

An Examination of AI in Travel Planning Across Traveler Spending Segments

By Christopher Anderson and Young Jang

QUICK TAKE

This study explores how travelers use artificial intelligence (AI) for travel planning across four spending segments: Budget, Premium, Aspirational, and Luxury. Based on a survey of 1,029 U.S. travelers, the analysis shows that AI is most widely used for discovery tasks, particularly identifying activities and attractions. However, adoption varies by segment when AI is used for budgeting or validating travel decisions. Premium and Luxury travelers tend to use AI to quickly evaluate options, Aspirational travelers rely on it for curated hotel recommendations, and Budget travelers use it primarily to identify value. Across all segments, concerns about accuracy, transparency, and generic recommendations continue to limit broader trust and adoption.

INTRODUCTION

The travel and hospitality industry has undergone a transformative shift driven by rapid advancements in emerging technologies, particularly Generative Artificial Intelligence (GenAI). This new wave of innovation is not merely about automation but is fundamentally reshaping how travelers discover, plan, and book their journeys. Companies such as Expedia have integrated conversational AI tools, while Google has enhanced its search capabilities with AI-powered personalized recommendations.

The potential of these tools is substantial, promising to streamline the travel planning process, generate hyper-personalized itineraries, and uncover unique experiences that were previously difficult to identify. AI models trained on massive datasets of travel behaviors, consumer preferences, and real-time market data are now capable of generating comprehensive and context-aware travel plans with unprecedented speed and accuracy.

OpenAI's recent launch of Expedia and Booking.com integrations within ChatGPT highlights how quickly this space is evolving. At the same time, industry leaders acknowledge that the technology still has limitations. As AirBnB CEO Brian Chesky indicated when explaining the company's decision not to launch with ChatGPT, the technology must make considerable progress before it can fully replace existing travel planning formats. Industry forecasts suggest that GenAI may play an increasingly influential role during the early inspiration phase of travel planning. Expedia argues that these tools could influence the 59% of travelers who begin planning without a predetermined destination (Expedia Group, 2023). At the same time, the growing emphasis on hyper-personalization requires robust ethical and regulatory frameworks to address risks related to bias and privacy, ensuring long-term consumer trust (Emerald Insight 2024).

The tourism industry's transition from traditional travel agencies to online platforms was largely driven by consumers seeking direct control over booking decisions. Today, however, travelers voluntarily engage in extensive research in order to avoid overpaying—often viewing an average of 141 travel-related content pages over a 45-day planning period (Expedia Group 2023). While this search behavior reflects a desire

to secure the best value, it has also created a state of information overload and decision fatigue, presenting a clear opportunity for AI to simplify the planning process.

GenAI also has the potential to increase the prevalence of hyper-segmentation and personalization by leveraging large datasets to treat each traveler as a segment of one (Unite.AI 2024). Major platforms such as Google and Expedia have already integrated GenAI to generate tailored itineraries and recommendations (Seyfi et al. 2025). Conversational AI further enables travelers to actively seek information, improving trip-planning efficiency while delivering customized recommendations and functioning as a 24/7 digital travel assistant (Wong et al. 2023).

In addition to functionality, however, AI adoption in travel planning ultimately hinges on consumer acceptance. Academic literature often frames this challenge through Innovation Resistance Theory (IRT), which explains why consumers may resist adopting new technologies even when they offer clear benefits (Lyu et al. 2024). For practitioners, this framework can serve as a predictive map for implementation challenges. Resistance to new technologies is rarely random; instead, it tends to be driven by specific functional barriers such as concerns about accuracy and trustworthiness, as well as psychological barriers including the loss of human interaction and privacy risks (Seyfi et al. 2025; Carvalho & Ivanov 2024; Shi et al. 2020; Wong et al. 2023).

Despite this technological transformation, a significant gap remains in understanding how different traveler segments perceive and adopt AI tools. It is often assumed that a single, one-size-fits-all approach to AI will appeal to the entire market. However, the value proposition of AI is not universal, and motivations for adoption—or resistance—are likely shaped by a traveler's financial capacity, behavioral patterns, and psychological preferences. This study addresses that gap by examining AI adoption motivations and perceived barriers across four distinct traveler spending segments: Budget, Premium, Aspirational, and Luxury.

This research aims to provide a more nuanced understanding of AI's evolving role in the travel ecosystem. Using survey data from U.S. travelers, the study explores how factors such as price sensitivity, a desire for unique experiences, and expectations for human interaction influence the adoption of AI-driven

travel planning tools. The ultimate goal is to offer actionable insights that help tourism stakeholders design AI tools aligned with the distinct needs and expectations of different traveler segments.

METHODOLOGY

We gathered data from 1,029 active U.S. travelers via Prolific, a platform recognized for providing high-quality academic and market research samples. To ensure the results reflect real travel behavior rather than bot-generated or “speeding” responses, several quality-control measures were implemented:

- **Knowledge Checks:** Strategic questions designed to verify respondent attentiveness.
- **Time-Limit Constraints:** Removal of unusually fast completions to ensure thoughtful engagement.
- **Verified Travel Intent:** Screening to confirm that participants were active participants in the travel marketplace.

Segmentation Logic: Mapping “Real-World” Spend

Rather than relying on broad demographic variables such as age or zip code, participants were segmented based on their actual nightly accommodation spending. This approach reflects the economic realities of the travel industry, where market segments are often defined by price tiers and spending behavior.

Using this framework, respondents were grouped into four segments:

- **Budget:** Cost-driven travelers seeking maximum utility.
- **Premium:** Efficiency-seekers who balance cost with convenience.
- **Aspirational:** Quality-driven travelers focused on curated, “best-in-class” experiences.
- **Luxury:** High-touch travelers who prioritize exclusivity and service.

Research Framework

The survey was structured around four pillars designed to extract the most relevant managerial insights:

1. **Behavioral Segmentation:** Classifying respondents by spending power and travel frequency to ensure segment-specific accuracy.
2. **AI Adoption Audit:** Measuring actual usage rates—rather than stated interest—to identify where travelers are currently experimenting with AI tools.
3. **Barrier Identification (“Risk Map”):** Using IRT to pinpoint where trust breaks down, distinguishing between functional barriers (such as accuracy concerns) and psychological barriers (such as the perceived loss of human interaction).
4. **Planning Baseline:** Comparing AI-assisted planning with traditional search and booking behaviors to identify where AI offers a genuine competitive advantage.

Traveler Segmentation and Demographics

As background, survey respondents were grouped based on their approximate budget per nightly stay in a large U.S. urban city, using reference prices from PwC as benchmarks. Respondents generally reflected typical U.S. travelers, with a near-equal distribution of male and female participants. The most active group of travelers consisted of young to middle-aged adults, aged 29 to 44. The modal educational background was a bachelor’s degree, and the largest share of respondents reported a household income between \$60,000 and \$99,999.

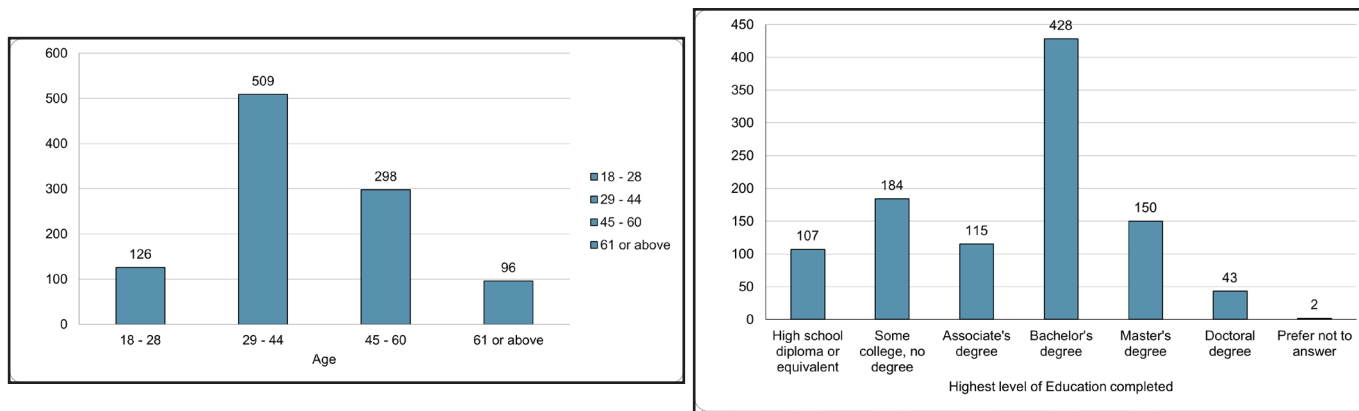
Respondents typically reported taking a few trips per year, with the largest group traveling two to three times annually and generally booking their trips 15–30 days prior to arrival. This pattern suggests a preference for a small number of planned getaways rather than frequent, short trips.

We use the following four spending buckets to segment respondents:

- **Budget Travelers (Under \$170 per night):** This group comprised 374 respondents, accounting for 36.3% of the total sample.

Figure 1 summarizes respondent age and education distributions.

Figure 1. Age and Education Distributions



- **Premium Travelers (\$170 – \$250 per night):** This segment represents the largest portion of the surveyed population, with 411 respondents, or 39.9% of the total.
- **Aspirational Travelers (\$251 – \$350 per night):** This segment accounted for 155 respondents, or 15.1% of the total.
- **Luxury Travelers (\$351 or above per night):** This segment included 89 respondents, accounting for 8.7% of the total.

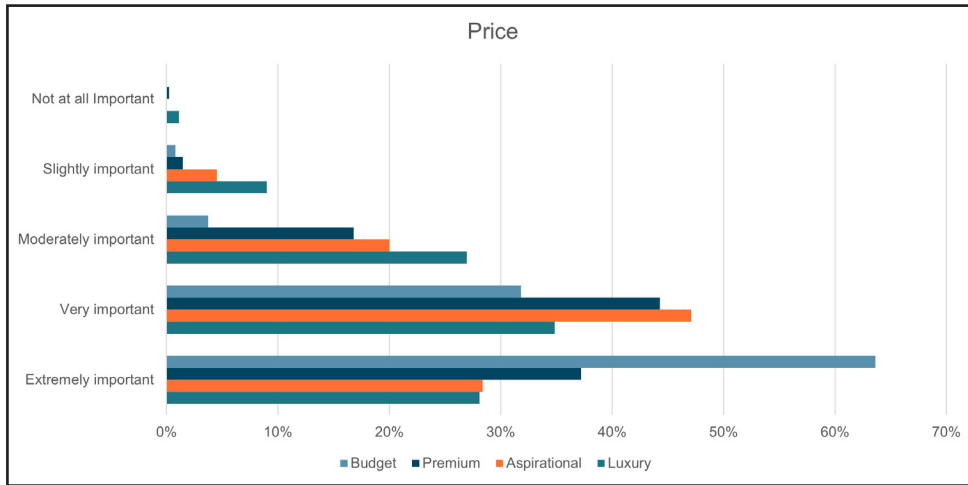
Traveler Insight

The analysis of the survey data, based on the four-segment model, provides strong support for the core research thesis that AI adoption and use cases are segment-dependent. Panels A–C of Figure 2 display the importance of three core property features—Price, Amenities, and Location—across the four traveler segments.

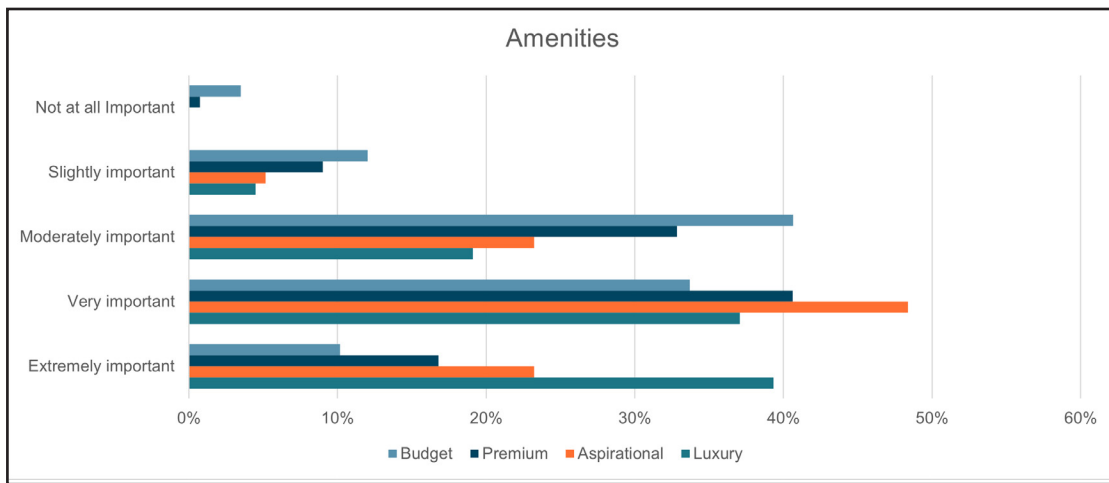
- **Price Importance (Panel A):** Over 60% of Budget travelers rate price as “Extremely Important.”
- **Managerial Move:** For this segment, AI interfaces should lead with a Value-First display. The customer journey should prioritize price-comparison tools and deal alerts immediately upon login in order to prevent abandonment.
- **Amenity and Location Importance (Panels B & C):** While price peaks for Budget travelers, the Luxury and Aspirational segments show a significant shift toward “Extremely Important” rankings for Location (over 60% for Luxury travelers) and Amenities.

As expected, the figures highlight the relative importance of service elements and experiential features for Aspirational travelers, while Budget travelers place greater emphasis on price. In other words, higher-spend segments prioritize amenities, experiences, and personalization, whereas Budget-focused travelers tend to prioritize cost considerations.

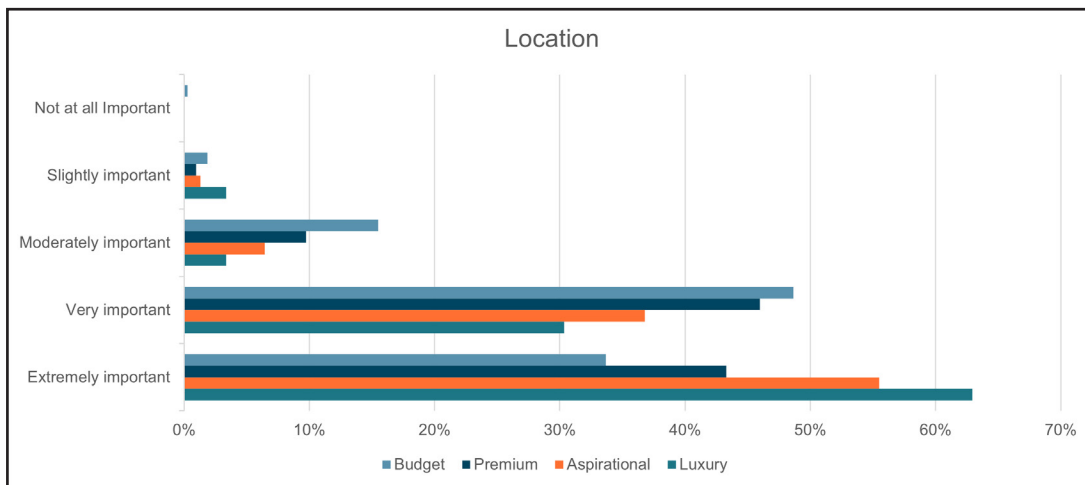
Figure 2. Property Features Importance by Segment



A: Price Importance by Segment

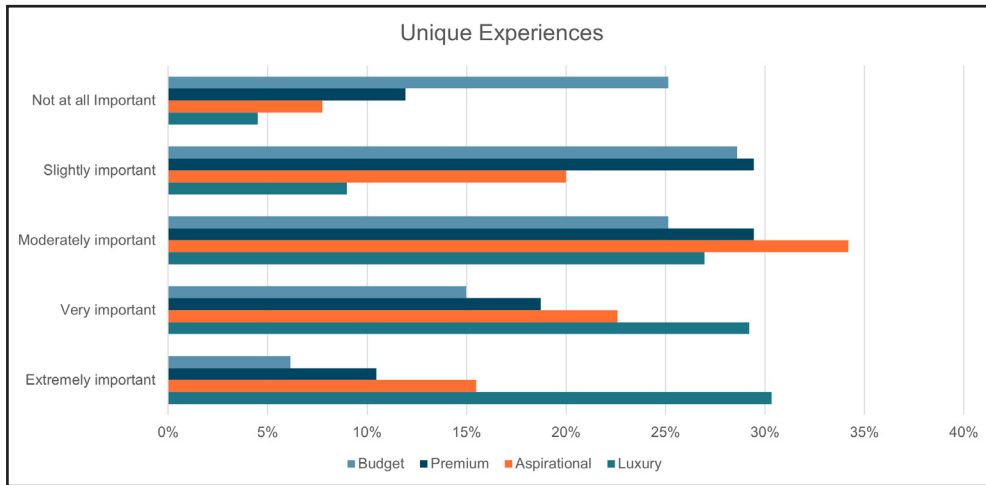


B: Amenity Importance by Segment

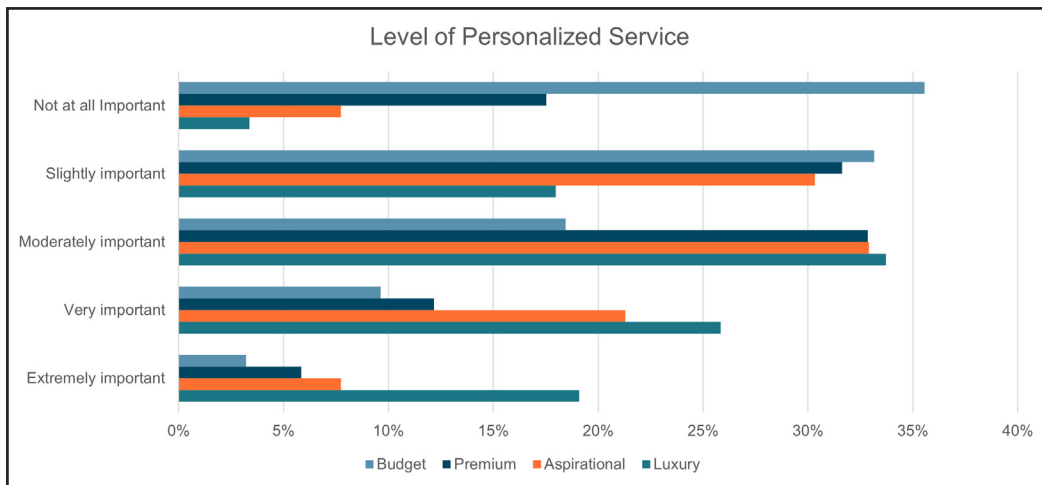


C: Location Importance by Segment

Figure 3. Service Element Importance by Segment



A: Unique Experience Importance by Segment



B: Personalized Importance by Segment

Interestingly, when respondents were asked to rank their Top 3 sources used in travel planning and decision-making, the four segments produced largely consistent rankings. Respondents were asked to select their top three “tools” for travel decision-making from the following list:

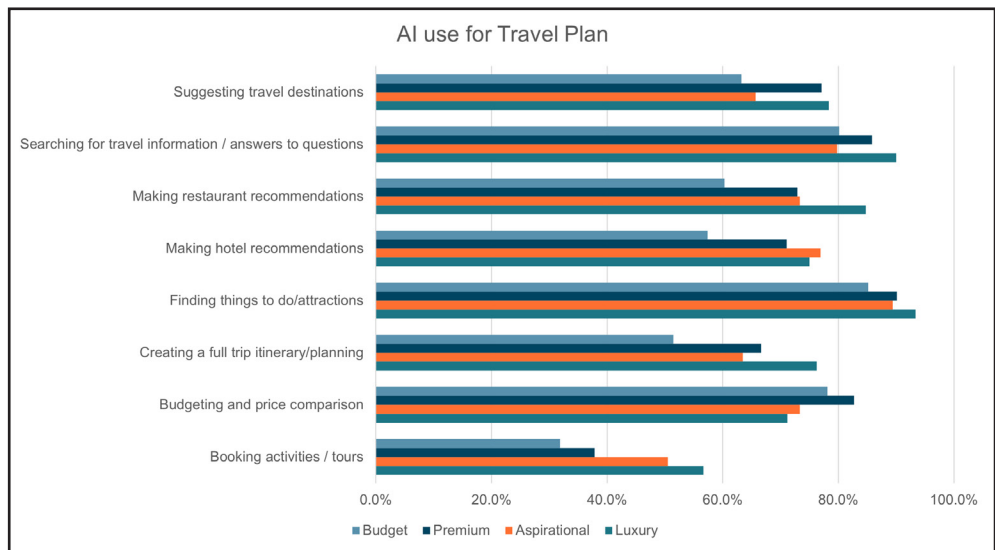
- AI Chatbot/Assistants (ChatGPT, Gemini, Copilot, etc.)
- Search (Google, Bing, etc.)
- Official Hotel Websites (Marriott.com, Hilton.com, IHG.com, etc.)
- Mainstream Media (Travel + Leisure, Condé Nast Traveler, etc.)
- Online Travel Agencies (Expedia.com, Booking.com, etc.)
- Recommendations from Friends/Family
- Reviews and Review Websites (TripAdvisor, Google Reviews, etc.)
- Social Media (Instagram, TikTok, Facebook, etc.)
- Travel Blogs / Online Media (A Hotel Life, The Points Guy, etc.)

As summarized in Table 1, Search was the tool most often listed in respondents' Top 3, followed by Reviews and Review Websites, Official Hotel Websites, AI Assistants, and Online Travel Agencies (OTAs).

Table 1: Most Commonly in Top 3 Travel Tools	Rank
Search	1
Reviews and Review Websites	2
Official Hotel Websites	3
AI Chatbots/Assistants	4
Online Travel Agencies	5

With AI having the potential to play a significant role in travel planning, respondents were asked to indicate Yes/No across a series of potential AI use cases—specifically whether they would feel comfortable using AI for various aspects of the travel planning and booking process. These results are summarized by segment in Figure 4.

Figure 4. AI Use for Travel Planning



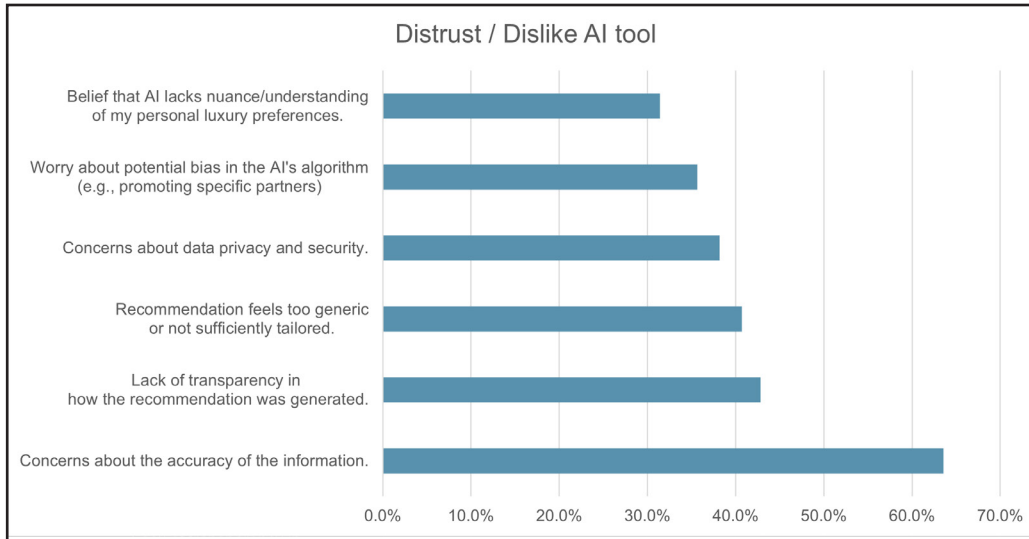
When focusing on AI use in travel planning, respondents were also asked about major barriers to adoption. The data reveal that the primary barriers to AI adoption in travel planning are fundamentally rooted in concerns about trust in the quality and integrity of the output. Figure 5 highlights the key barriers to AI adoption, with respondents selecting from a list of potential concerns. Because responses were very similar across all four segments, we present the results in aggregated form.

The single greatest factor driving user hesitation across all segments is concern about the accuracy of the information, cited by over 60% of respondents. This widespread concern about factual correctness is closely followed by issues related to transparency and personalization. Both the lack of transparency in how recommendations are generated

and the perception that recommendations feel too generic or insufficiently tailored are cited by more than 40% of travelers.

Taken together, these findings suggest that while travelers are willing to trust AI for specific informational tasks—such as Fact retrieval or Finding things to do—they remain hesitant to rely on AI for more subjective or complex recommendations. This underlying desire for accurate, transparent, and personalized outputs shapes how different traveler segments seek validation. For example, Budget travelers tend to prioritize cost-saving verification, while Premium and Aspirational travelers place greater emphasis on human oversight and the AI’s ability to handle more complex requests, ensuring that their expectations for a high-quality and seamless experience are met.

Figure 5. Key Barriers to AI Adoption



SUMMARY

The preliminary findings highlight the strong potential for AI adoption in travel while simultaneously indicating that the technology still has some distance to go before it can replace the many facets of travel planning today. It is also clear that AI’s role within the travel planning process will be highly segment-specific.

For Budget Travelers, AI is predominantly viewed as a functional tool for simplifying complex trip planning and ensuring optimal value. Their strong focus on price and their interest in budgeting and cost comparison confirm that their motivations are rooted in efficiency and cost-effectiveness. This low-risk, functional approach is further supported by a reliance on verifiable accuracy. Budget travelers build trust through tangible demonstrations of value, such as transparent source citations and real-time price comparisons.

Premium Travelers also remain highly value-conscious and engaged in budgeting, but their primary use of AI shifts toward that of a discovery engine. They maximize trip quality by using AI for high-volume information retrieval and identifying attractions, indicating a demand for seamless organization that leverages technology to save time as well as money. Their engagement with optimization suggests they use AI to vet options and ensure strong value for money rather than simply locating the lowest price.

In contrast, Aspirational Travelers are driven by a desire for curated, high-quality, and personalized experiences. They tend to view AI as a curation assistant and a proactive tool for hyper-segmentation and personalization. Their willingness to adopt this technology is often contingent upon assurances of privacy and data security. This segment’s high usage of AI for hotel recommendations demonstrates their reliance on the technology as a quality filter for properties offering elevated locations and amenities.

Luxury Travelers present a unique and somewhat paradoxical case. The data indicates that they value both the technological capabilities of AI and the traditional human touch of a travel advisor. At the same time, they show strong resistance to using AI for complex logistical coordination—such as checking real-time room availability across multiple properties or navigating fluctuating inventory across multiple travel windows. While Luxury travelers are comfortable using AI for rapid, fact-based research, they prefer human interaction for the final orchestration of a trip. This suggests that for high-end segments, AI functions best as a subtle enabler for data support rather than as a replacement for the nuanced, bespoke service provided by human advisors.

Across all segments, the analysis of perceived helpfulness and trustworthiness reveals that the primary barrier to broader adoption is largely universal: concerns about the accuracy of the information. This study therefore provides a valuable segment-specific perspective on AI adoption in travel planning, confirming that AI's role is not uniform across traveler groups. Motivations for adoption and the conditions required for trust differ across segments, with each group seeking distinct benefits.

By replacing one-size-fits-all bots with these prescriptive, segment-aligned approaches, hospitality firms can move AI from a risky novelty to a trusted conversion partner.

This has several important implications for stakeholders:

- **Budget and Premium travelers:** AI tools should prioritize cost comparison, simplified itinerary planning, and overall efficiency, with marketing that emphasizes clear savings and tangible value.
- **Aspirational travelers:** AI tools should foster discovery, quality curation, and personalization, emphasizing experiential benefits within a visually engaging and secure interface.
- **Luxury travelers:** AI should be positioned as an intelligent enabler that augments—rather than replaces—human expertise. AI can handle back-end logistics and rapid information retrieval, allowing human advisors to focus on the high-touch services that define the luxury experience.

Together, these findings suggest that the future of AI in travel planning is not about replacing existing planning behaviors but enhancing them. By aligning AI design with the distinct expectations of different traveler segments, hospitality organizations can build tools that travelers trust and are willing to use throughout the planning journey. ■

ACKNOWLEDGEMENT

We would like to thank Curacity for supporting data collection for this study. Curacity is a hospitality technology company that enables hotels, cruise lines, and destinations to turn visibility across leading media outlets into a measurable source of new demand. Founded in 2015, Curacity is an Inc. 5000 top company in the hospitality and travel sector. Headquartered in New York, it also has offices in Stamford, Conn., Toronto, and Buenos Aires. For more information, visit <https://curacity.com/>.

REFERENCES

- Capgemini. 2024. Luxury Customer Experience in Automotive. <https://www.capgemini.com/us-en/insights/research-library/luxury-customer-experience-in-automotive/>.
- Carvalho, I., and S. Ivanov. 2024. "ChatGPT for Tourism: Applications, Benefits and Risks." *Tourism Review* 79 (2): 290–303. <https://doi.org/10.1108/TR-02-2023-0088>.
- Emerald Insight. 2024. "Generative Artificial Intelligence: A Proactive and Creative Tool to Achieve Hyper-Segmentation and Hyper Personalization in the Tourism Industry." *International Journal of Tourism Cities*. <https://doi.org/10.1108/ijtc-05-2024-0111>.
- Expedia Group. 2023. The Path to Purchase: Uncovering How Travelers Plan and Book Online. https://partner.expediagroup.com/content/dam/unified/partner/documents/reports/2023-reports/report-path-to-Purchase-2023-final_en-us.pdf.
- Lyu, T., K. Huang, and H. Chen. 2024. "Exploring the Impact of Technology Readiness and Innovation Resistance on User Adoption of Autonomous Delivery Vehicles." *International Journal of Human–Computer Interaction* 41 (12): 7663–7683. <https://doi.org/10.1080/10447318.2024.2400387>.
- Seyfi, S., M. J. Kim, A. Nazifi, S. Murdy, and T. Vo-Thanh. 2025. "Understanding Tourist Barriers and Personality Influences in Embracing Generative AI for Travel Planning and Decision-Making." *International Journal of Hospitality Management* 126: 104105. <https://doi.org/10.1016/j.ijhm.2025.104105>.
- Shi, S., Y. Gong, and D. Gursoy. 2020. "Antecedents of Trust and Adoption Intention toward Artificially Intelligent Recommendation Systems in Travel Planning: A Heuristic–Systematic Model." *Journal of Travel Research* 60 (8): 170–187. <https://doi.org/10.1177/004728752096639>.
- Unite.AI. 2024. "Generative AI Can Help Save Brands as Hyper-Personalized Experiences, Heightened Demand Wins Consumers." <https://www.unite.ai/generative-ai-can-help-save-brands-as-hyper-personalized-experiences-heightened-demand-wins-consumers/>.
- Wong, I. A., Q. L. Lian, and D. Sun. 2023. "Autonomous Travel Decision-Making: An Early Glimpse into ChatGPT and Generative AI." *Journal of Hospitality and Tourism Management* 56: 253–263. <https://doi.org/10.1016/j.jhtm.2023.06.022>.

ABOUT THE RESEARCHERS



Chris Anderson is a professor at the Cornell Peter and Stephanie Nolan School of Hotel Administration. His main research focus is on AI, analytics, and revenue management (RM). He actively works with industry, across numerous industry types, in the application and development of RM, having worked with a variety of hotels, airlines, rental car and tour companies, as well as numerous consumer packaged goods and financial services firms.



Young Jang is a Master of Science student in Hotel Administration at Cornell University's Peter and Stephanie Nolan School of Hotel Administration, within the SC Johnson College of Business. He holds a B.S. in Hotel, Restaurant, and Institutional Management with a minor in Information Science and Technology from The Pennsylvania State University. Prior to his graduate studies, Young spent over 15 years in hospitality revenue management, orchestrating commercial and revenue strategies for a diverse portfolio including Marriott, Hilton, Hyatt, IHG, and independent luxury assets.

CHR Advisory Board

Carolyn Corda, MPS '89
Managing Director
Deloitte

Tommy Crozier
Executive Vice President, National Hotel
Practice Leader
CBRE Hotels Valuations

Jeff Garber '92
Vice President, Revenue System Transformation
IHG Hotel & Resorts

Fannélie Gerard
Managing Director
Accenture

Jeanelle Johnson
Managing Partner, PwC DC Metro
Travel Lead Client Partner
Co-Leader
PwC

Gizem Kilic, PhD '25
Senior Director, Industry Research, Policy and
Regulatory Affairs
AHLA

Klaus Kohlmayr
Chief Evangelist and Head of Strategy
IDEaS

Jamie Lane
Chief Economist, SVP of Analytics
AirDNA

Mark Lomanno
Partner and Senior Advisor
Kalibri Labs

Robert Mandelbaum '81
Retired Hotel Research and Consultant

Kelly McGuire MMH '01, PhD '07
Advisory Board Chair
Chief Commercial Officer
Kasa

Stephanie Perrone Goldstein '01
Partner
Deloitte

Jess Pettitt '05
Senior Vice President, Strategy, Insights and
Full Service Brands
Hilton

Prashanth Radhakrishnan
Vice President, Global Topline Intelligence
Marriott International

Stacy Silver
President
Silver Hospitality Group

Liesl Smith
Chief Marketing Officer
FreedomPay

Cornell Hospitality Report

Vol. 26, No. 7

©2026 Cornell University. This report may not be reproduced or distributed without the express permission of the publisher. The authors were granted permission to use the photos, names, and stories of the people referenced in this article. The views and opinions expressed in this article are those of the authors and do not necessarily reflect the official policy or position of the Center for Hospitality Research, its advisory board, the Cornell Nolan School of Hotel Administration, or Cornell University.

Cornell Hospitality Reports are produced for the benefit of the hospitality and service industries by the Center for Hospitality Research at Cornell University.

This report was prepared by CHR editorial staff with support from AI tools and has been reviewed by the authors for accuracy.

Center for Hospitality Research
Cornell Nolan School of Hotel Administration
Cornell SC Johnson College of Business
Cornell University
Statler Hall
Ithaca, NY 14853
Linda Canina, Academic Director
Nicole McQuiddy, Executive Director
Shana Claar, Center Coordinator, Contributing Editor
Devon Rainbow, C&I Assistant

business.cornell.edu/centers/chr