

Sustainability in Hotels: Can Artificial Intelligence Green Behaviour? Evidence from Smart Hotel Technologies: A Systematic Literature Review

Prachee Kharasne¹, Dr. Nandita Sapra²

¹ Research Scholar, LAD & SRP College for Women, Rashtrasant Tukadoji Maharaj Nagpur University (RTMNU), Nagpur, Maharashtra, India.
Email: pracheekharasne@gmail.com

² Professor, Department of Hotel Management and Catering Technology, LAD & SRP College for Women, Rashtrasant Tukadoji Maharaj Nagpur University (RTMNU), Nagpur, Maharashtra, India.
Email: nanditasapra2@gmail.com

Corresponding Author:

Prachee Kharasne¹

Research Scholar, LAD & SRP College for Women, RTM Nagpur University, Nagpur, Maharashtra, India.
Email: pracheekharasne@gmail.com

Abstract: Hotels today face a difficult balance. They are expected to cut their environmental footprint, but they also have to keep service quality and guest satisfaction high. Artificial intelligence (AI) and smart hotel technologies are now being used to help with this. They serve two roles. They make daily operations more efficient, and they nudge guests toward more environmentally friendly behaviour. The aim of this paper is to find out if AI actually encourages green behaviour in hotels, and if it does, how. To answer this, we used behavioural and technology acceptance theories as a base. A systematic literature review (SLR) was carried out using peer-reviewed articles from Scopus and Web of Science, published between 2015 and 2025. The articles were then analysed through thematic synthesis.

The results show a fairly consistent pattern. AI tools like smart thermostats, intelligent lighting, energy management platforms, and personalised digital interfaces have a positive effect on green behaviours. These behaviours include saving energy, reusing linen, and reducing waste. When read through the Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT), the effect seems to come through perceived usefulness, ease of use, performance expectancy, and facilitating conditions. These shape what guests think and how they act. But none of this works on its own. AI sustainability tools only succeed when they are designed with care, when systems are transparent, when they are easy to use, when data privacy is respected, and when guests trust the system.

This review adds to the literature on hospitality and sustainability by tying behavioural theory to research on smart technologies. It treats AI as both a technical tool and a behavioural one. The study has theoretical value for future model building. It also offers practical advice for hotel managers who want to use AI to push guests toward greener choices, without hurting the guest experience.

Introduction

AI is changing the way sustainability is practised in hotels. Environmental concerns are rising, and global tourism is being pushed in a more sustainable direction. Because of this, hotels are slowly bringing in AI-based smart technologies to lower their ecological impact. Looking at this through the Technology Acceptance Model (TAM), we can see that systems like AI energy management platforms, smart thermostats, automated lighting, and water conservation tools improve perceived

usefulness. They do this by making operations more efficient and by helping hotels use resources better. The interfaces are usually simple, and the automation runs on its own, which improves perceived ease of use.

If we look further through the Unified Theory of Acceptance and Use of Technology (UTAUT), the picture gets richer. AI sustainability tools are also affected by performance expectancy, effort expectancy, facilitating conditions, and social influence within the hotel. So the technology side is just one part. AI also has a behavioural side. It shapes how guests engage with sustainability through real-time feedback, personalised recommendations, and small nudges. These tie back to behavioural theories. They influence attitudes, intentions, and what guests actually do, like reusing towels or using less energy. AI plays both roles at once. It enables sustainability technically, and it acts as a behavioural mechanism that connects operational goals with green guest behaviour.

The idea of using AI to influence green behaviour comes from behavioural science. Here, technology is seen as something that helps build awareness, motivation, and habits. AI looks at guest preferences and patterns of behaviour. From there, it can tailor sustainability messages, feedback, and incentives. This makes the green choice more convenient, more visible, and more attractive. A simple example: smart room technologies adjust lighting, temperature, and energy use on their own, based on whether the room is occupied. In-room digital screens or mobile apps can suggest eco-friendly options on the spot.

These AI interventions improve the guest experience through personalisation and convenience. At the same time, they line up individual choices with bigger environmental goals. So AI has the chance to be more than just an efficiency tool. It can become a behavioural change agent in the hospitality industry. Understanding how AI shapes green behaviour in hotels matters for both researchers and practitioners. It sits at the meeting point of technology, human psychology, and the environment, and it will shape the future of smart and responsible tourism.

AI is moving fast through the hospitality industry. It improves convenience for guests, but it also pushes sustainability and shapes green behaviour. In hotels, AI tools (from smart energy systems to personal guest apps) can nudge both guests and staff to act in greener ways. AI also lets hotels watch and adjust resources like energy, water, and waste in real time. And it makes sustainability visible. It can even make it feel rewarding.

Recent research points to a common gap. Many guests say they support sustainability, but they often do not act sustainably during a hotel stay. The reason is usually friction. The process feels like effort. AI helps close this gap. It gives real-time feedback, personalised tips, and recognition for green choices. Sustainability stops being a sign on the wall. It turns into something the guest takes part in (hospitalitynet.org). At an organisational level, AI strengthens decisions based on data. It also improves sustainable performance when it is paired with Internet of Things (IoT) systems that lower resource use and waste (frontiersin.org).

More and more hotels use AI not just for efficiency, but to actually shift behaviour toward sustainability. AI looks at occupancy, demand, and consumption patterns. It then adjusts lighting, heating, cooling, laundry, and housekeeping schedules so that resources are used only when they are needed. It also gives guests personalised prompts or feedback. These prompts nudge them toward greener actions, like reusing towels, cutting unnecessary room-service waste, or picking lower-impact options.

There are two main ways AI shapes green behaviour. One is automation. The other is nudges. Automation makes the green action the default. Think of HVAC turning down when a room is empty, or a sensor catching a leak early to save water. Nudges work differently. They give guests and staff timely information, reminders, or visible feedback that supports eco-friendly choices.

Why does this matter? Hotels use a lot of energy and water. Even small behaviour changes, multiplied across hundreds of rooms and services, add up to real impact. AI also helps hotels measure sustainability more accurately. Better measurement means better transparency, and it lowers the risk of greenwashing. When guests see real numbers and real results, they tend to trust the hotel's effort

more, and they support it.

Take a simple example. An AI system in a hotel notices that a room is empty. It lowers the temperature, dims the lights, and delays housekeeping until later. Meanwhile, the hotel app can show the guest how much water or electricity they saved during their stay. The next time they travel, that small piece of feedback can shape their choices.

The takeaway is straightforward. AI can clearly influence green behaviour in hotels when smart resource management is paired with engagement from both guests and employees. The biggest impact happens when hotels stop using AI only to cut costs, and start using it to make sustainability part of the guest experience itself.

Review of Literature: Conceptual and Technological Foundations

1. Conceptual Foundations: Behavioural and Technology Adoption Perspectives

The literature on AI sustainability and green behaviour in hotels leans on a few well-established theories. The most common one is the Theory of Planned Behaviour (TPB). It says that pro-environmental behaviour in guests comes from three things: attitudes about sustainability, perceived social norms, and a sense of behavioural control (Rozenkowska, 2023; Verma & Chandra, 2018). In a hotel setting, TPB has been used a lot to explain why guests pick green hotels, why they reuse linen, and why they go along with energy-saving programmes (Hossien Olya, 2021; Verma et al., 2016). What AI does is strengthen these factors. It makes green actions easier to do, more visible, and more socially supported through feedback and digital cues (Wan et al., 2025).

Nudge Theory adds something extra to TPB. It explains how small, non-forceful interventions can guide guest behaviour without taking away their choice. AI nudges fit here neatly. Examples include default eco-settings, real-time energy alerts, and reward-based prompts. They all work in hotels (Gunduz Songur & Toker, 2023; Qi, 2024). The point is that they rely on design, not on lectures. They lift compliance without lowering guest satisfaction.

From the technology adoption side, the Technology Acceptance Model (TAM) and similar frameworks point to two key drivers: perceived usefulness, and perceived ease of use. These decide whether guests and staff will actually engage with AI systems (AZ He & Zha, 2023; Rasheed et al., 2024). The evidence is clear. AI tools that feel useful and easy get accepted, and they get used for sustainability (Ledro & Nosella, 2022; Ekta Kumawat et al., 2025). When the tools are complicated, intrusive, or poorly explained, the opposite happens. People resist, and the behavioural impact fades (Khan, 2025).

Read together, these theories show something important. The link between AI and sustainable guest behaviour is not random. It is grounded in theory. And that gives us a good lens for understanding both the AI projects that work and the ones that fail in hospitality.

2. Sustainability and Green Behaviour in Hospitality

Sustainability in hospitality is usually framed through the triple bottom line. The three pillars are environmental, social, and economic (Filimonau et al., 2025; Sharma & Chopra, 2020). Hotels are bringing in more energy-efficient technology, water conservation systems, waste reduction projects, and renewable energy. They are doing this to shrink their environmental footprint while staying financially healthy (Bhawani Ghimire et al., 2023; Tarik Dogru et al., 2020). On the social side, sustainability shows up in fair labour practices, community engagement, and ethical sourcing. These build corporate responsibility and legitimacy (Perera et al., 2015; Punitha & Aziz, 2016).

Green behaviour in hotels is about more than just the operational side. It also includes how guests and employees take part in sustainability. The studies are pretty consistent here. Things like environmental awareness, social norms, convenience, and the feeling that one's actions matter all shape green behaviour. Examples are towel reuse, saving energy, and separating waste (Yixiu Yu et al., 2017; Vikas Gupta & Sharma, 2023). On top of that, nudges, incentives, and small informational cues lift guest engagement, especially when the green action feels easy and is socially supported (Singhal & Dagar, 2018; Shweta Mathur & Kaushik, 2017).

3. Technological Foundations: Artificial Intelligence in Smart and Sustainable Hotels

AI has become a key enabler of sustainability in hospitality. It pulls together automation, data analytics, and behavioural influence (Doborjeh et al., 2022; García-Madurga et al., 2023). In smart hotel systems, AI is now common. It runs intelligent HVAC control, lighting automation, water management, predictive maintenance, and energy optimisation based on occupancy (Gajić et al., 2024; Mudita Sinha et al., 2021). All of this lowers resource use, but it does not lower guest comfort.

AI recommendation systems and feedback tools also play a part in green behaviour. By looking at guest preferences and live usage data, AI can push eco-friendly choices, like linen reuse, low-impact dining, and carbon-conscious services (Qi, 2024; Wan et al., 2025). The literature also draws a useful split. There are visible AI tools (dashboards, apps, prompts) that build awareness and shape attitudes. And there are invisible AI systems (like background energy optimisation) that keep efficiency running quietly, with or without guest input (Filimonau et al., 2025; Samara et al., 2020). The best results seem to happen when both are working together.

4. Enablers and Barriers to AI-Driven Green Behaviour

Whether AI sustainability projects succeed depends a lot on user perception and ethical design. When systems are easy to use, when their environmental impact is communicated openly, and when data privacy is trusted, acceptance and engagement go up (Rasheed et al., 2024; Ledro & Nosella, 2022). On the other hand, worries about being watched, losing control, having data misused, or feeling drowned in automation can push guest satisfaction down. They can even lead to active resistance (Khan, 2025; Moodaley et al., 2023).

The literature keeps coming back to one idea: AI in hospitality should be human-centred. Automation should support people, not replace them or replace the values of hospitality (Ekta Kumawat et al., 2025). Ethical, transparent, guest-focused AI design is a basic requirement. It is what turns short-term compliance into lasting green behaviour.

5. Synthesis and Research Implications

Pulling all of this together, the literature points to two pillars under AI sustainability in hotels. The first is behavioural, rooted in TPB, Nudge Theory, and TAM. The second is technological, grounded in smart systems, data analytics, and automation. AI plays both sides. It makes resource use more efficient. It also acts as a catalyst that shapes green behaviour in guests and staff. But its success depends on the basics: usability, trust, transparency, and how well it lines up with sustainability goals.

This combined view points to something the field needs more of. We need empirical research that looks at technology design, behavioural responses, and sustainable performance at the same time. Right now, that gap is one of the most important in the hospitality sustainability literature.

Research Methodology: Systematic Literature Review

This study is a systematic review of literature and the work of scholars who have looked at the use of AI in sustainability within the hotel industry. The review draws on research from the Scopus and Web of Science databases. Only peer-reviewed articles published between 2015 and 2025 were included. The use of AI in hotels for resource conservation actually started a few decades back. Hotels were already using energy-efficient bulbs, flow restrictor taps, and particle wood instead of wood taken straight from trees. Many hotels have followed the reuse, reduce, and recycle approach for a long time. But AI adoption has really picked up only in the last decade. In this period, the technology is being used not just for conserving resources to support the environment and economy, but also to analyse and monitor the trends and demands of the guests using the hotels.

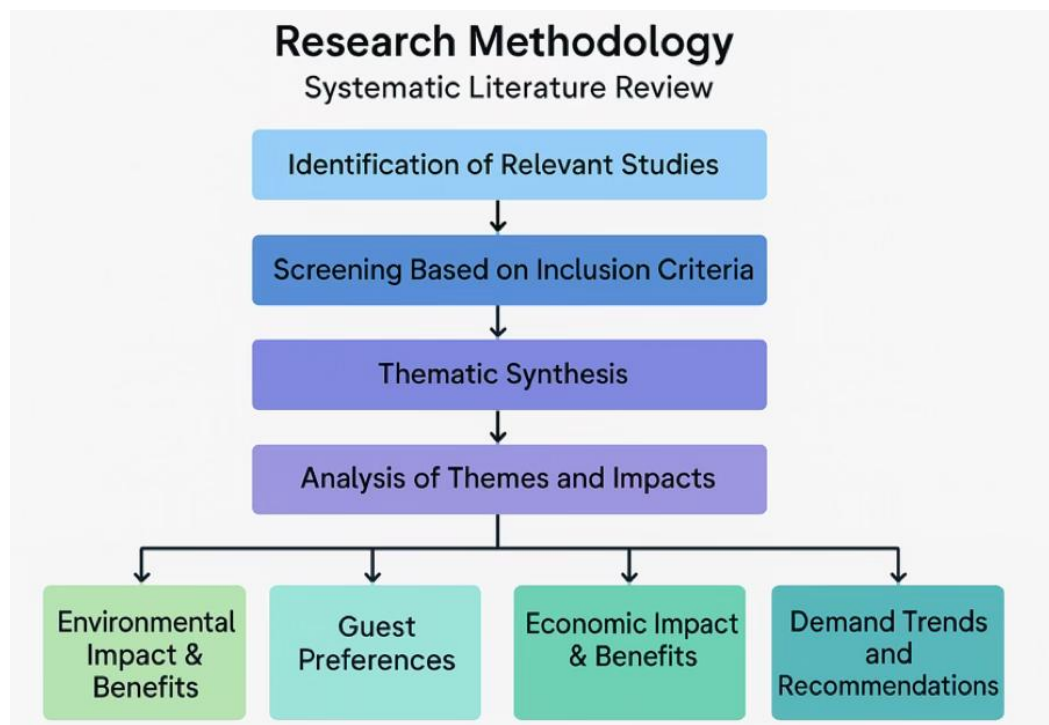
Keyword combinations were used to find the relevant literature. These included: artificial intelligence, sustainability, AI and machine learning in the hotel industry, and green behaviour in the hotel industry.

The inclusion criteria looked for empirical studies done in hospitality. The studies had to look at AI-enabled technology along with behavioural or sustainability outcomes. These were then analysed using thematic synthesis.

The articles and papers were read carefully. Themes were pulled out, along with the technological and sustainability implications. The systematic review paid attention to the methods used in each study, plus the diagrams and tools used to share the results.

Analysis of Themes and Their Impacts

- Environmental Impact and Benefits
- Guest Preferences
- Economic Impact and Benefits
- Demand Trends and Recommendations



The search was done to identify the work on AI in green hotels. It was not limited by country, region, industry, or sector. After the inclusion criteria were applied, the first round gave 1,093 articles. The search was then refined further in both Web of Science and Scopus to gather the relevant work on the topic.

Environmental Impact and Benefits: Hotels use a lot of electricity. The main uses are heating, cooling, lighting, and digital services. They also use large volumes of water for bathrooms, laundry, and food and beverage services. Waste generation is another part of the problem with a high environmental cost. AI and other technological tools have helped lower this impact. They do this by monitoring use and reducing where it is wasteful.

Guest Preferences: AI can study guest preferences. For example, guests sometimes override energy-saving settings or ask for new linen they do not really need. Staff routines also affect water and energy use behind the scenes. This shows why behaviour-focused sustainability matters in hotels. It also shows why hotels are such a good setting to study green behaviour in the first place.

Economic Impact and Benefits: Saving energy and water, plus managing waste, leads to real cost savings. This directly helps hotel management on the financial side. AI and tech tools do not just track energy and water use. They also track the savings, in actual money.

Demand Trends and Recommendations: The literature in this study sits on top of several behavioural and technology adoption theories. The Theory of Planned Behaviour explains how attitudes, social norms, and perceived control shape intentions and actions. This helps us understand how AI feedback can change guest choices. Nudge Theory matters even more here, because many AI

interventions are designed to guide behaviour quietly, without forcing anything. Default green settings and real-time reminders are both examples. The study found evidence that AI in smart hotels really does shape guest behaviour. It does this by gently steering decisions and pushing certain actions over others. For example, AI systems can encourage greener habits by giving live feedback on energy or water use. Personalised recommendations from data analytics can also guide guests toward certain services, dining choices, or activities. This raises engagement, and often spending too. Virtual assistants and smart room controls add convenience, and over time guests start to depend on these automated systems. The shift here is important. AI does not just deliver service better. It actively shapes guest choices and decision patterns inside the smart hotel environment.

Findings

This study gives a few important insights into how AI enables green behaviour and lifts sustainable performance in hospitality.

The first insight is that AI sustainability outcomes are mediated by behaviour. They are not purely technological. AI tools (smart energy systems, intelligent lighting, predictive automation) do clearly improve operational efficiency. But the impact on sustainability gets much stronger when those tools also change how guests and employees behave. This brings the Theory of Planned Behaviour back into focus. Attitudes toward sustainability, social norms, and perceived behavioural control keep coming up as the key mechanisms behind green behaviour in hotels.

The second insight is about nudges. AI nudges work. Default green settings, real-time feedback, reminders, and recommendations all encourage greener behaviour. And they do this without making guests feel like their freedom or satisfaction is being taken away. These small, gentle interventions match Nudge Theory closely. The lesson is that sustainability does not need enforcement. It just needs better design choices.

Third, technology acceptance factors really matter. Whether AI sustainability initiatives succeed or fail often comes down to perceived usefulness, ease of use, transparency, and whether guests trust the data privacy. AI tools that are intuitive and that explain their environmental benefits clearly tend to be adopted, and they shape behaviour in a positive way. Tools that are complex, intrusive, or unclear face pushback.

Fourth, there is an important split between visible and invisible AI. Invisible systems run quietly in the background. They do things like automated energy optimisation. They make sure baseline efficiency happens, no matter what guests do. Visible AI is different. Dashboards, apps, and feedback displays are seen by guests, and they raise awareness, shape attitudes, and reinforce social norms. Over time, this leads to longer-term behavioural change. The literature suggests that mixing both works best. A hybrid approach gives the strongest sustainability results.

Finally, green behaviour acts as a key bridge. It links AI adoption to sustainable performance across the triple bottom line. When guests and staff act in pro-environmental ways, the effects show up across all three areas. Environmentally, energy use, water use, and emissions go down. Economically, costs drop and efficiency rises. Socially, guest satisfaction, hotel reputation, and stakeholder trust go up. So sustainability performance in hotels is not just a technical issue. It is a socio-technical one.

Limitations

This study offers useful insights, but it has limitations that should be admitted.

First, the study is based on a systematic literature review. That means it relies on existing published research, not on new empirical data. The cause-and-effect links proposed in the conceptual framework are theoretical. They will need to be tested through quantitative or mixed-methods research.

Second, the review is limited to peer-reviewed English-language articles. They were published between 2015 and 2025. Most are indexed in Scopus and Web of Science. Studies in other languages, in regional journals, in industry reports, or in newer databases may have been missed. This can limit how

well the findings represent the global picture.

Third, most of the existing literature focuses on guest perceptions and on hotel management. The employee side, especially employee adoption and behaviour around AI, is still under-researched. But employees are central to making AI projects work in practice. So this is a real gap.

Fourth, contextual diversity does not get enough attention. There are real differences across regions, hotel categories, cultures, and levels of technological maturity. These differences are even bigger in developing economies. The literature does not look at this consistently. As a result, it is hard to generalise the conclusions across all hospitality contexts.

Finally, ethical issues like data privacy, surveillance, algorithmic bias, and the loss of human touch are talked about often, but mostly in theory. Empirical work is rare. This makes it harder to understand how ethical design actually shapes acceptance and long-term behaviour.

Conclusion

This study concludes that AI has real potential to make hospitality more sustainable, more efficient, and more responsive to behaviour. But the effect is not automatic. AI works through pathways that are behavioural, perceptual, and ethical. These pathways shape how guests and employees end up using the technology.

By combining the Technology Acceptance Model, the Theory of Planned Behaviour, and Nudge Theory, this study offers a fuller picture of AI-driven green behaviour in hotels. AI is not just an operational tool here. It also acts as a behavioural catalyst. It shifts attitudes, norms, and the sense of control. Together, these support sustainable practices at a wider scale.

The findings make one point clear. For AI sustainability to actually work, the design has to be human-centred. Usability, transparency, trust, and autonomy need to sit alongside the automation, not behind it. Hotels that get this balance right (running invisible efficiency systems together with visible, engaging AI feedback) are the ones most likely to see real environmental, economic, and social gains over time.

Overall, this study contributes to the hospitality sustainability literature in three ways. It clarifies how and why AI affects sustainable performance. It places green behaviour at the centre as the main mechanism. And it offers a theoretically grounded framework for future empirical work. As AI keeps spreading through the industry, lining up technical innovation with behavioural science and ethics will be the key to long-term sustainability in hospitality..

References

- Filimonau, V., Ashton, M., Derqui, B., & Hernandez-Maskivker, G. (2025). Exploring How Artificial Intelligence (AI) Can Enable Sustainability in the Hospitality Industry. *Sustainable Development*, 7915-9487.
- Alam, R. M. (2023). A systematic review of halal hotels: A word cloud and thematic analysis of articles from the Scopus database. *International Journal of Advanced and Applied Sciences*, 166-175.
- Gunduz Songur, A., & Toker, G. (2023). Progress on green technology research in hotels: a literature review. *Journal of Hospitality and Tourism Insights*, 2052-2072.
- He, A. Z., & Zha, Y. (2023). AI-powered touch points in the customer journey: a systematic literature review and research agenda. *Journal of Research in Interactive Marketing*, 620-639.
- Ghimire, B., et al. (2023). Renewable energy use in green hotels for sustainability: A systematic review. *International Journal of Energy Economics and Policy*, 618-627.
- Ledro, C., & Nosella, A. (2022). Artificial intelligence in customer relationship management: literature review and future research directions. *Journal of Business & Industrial Marketing*, 37(13), 48-63.
- Szpilko, D., Naharro, F., & Gallegos, A. de la T. (2023). Artificial intelligence in the smart city: a literature review. *Engineering Management in Production and Services*, 53-75.

- Doborjeh, Z., Hemmington, N., Doborjeh, M., & Kasabov, N. (2022). Artificial intelligence: a systematic review of methods and applications in hospitality and tourism. *International Journal of Contemporary Hospitality Management*, 34, 1154–1176.
- Rahmadian, E., & Feitosa, D. (2022). A systematic literature review on the use of big data for sustainable tourism. *Current Issues in Tourism*, 1711-1730.
- Kumawat, E., et al. (2025). Artificial intelligence through the lens of hospitality employees: A systematic review. *International Journal of Hospitality Management*, 1-15.
- Gajić, T., Petrović, M. D., Pešić, A. M., & Gligorijević, M. C. (2024). Innovative Approaches in Hotel Management: Integrating Artificial Intelligence (AI) and the Internet of Things (IoT) to Enhance Operational Efficiency and Sustainability. *Sustainability*, 16(17), 7279.
- Rasheed, H. M. W., Yousaf, H., Khizar, H. M., & Khalid, J. (2024). What drives the adoption of artificial intelligence among consumers in the hospitality sector: a systematic literature review and future agenda. *Journal of Hospitality and Tourism Technology*, 15(2), 211–231.
- Perera, H. L. N., et al. (2015). Green marketing practices and customer satisfaction: A study of hotels in Wennappuwa Divisional Secretariat. *Tourism, Leisure and Global Change*, 2(1), 13-29.
- Olya, H., et al. (2021). Hotels' sustainability practices and guests' familiarity, attitudes and behaviours. *Journal of Sustainable Tourism*, 29(7), 1063-1081.
- Khan, A. N. (2025). Artificial intelligence in hospitality & tourism: ethics, values and cognitive work ability. *Current Issues in Tourism*. doi:10.1080/13683500.2025.2530590
- Kularatne, I. W. (2025). The Role of Artificial Intelligence on Sustainable Performance in Sri Lanka's Hotel Industry. In *Proceedings of the Smart Sustainable Development Conference 2025 (SSD 2025)* (pp. 150-160). Netherlands: Atlantis Press International.
- García-Madurga, M.-Á., et al. (2023). Artificial Intelligence in the Tourism Industry: An Overview. MDPI.
- Sinha, M., Naik, L., & Sinha, A. (2021). Artificial Intelligence and Internet of Things readiness: inclination for hotels to support a sustainable environment. *Elsevier*, 327-353.
- Oluwafemi, I. O., Clement, T., Adanigbo, O. S., & Gbenle, T. P. (2021). Artificial Intelligence and Machine Learning in Sustainable Tourism: A Systematic Review of Trends and Impacts. *IRE Journals*, 4(11), 1-10.
- Qi, Y. (2024). Incorporation of artificial intelligence toward carbon-footprint management in hotels to create sustainable green hotel: Mini review. *Tourism Management and Technology Economy*, 1-5.
- Rozenkowska, K. (2023). Theory of planned behavior in consumer behavior research: A systematic literature review. *International Journal of Consumer Studies*.
- Punitha, S., & Aziz, Y. A. (2016). Consumers' perception of green marketing in the hotel industry. *Asian Social Science*, 12(1), 1-16.
- Samara, D., Magnisalis, I., & Peristeras, V. (2020). Artificial intelligence and big data in tourism: a systematic literature review. *Journal of Hospitality and Tourism Technology*, 11(2), 343–367.
- Shekhar, S. G. (2022). Mapping research on family business in tourism and hospitality: a bibliometric analysis. *Journal of Family Business Management*, 367-392.
- Singhal, S., & Dagar, A. (2018). Green Initiatives Practices in Indian Hotels. *Journal of Business and Management*, 10-13.
- Mathur, S., & Kaushik, K. (2017). Sustainability practices in hotel industry: A study on guest awareness and satisfaction. *Indian Journal of Sustainable Development*, 3(2), 55-66.
- Gajić, T., et al. (2024). Tourists' willingness to adopt AI in hospitality: Assumption of sustainability in developing countries. *Sustainability*. MDPI.
- Sharma, T., & Chopra, J. (2020). Eco-innovation in hospitality research (1998-2018): a systematic review. *International Journal of Contemporary Hospitality Management*, 913–933.
- Dogru, T., et al. (2020). The nexus between tourism, economic growth, renewable energy consumption, and carbon dioxide emission: contemporary evidence from OECD countries. *Environmental Science and Pollution Research*, 40930-40948.

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- Gupta, V., & Sharma, S. (2023). How sustainable practices influence guests' willingness to pay a price premium in Fiji. *Worldwide Hospitality and Tourism Themes*, 15(3), 269-278.
- Garg, V., et al. (2025). AI-driven sustainability marketing transforming consumers' perception toward eco-friendly brands. *Discover Sustainability*.
- Verma, V. K., & Chandra, B. (2016). Hotel guests' perception and choice dynamics for green hotel attribute: a mix method approach. *Indian Journal of Science and Technology*, 9(5), 1-9.
- Verma, V. K., & Chandra, B. (2018). An application of theory of planned behavior to predict young Indian consumers' green hotel visit intention. *Journal of Cleaner Production*, 1152-1162.
- Moodaley, W., & Telukdarie, A. (2023). Greenwashing, sustainability reporting, and artificial intelligence: A systematic literature review. *Sustainability*. MDPI.
- Wan, C., Lee, D., Ng, P., & Leung, T. (2025). Going Green with AI-Powered Virtual Influencers: The Role of Social Cues, Source Credibility and Environmental Identity. *International Journal of Human-Computer Interaction*, 1-23.
- Yu, Y., Li, X., & Jai, T. (2017). The impact of green experience on customer satisfaction: Evidence from TripAdvisor. *International Journal of Contemporary Hospitality Management*, 29(5), 1340-1361..
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