study directly addresses these gaps by examining the influence of GAI service design on brand performance through the mediating roles of GAI service expectation and tourist engagement. Furthermore, the study explores how anthropomorphism may moderate the relationship between GAI service design and expectation with tourist engagement. The findings provide insights into the pathways through which GAI can be leveraged to engage tourists, fulfill their expectations, and ultimately boost brand performance, offering valuable implications for travel companies or tour operators looking to integrate GAI into their service strategies.

To begin, the findings of this study emphasize the significant positive relationship between GAI service design and tourist engagement, demonstrating how thoughtfully designed GAI services can enhance user experience (H_1). GAI's *action-oriented* approach, which allows for immediate, personalized responses based on tourists' characteristics (e.g., age, medical conditions) and preferences (e.g., activities, destinations), plays a critical role in fostering engagement. The *human-centered* nature of GAI, evident in its ability to adapt recommendations according to individual needs, further strengthens this connection. Additionally, GAI's *compatibility for users*, particularly through its attention to user comfort and multilingual capabilities, makes it accessible to a diverse audience, enhancing its appeal. The assurance of *maintaining privacy* by not storing user data is another crucial aspect, building trust and encouraging more meaningful interactions. *Collaboration* is reflected in how GAI integrates cultural and social factors into service design, enabling travel companies or tour operators to create experiences that resonate with tourists on multiple levels. In this regard, the present study advances the work of Koskela-Huotari et al. (2021), which considered only three dimensions of service design, by introducing two more via "compatibility for users" and "maintaining privacy", identified through qualitative analysis and validated quantitatively. These findings offer valuable insights for the tourism industry, highlighting the need for service designs that effectively combine action-oriented, collaborative, and human-centered approaches with user compatibility and privacy considerations to enhance tourist engagement.

Besides that, the findings demonstrate a significant positive relationship between GAI service design and GAI service expectation, suggesting that well-crafted GAI services enhance tourists' perceptions of overall service quality (H2). The *action-oriented* nature of GAI, which delivers prompt and accurate information tailored to tourists' specific characteristics and preferences, directly shapes their expectations of receiving *high-quality service*. This action-oriented approach reinforces the expectation of *appealing facilities* that cater to individual needs. GAI's *human-centered* design, which emphasizes *friendly and helpful* interactions, aligns with tourists' desires for a *dependable and supportive tour operator*, fostering expectations of personal attention and reliability. *Compatibility for users*, particularly through ease of use and multilingual capabilities, ensures that services are accessible and intuitive, enhancing expectations of a user-friendly and inclusive experience. The emphasis on *maintaining privacy* strengthens trust, reassuring tourists that their interactions will remain confidential, thus meeting their expectations of discretion and security. *Collaboration* within GAI service design, which thoughtfully integrates cultural and social factors, further ensures that services resonate with tourists on a personal level, reinforcing the expectation that their unique preferences will be acknowledged and fulfilled. These insights align with previous research that has shown how chatbot service design can significantly influence customer expectations (Lu, Min, Jiang, & Chen, 2024). While some studies have highlighted both positive and negative influences of chatbots on human expectations and usage intentions (Melián-González, Gutiérrez-Taño, & Bulchand-Gidumal, 2021), the findings from this study emphasize that a well-designed GAI service can not only meet but elevate tourists' expectations, reinforcing the principles of expectation theory (Sujan, 1986).

In addition, the findings indicate a significant positive relationship between GAI service expectation and tourist engagement, underscoring how well-aligned service expectations can foster engagement (H_3). The *appealing facilities* and *dependable service* that tourists anticipate from GAI are crucial in building this engagement. GAI's communication style, characterized by empathy and responsiveness, enhances tourists' perception of reliability and personal attention. This dependable service encourages tourists to rely on GAI for tourism-related decisions, making them more likely to engage attentively with the platform's recommendations. The *friendly and helpful* nature of GAI interactions fosters a sense of trust and comfort, encouraging tourists to explore the services further, follow updates regularly, and actively seek out new offers or information. The *quality of service* expected from GAI, which includes receiving accurate and prompt answers to queries, reinforces the habit of using the platform regularly, deepening engagement. Consistent with findings by Jones, Hancock, Kazandjian, and Voorhees (2022) and Zhang et al. (2024), the empathetic and user-friendly approach of GAI significantly influences customer engagement. This study extends these insights by establishing a strong connection between service expectations and engagement, providing new evidence on how well-designed GAI services can sustain and deepen tourist engagement.

Next, the findings show how enhanced tourist engagement, driven by well-aligned service design and expectation, can positively impact brand

Table 7
Structural model statistics for main effects of GAI service design and expectation, tourist engagement, and brand performance.

Hypothesis and relationship	Estimate (β)	Standard error	*p*-value	Outcome
H_1. GAI service design → Tourist engagement	0.128	0.084	0.04	Supported
H_2. GAI service design → GAI service expectation	0.280	0.088	0.00	Supported
H_3. GAI service expectation → Tourist engagement	0.193	0.063	0.00	Supported
H_4. Tourist engagement → Brand performance	0.272	0.078	0.00	Supported

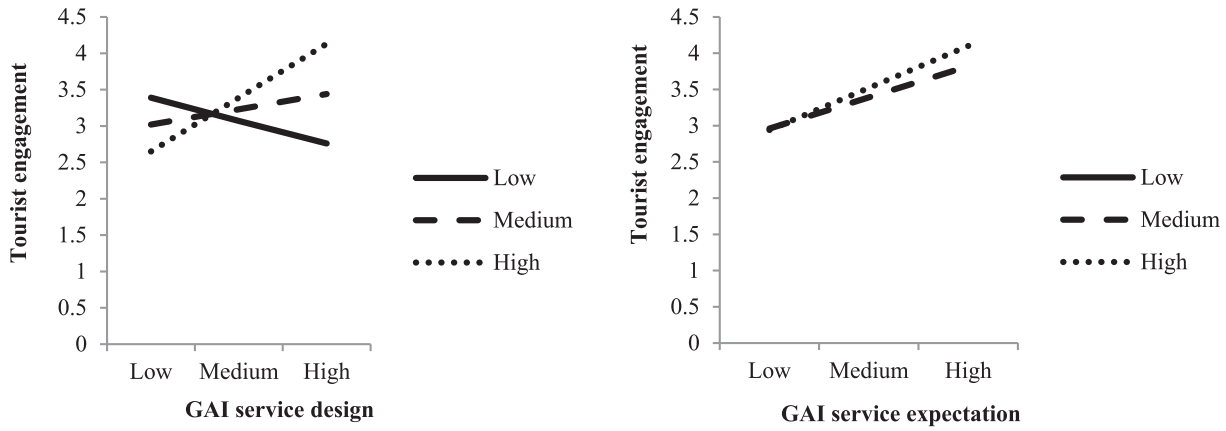

Fig. 2. Moderation graph for anthropomorphism, GAI service design and expectation, and tourist engagement

Table 8
Moderation statistics for anthropomorphism, GAI service design and expectation, and tourist engagement

Hypothesis and relationship	Estimate (β)	Standard error	Statistical significance				Outcome
			p-value	*t*-value	Lower -limit confidence interval	Upper-limit confidence interval	
$H_{5a.}$ GAI service design → Tourist engagement	0.565	0.043	0.00	12.853	0.478	0.651	Supported
$H_{5b.}$ GAI service expectation → Tourist engagement	0.174	0.051	0.00	3.395	0.073	0.274	Supported

performance. Tourists who experience high levels of engagement, marked by *absorption*, *attention*, *enthusiasm*, *identification*, and *interaction*, are more likely to include the brand within their *consideration set* when making future travel decisions. This deep engagement, characterized by tourists' focused attention and emotional investment in the GAI interactions, leads to stronger identification with the brand, fostering a sense of loyalty and preference. As noted by Harrigan et al. (2017), such engagement creates an emotional and psychological bond with the brand, further reinforcing tourists' commitment and preference. Enthusiasm generated through positive interactions encourages tourists to not only revisit the brand but also expand their relationship with it, thereby increasing their *share of wallet*. As tourists regularly interact with the GAI-enabled platform, their identification with the brand solidifies, making them more likely to consider it as their primary choice for *future travel* plans. The combination of these engagement factors ensures that tourists are not only retained but also become advocates, sharing their positive experiences with others and contributing to the brand's growth. These insights emphasize the critical role of tourist engagement in enhancing brand performance, suggesting that travel companies or tour operators can significantly boost their market position by designing GAI services that effectively engage and resonate with their customers.

Finally, the findings reveal the role of anthropomorphism as a significant moderator in the relationships between GAI service design and service expectation with tourist engagement, wherein the humanlike features of GAI enhance both service design and expectation by making interactions more relatable and engaging (H_{5a} and H_{5b}). The humanlike communication style of GAI allows tourists to make informed decisions through detailed interactions, where their questions, no matter how redundant, are met with clarity and patience. This friendly and responsive communication fosters a sense of dependence and raises expectations, gradually drawing tourists into deeper engagement with the service and the brand. Previous studies have cautioned that excessive anthropomorphism might lead to unrealistic expectations and even discomfort, known as the "uncanny valley" effect (Mulcahy et al., 2024). However, when managed effectively, anthropomorphism significantly enhances the emotional state of users (Balakrishnan & Dwivedi, 2024). Notably, GAI's clear communication of its capabilities and limitations helps prevent the risks of over-expectation, ensuring that tourists remain within a comfortable range of familiarity. This careful balance allows tourists to enjoy the benefits of humanlike interaction without experiencing discomfort or unrealistic expectations. These findings contribute to the ongoing discourse on anthropomorphism in AI, demonstrating that when properly calibrated, humanlike features can significantly enhance tourist engagement, thereby strengthening the overall brand experience and performance.

4.1. Theoretical contributions

This study provides significant theoretical contributions at the intersection of tourism and technology by elucidating the role of GAI in enhancing brand performance through well-designed service interactions. Grounded in S-D logic (Vargo & Lusch, 2004), social exchange theory (Homans, 1958), and uncanny valley theory (Mori, 1970), the findings advance the theoretical generalizability of these theories (Lim, 2026b) and demonstrate their generative capacity to deliver new theoretical contributions (Bartunek & Lei, 2025) in a contemporary tourism setting by showing that GAI-enabled service designs orchestrate resource integration and value-in-use to convert clear expectations into engagement and brand performance and that anthropomorphism functions as a boundary condition with gains at moderate human-likeness and losses once the uncanny threshold is crossed. The finer-grained details of these theoretical contributions are as follows.

Firstly, this study advances the application of SD logic in the context of tourism by demonstrating how GAI service design, with its human-centered and collaborative approach, directly influences tourist engagement and service expectations. This aligns with SD logic's emphasis on co-creation of value (Vargo & Lusch, 2004), where tourists actively participate in shaping their service experiences. Notably, this study highlights how GAI facilitates this co-creation by providing personalized and timely information, thus meeting tourists' needs without compromising privacy. This contribution broadens the

theoretical understanding of how service design in tourism can be enhanced through advanced AI technologies, reinforcing the importance of aligning service elements with tourist expectations to foster engagement by means of co-creation (Koskela-Huotari et al., 2021).

Secondly, this study enriches social exchange theory by illustrating how well-designed GAI services can meet and elevate tourists' expectations, thereby fostering stronger engagement. Social exchange theory posits that relationships are built on reciprocal exchanges of value (Homans, 1958), and this study shows how GAI enhances these exchanges by ensuring appealing, dependable, and seamless communication. Noteworthily, the ability of GAI to provide continuous, responsive interaction builds confidence and strengthens the relationship between tourists and tourism service providers, which is crucial for long-term engagement and loyalty (Zhang et al., 2024). Hence, the study's findings contribute to the theoretical discourse by showing that technology, when designed to meet human expectations, can significantly enhance social exchanges in a tourism context.

Thirdly, this study underscores the importance of tourist engagement as a key driver of brand performance, demonstrating that GAI can effectively facilitate this engagement through appealing and personalized service designs. In particular, the findings suggest that GAI not only helps tourists identify and connect with a brand but also motivates them to increase their interaction and spending, thus improving brand performance. This extends the theoretical understanding of how engagement can be cultivated through technology (Lim & Rasul, 2022; Lim, Rasul, Kumar, & Ala, 2022; Rasul et al., 2025), providing insights into how tourism brands can leverage GAI to establish a competitive advantage. These dynamics also align with tourism research that applies S-D logic to AI-enabled service ecosystems, where context-aware, data-driven, real-time interactions operationalize resource integration and translate personalized design into engagement outcomes. Notably, the tourism scholarship conceptualizes smart tourism destinations as digitally enabled service ecosystems in which such interactions support S-D logic resource integration and co-creation, thereby enhancing destination competitiveness (Buhalis & Amaranggana, 2015; Femenia-Serra & Neuhofer, 2018; Gretzel, Sigala, Xiang, & Koo, 2015). Within AI-enhanced travel services, conversational agents and itinerary generators enable dialogic, personalized exchanges that raise engagement and satisfaction and translate into visit and repeat usage, which are direct precursors of brand performance (Jiang, Cheng, Yang, & Gao, 2022; Tosyali et al., 2025; Zhang et al., 2024). Consistent with these mechanisms, our results show that GAI-enabled co-creation operates through the expectation to engagement pathway to increase consideration set size, revisits, and share of wallet, thereby providing a measurable link from design to performance.

Lastly, this study contributes to the uncanny valley theory by exploring the moderating role of anthropomorphism in the relationships between GAI service design and expectation with tourist engagement. While existing literature offers mixed views on the impact of anthropomorphism (Balakrishnan & Dwivedi, 2024; Mulcahy et al., 2024), this study supports the idea that humanlike features in GAI can enhance tourist engagement when managed appropriately. Noteworthily, this study shows that when GAI clearly communicates its capabilities and limitations, tourists experience a comfortable interaction, avoiding the discomfort associated with the "uncanny valley." This finding advances the theoretical discussion on the role of anthropomorphism in AI-driven services (Lim, Kumar, Verma, & Chaturvedi, 2022), suggesting that a balanced approach to humanlike features can serve as a positive catalyst for engagement in the tourism industry.

4.2. Managerial implications

The findings of this study offer valuable insights for travel companies and tourism operators seeking to leverage GAI to enhance their brand performance. Given that GAI is often operated by third-party providers such as OpenAI, travel companies and tourism operators must strategically integrate GAI into their service offerings while ensuring alignment with their brand values and customer expectations.

Firstly, GAI service design should be action-oriented, human-centered, and collaborative to foster meaningful tourist engagement. Travel companies should work closely with GAI providers to customize AI responses and interactions that reflect their brand's unique identity and service standards. For instance, GAI should facilitate the sharing of past tourist experiences in a way that respects privacy, allowing companies to gather valuable insights for strategic decision-making. Such personalized interactions can enhance the uniqueness of the service offered, thereby strengthening the brand's connection with tourists. Ensuring that GAI is accessible in multiple languages and easy to use for a diverse audience will further enhance its compatibility, making the service more appealing to a larger range of tourists.

Secondly, GAI service expectation must be carefully managed to align with the brand's commitment to delivering high-quality services. Consistency in service quality is key to building and maintaining trust with tourists, which is crucial for long-term sustainability. GAI should be designed to offer personalized facilities that meet individual needs, thereby fulfilling tourists' expectations. Tourism managers should ensure that the AI-driven interactions reinforce the perception of appealing facilities, dependable services, and friendly communication. This approach not only meets but potentially exceeds tourists' expectations, leading to greater satisfaction and stronger engagement.

Thirdly, tourist engagement can be significantly enhanced through GAI by making the service experience immersive and interactive. GAI should be utilized to keep tourists engaged with ongoing offers and new packages, encouraging them to explore and interact with the brand consistently. Tourism managers should monitor how effectively GAI clarifies tourists' queries and addresses their doubts, as this clarity directly impacts engagement. A strategically deployed GAI can contribute to consistent brand performance, motivating tourists to spend more on the brand due to the perceived value of a high-quality service. As tourists become more engaged and loyal, the brand is likely to see increased revenue and stronger market positioning.

Lastly, anthropomorphism should be carefully managed to enhance tourist engagement without leading to discomfort. Tourism managers need to understand the balance between humanlike attributes and the inherent limitations of GAI. A thoughtful application of anthropomorphism can create a more relatable and engaging experience for tourists, but it should be done with the understanding that GAI complements, rather than replaces, human expertise. Recognizing this balance allows tourism managers to harness the benefits of GAI while avoiding the pitfalls of excessive anthropomorphism, ultimately achieving organizational goals more effectively.

4.3. Limitations and recommendations for future research

While this study provides valuable insights into the influence of GAI on brand performance in the tourism industry, several limitations warrant consideration. First, the focus group and expert panel were composed of individuals from a geographically proximate area, which may introduce socio-cultural biases into the findings. Likewise, the survey was conducted via a non-random approach (i.e., purposive and snowball sampling) in India, which may introduce non-random response bias. Similarly, the context of GAI was ChatGPT and the focus of the survey questions was on tour operators, which tourists may or may not necessarily use. Hence, future studies could expand the geographical and socio-cultural scope of participants using a random sampling approach (e.g., stratified sampling) and explore alternative contexts (e.g., hotels, restaurants) and GAI (e.g., DeepSeek) to improve the generalizability of the results. Second, the study primarily focused on themes derived from qualitative analysis and literature review, such as service design, service expectation, tourist engagement, and brand performance. However, other relevant dimensions, such as customer trust, brand reputation, and brand governance, were not included and should

be explored in future research to provide a more comprehensive understanding of GAI's impact. Lastly, this study considered only one moderator (i.e., anthropomorphism), and thus, leaving out other potential moderators that might influence the relationships between GAI service design and expectations with tourist engagement. Future research should investigate additional moderating variables, such as cultural factors, user experience levels, or technological familiarity, to deepen the understanding of how GAI interacts with various elements of brand performance in tourism.

CRediT authorship contribution statement

Arunangshu Giri: Writing – original draft, Visualization, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Dipanwita Chakrabarty:** Writing – original draft, Visualization, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Weng Marc Lim:** Writing – review & editing, Writing – original draft, Visualization, Validation, Supervision, Investigation, Conceptualization. **Sachin Kumar Mangla:** Writing – review & editing, Validation, Investigation, Conceptualization. **Linda D. Hollebeek:** Writing – review & editing, Validation, Investigation, Conceptualization.

Source of funding

None.

Declaration of competing interest

None.

Acknowledgement

During the preparation of this work, the author(s) used Grammarly, OpenAI GPT, and Microsoft Editor to check and improve language and readability, including expression, tone, and style of writing. After using these tools/services, the author(s) reviewed and edited the content as needed and take(s) full responsibility for the content of the publication.

Appendix A. Appendix

Table A1
Thematic mapping of GAI service design

Panel A. Dimensions of GAI service design

Theme	Sub-themes / second-order codes	Frequency	Excerpts	Related words / first-order codes
GAI service design	Action oriented	151	"*The amazing part of ChatGPT interaction is it can customize the tour … always go for customization.*" "*I think, before going for a travel, I'll like to gather valuable information and latest tourism trends … found ChatGPT is effective in this context.*"	Customization, Information
	Collaboration	81	"*It is giving me plethora of alternatives which fulfill my needs … traveler's review as well.*" "*ChatGPT provides a platform for me to share my experiences and connect with others.*" "*It also incorporates my suggestions while designing my travel itinerary.*"	Needs-fulfillment, Sharing, Suggestions
	Compatibility for users	125	"*One can interact with ChatGPT in whatever language he or she is comfortable.*" "*It interacted with me in the way I am comfortable.*" "*It doesn't require specific skills as well.*" "*ChatGPT allows me to provide feedback on my travel experiences … and accommodations.*"	User-friendly, Interactive, Skill
	Human centeredness	142	"*ChatGPT could be designed with an interactive interface that encourages users to explore different travel options and destinations.*" "*ChatGPT helps me plan my travels by recognizing my personal needs and limitations … and abilities."*	Feedback, Involvement, Needs-recognition
	Maintaining privacy	44	"*…privacy of the user is maintained … it keeps all the information confidentially.*"	Privacy

Panel B. Word cloud of GAI service design

Panel C. Hierarchy chart of GAI service design

Table A2
Thematic mapping of GAI service expectation

Panel A. Dimensions of GAI service expectation

Theme	Sub-themes / second-order codes	Frequency	Excerpts	Related words / first-order codes
GAI service expectation	Appealing facilities	92	"*It's really an awesome experience chatting with ChatGPT.*" "*ChatGPT provides choice-based service.*" "*I think I am highly impressed with … of ChatGPT.*" "*If there is someone reliable and always available, I would feel much more relaxed.*"	Awesome, Choice-based, Impressed, Relaxed
	Dependable tour operator	93	"*I have checked the authenticity of the information.*" "*It is dependable.*" "*Most of the information are highly effective.*"	Authenticity, Dependability, Effectiveness
	Friendly and helpful	77	"*One will experience a friendly comfort while conversing.*" "*Like to depend on ChatGPT for my tourism queries. It is really helpful.*" "*ChatGPT is there to troubleshoot instantly.*"	Friendly, Helpful, Troubleshooting
	Service quality	112	"*To satisfy all needs I need to be empowered with all related know-hows … all I can gather using ChatGPT.*" "*I think ChatGPT can help immensely in planning itineraries.*""*I think, ChatGPT is actually enhancing the operational efficiency of the tourism sector.*"	Know-hows, Planning, Quality

Panel B. Word cloud of GAI service expectation

Panel C. Hierarchy chart of GAI service expectation

Table A3
Thematic mapping of tourist engagement

Panel A. Dimensions of tourist engagement				
Theme	**Sub-themes/ second-order codes**	**Frequency**	**Excerpts**	**Related words / first-order codes**
Tourist engagement	Absorption	78	"*When I visit a travel website, I find myself instantly absorbed.*" "*What started as a casual interest has turned into a compulsion.*" "*I find myself getting engrossed in the process.*" "*Overall, the experience of exploring the contents of travel website is both informative and immersive.*"	Absorbed, Compulsion, Engrossed, Immersive, Obsession
	Attention	83	"*Eager to catch up on any new tourism updates that might have been posted overnight.*" "*I immerse myself attentively in the detailed discussions about each place they offer.*" "*As a passionate traveler, I make it a point to carefully and regularly follow travel updates from my favorite tour operator.*" "*Each piece of content draws me in and ignites my curiosity to explore further.*"	Attentive, Follow, Interest, Review
	Enthusiasm	67	"*ChatGPT serves as an invaluable tool for gathering tourist reviews of various aspects of travel.*" "*ChatGPT has seamlessly become an integral part of my daily life as a tourist.*" "*Using ChatGPT as a tourist has been an absolute delight.*" "*I feel a surge of excitement coursing through me …. all at the tips of my fingers.*" "*I wait eagerly for new packages to come.*"	Day-to-day, Enjoyment, Excitement, Keen
	Identification	116	"*I cannot say that I am attached with ChatGPT … but, yeah, gradually I am getting attached because of its highly attractive benefits.*" "*Whenever whatever information I required from ChatGPT, I got cooperation.*" "*ChatGPT is flexible … it tries to cope up with my choices and assist accordingly.*" "*A perfect tour operator can guide about how a tour can be designed so that maximum satisfaction can be earned with minimum or optimized fund.*"	Attachment, Cooperative, Flexibility, Valued
	Interaction	81	"*One of the things I appreciate most about ChatGPT is its ability to provide accurate and up-to-date information on a wide range of travel topics … ensuring that I always have access to the information I need to make informed decisions.*" "*ChatGPT has become my go-to companion when it comes to seeking innovative travel ideas.*" "*ChatGPT has been an invaluable resource … to clarifying all my travel-related doubts.*"	Clarified, Expectation, Innovative, Success
Panel B. Word cloud of tourist engagement			**Panel C.** Hierarchy chart of tourist engagement	

Table A4
Thematic mapping of brand performance

Panel A. Dimensions of brand performance				
Theme	**Sub-themes/ second-order codes**	**Frequency**	**Excerpts**	**Related words / first-order codes**
Brand performance	Consideration set size	83	"*I continue to search for and support those brands that consistently deliver exceptional experiences.*" "*Limited availability … making it challenging to secure desired travel arrangements.*"	Consistent performance, Limited options
	Revisit intention	108	"*This tourism … because it reflects the brand's performance.*" "*This tourism website … because it relies on the brand's reputation.*" "*Plan to return to a specific tourism brand for future visits.*"	Reflection, Reliance, Revisit
	Share of wallet	89	"*Good performance from a tourism brand … making me more inclined to … spending a little extra for their packages.*" " … *I look for when evaluating value for money.*" "*I've dedicated a considerable chunk of my overall travel budget … because they … excel.*"	Performance, Spending, Value-for-money, Worth-spending
Panel B. Word cloud of brand performance			**Panel C.** Hierarchy chart of brand performance	

Data availability statement

Data can be made available upon reasonable request.

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