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Editorial

The Future is Now: *AI and the Transformation of the Hospitality and Tourism Industry*

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Abstract

This write-up postulates that integration of Artificial Intelligence (AI) offers transformative potential for Nepal's hospitality and tourism industry, enhancing visitor experiences, improving operational efficiency, and supporting sustainable development. AI-driven tools-such as chatbots, real-time language translation, and predictive analytics-can streamline service delivery while safeguarding the nation's cultural authenticity and human-centred approach to hospitality. Advanced technologies like virtual reality (VR), augmented reality (AR), and biometric systems further enhance tourist engagement, safety, and decision-making. Importantly, AI is not a replacement for human roles but a collaborative force that empowers workers to deliver more personalised and emotionally intelligent services. This synergy between innovation and tradition positions Nepal as a promising leader in AI-augmented tourism. With strategic implementation, Nepal can strengthen its global tourism competitiveness while preserving its unique cultural heritage and values.

Keywords: artificial intelligence, hospitality, human-AI collaboration, tourism

The hospitality and tourism industry stands at the brink of a technological revolution, with Artificial Intelligence (AI) reshaping how services are delivered, experiences are personalised, and operations are optimised. In Nepal, where natural beauty and cultural richness attract global visitors, the integration of AI offers unprecedented opportunities to enhance competitiveness, sustainability, and customer satisfaction. Sthapit (2023) emphasises that harnessing technological

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advancements, such as AI and blockchain for sustainable practices, can propel businesses towards more responsible and efficient operations. As the world embraces digital innovation, the time for Nepal's hospitality and tourism sector to adapt and lead with AI is not tomorrow-but now.

Unlocking AI's Potential in Nepal's Hospitality and Tourism Sector

Artificial Intelligence (AI) has the potential to significantly transform Nepal's hospitality and tourism industry by enhancing visitor experiences, improving operational efficiency, and promoting sustainable tourism. AI-based tech companies are emerging in Nepal as well to guide the tourism and hospitality sector into the AI era of business. Limna (2023) viewed AI as a strategic driver for economic growth, widely deployed as digital assistants. In hospitality, it enhances service, operations and cuts costs. However, its advancement risks job displacement in certain sectors, loss of human control, and significant safety, security, and privacy challenges that must be managed. AI's underexplored impacts on hospitality, moving beyond efficiency gains to examine ethical concerns, workforce adaptation, and customer behaviour. There is a need for a balanced integration of technology that prioritises human-centric service excellence alongside innovation (Gursoy, 2025). AI is revolutionising hospitality by transforming service creation, delivery, and guest experiences. It enables businesses to engage customers personally, streamline operations, and optimise resources with unprecedented efficiency, reshaping the entire industry (Gursoy & Cai, 2025; Huang et al., 2025)

In the context of Nepal, AI can serve as a valuable partner to the human workforce rather than a substitute. Sthapit and Vaidya (2025) provide a comprehensive overview of AI's transformative potential in global and Nepalese business sectors, highlighting its benefits—efficiency, cost reduction, and innovation—while acknowledging challenges like skill gaps, ethical concerns, and infrastructural limitations.

Nepal demonstrates moderate readiness for AI adoption, with early progress witnessed in sectors like banking and insurance, though challenges such as regulatory gaps and market limitations persist. The analysis emphasises the importance of policy support, ethical standards, and capacity-building to ensure inclusive and effective AI integration. Nepal's National Artificial Intelligence (AI) Policy, introduced in August 2025, is highly significant in this context as it seeks to create an enabling environment for the development, expansion, and safe use of AI. The policy lays the foundation for institutional, legal, and regulatory frameworks for AI governance in Nepal, while ensuring its ethical, transparent, and inclusive application across all sectors.

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While more localised case studies would enhance its practical relevance, the present article provides a balanced overview of both the opportunities and constraints in Nepal's evolving AI landscape. In hospitality and tourism, for example, AI-powered chatbots can manage routine tasks and multilingual support, allowing human staff to focus on personalised, culturally rich experiences. Data-driven analytics can aid hotel management, while local teams apply insights with contextual understanding. In adventure tourism, AI enhances real-time safety monitoring, while experienced guides maintain leadership roles, offering empathy and cultural storytelling. This synergy between technology and human interaction offers a pathway for Nepal to embrace AI while preserving its unique hospitality traditions and values.

The rise of AI should not be perceived as a threat to human employment, but rather as a catalyst for innovation and creativity by alleviating routine and repetitive tasks. There is a growing consensus that humans must adapt and collaborate with AI systems, which necessitates the development of new skills and knowledge. While AI undoubtedly has significant implications for the labour market, it also offers opportunities for job creation, enhancement of human competencies, and broader economic growth (Yeh et al., 2020). This evolving dynamic could give rise to a 'hybrid intelligence' ecosystem, where humans and AI work together synergistically (Dellermann et al., 2019). The concept of human-AI co-creation is gaining momentum across various sectors (Yuan et al., 2022), reinforcing the view that AI is more likely to amplify and complement human capabilities rather than replace them.

Use of AI in Hospitality Industry

Chatbots and virtual assistants, powered by Natural Language Processing (NLP) and speech recognition technologies, have become integral tools in the tourism industry for enhancing customer interactions (Buhalis et al., 2019). These systems, which may be either text-based or voice-based, provide a range of services including booking appointments, offering hotel and travel information, and delivering personalised recommendations (Kumar et al., 2018; Oh et al., 2017). Voice-based chatbots enhance customer engagement by facilitating natural, conversational interactions (Yadav et al., 2021), while text-based chatbots efficiently manage customer inquiries through messaging platforms and websites (Gajdošík & Marciš, 2019). While it all effectively highlights the functional benefits of chatbots and virtual assistants in tourism, it could be strengthened by addressing potential limitations-such as language barriers, lack of emotional intelligence, or privacy concerns-that may affect their widespread adoption and user satisfaction. Additionally, a deeper discussion on the contextual relevance of these technologies in developing countries like Nepal would enhance its critical depth.

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Artificial Intelligence and Natural Language Processing (NLP) have significantly advanced language translation tools, helping travellers overcome communication barriers (Azis et al., 2011). These technologies enable real-time translation of speech and text, thereby improving tourists' ability to navigate unfamiliar environments and engage more meaningfully in local activities (Marasco et al., 2018). Additionally, AI-powered site search enhances user experience by delivering personalised results based on individual preferences and browsing history, offering tailored travel guides, itineraries, and promotional offers (Merrill, 2023).

Emerging technologies like Virtual Reality (VR) and Augmented Reality (AR) are also reshaping the tourism landscape by offering immersive and interactive experiences. VR allows users to take virtual tours of destinations, accommodations, and attractions, providing a realistic preview before booking (Samala et al., 2022). Meanwhile, AR enriches on-site exploration by overlaying digital information onto physical surroundings, enabling tourists to access contextual details about landmarks in real time (Barten, 2023). Collectively, these technologies enhance tourist engagement, confidence, and decision-making both before and during travel.

Biometric data, including facial recognition, streamline processes like hotel check-ins and crowd monitoring (Bulchand-Gidumal, 2022). Robots, equipped with AI and IoT, automate tasks such as luggage handling and room service (Samala et al., 2022), improving efficiency in hospitality (Li et al., 2019). Drones, enhanced with AI, offer live virtual tours and delivery services, contributing to innovative tourism practices (Elkhwesky et al., 2022; Snead & Seibler, 2017).

AI-powered kiosks and booking systems optimise customer interactions by providing personalised recommendations and contactless services (VirtuBox Infotech Pvt Ltd., 2023). QR codes, integrated with AI, enable secure, context-aware functionalities like ticketing and payments (Jaesny, 2023). However, the seamless integration of AI into these technologies often makes its presence unnoticed by users, complicating awareness of its role in enhancing travel experiences.

Al-Nafjan et al. (2023) introduce the concept of 'neuro-tourism' as an interdisciplinary approach that integrates neuroscience and tourism marketing to better understand tourists' cognitive and emotional responses. By leveraging neuromarketing tools, the study aims to decode both conscious and unconscious processes that influence tourist behaviour.

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Elisa-Sousa et al. (2024) highlight the vast potential of AI applications in tourism and hospitality, ranging from robotic customer service in hotels and restaurants to AI-powered chatbots, machine learning-based business intelligence tools, and immersive technologies like virtual and augmented reality. They also emphasise the capacity of AI to analyse large datasets for improved decision-making. While AI has made significant strides in the industry, its full potential remains untapped, offering opportunities to enhance a "people-to-people" industry through technological innovation.

Genç (2020) stresses the importance of a balanced approach to AI adoption in the hospitality industry, advocating for the maximisation of economic and social benefits while addressing potential technological and environmental challenges in smart tourism. Elisa-Sousa et al. (2024) found that most tourists have interacted with AI systems, perceiving more advantages than disadvantages. They associate positive emotions with these technologies, appreciating their value in enhancing tourism and hospitality experiences. Furthermore, respondents not only reported using a wide range of AI systems but also expressed a strong interest in exploring even more diverse AI applications in future tourism contexts.

Conclusion: The Way Ahead

In the context of the Nepalese tourism industry, AI can play a pivotal role in enhancing the visitor experience by streamlining various aspects of the sector. Chatbots can provide personalised guidance and assist in crowd management, while smart trail apps can offer real-time navigation and AI-based predictive safety analyses for the Himalayan trekking routes. AI-powered multilingual support systems using QR codes can provide detailed destination profiles, and real-time risk management can enhance safety in activities like white-water rafting. Additionally, AI can offer route recommendations and ethical guidance for safari tourists, as well as optimise the services in both star-rated hotels and homestays. By embracing AI as an enabler, Nepal has the potential to enhance its global tourism appeal while preserving its cultural authenticity and human warmth.

Nepal's tourism identity is deeply rooted in human connection, tradition, and spirituality. Rather than replacing these core values, AI should amplify them by handling repetitive tasks, optimising services, and enriching visitors' experiences. The future of Nepal's tourism lies in hybrid intelligence-where AI works alongside human creativity, empathy, and care. With strategic foresight, Nepal can strive to become a global leader in AI-augmented, culturally grounded tourism, offering a model of innovation that remains true to its unique heritage.

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