

Chapter 4

AI in Tourism: Business and Economic Perspectives

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ABSTRACT

Artificial Intelligence is redefining the tourism industry by ensuring the accumulation of technologies in business operations and tourism-related activities and fostering economic growth and financial outcomes. From the automated reservation system, AI is increasing its branches toward personalized marketing, setting dynamic pricing models, and offering tailored experiences per guests' requirements. Tourism and hospitality-related services can strengthen smarter decision-making, certify efficient operations, and enhance service delivery to tourists. This chapter scrutinizes the sequential development of AI in tourism, examining assorted AI applications that have been applied to the tourism industry. AI creates new job opportunities, increasing efficiency at work, enhancing competitiveness, and encouraging economic expansion and growth, especially in developing markets. This chapter offers a thorough overview of the transformative role of AI in tourism-related business, economic development, and advancement challenges and opportunities AI presents to the industry.

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INTRODUCTION

AI technologies are transforming the nature and characteristics of different industries, including tourism and hospitality (Talukder, 2020). Various forms of these AI technologies, such as machine learning, natural language processing, and computer vision, are transforming business operations and creating new ways of effective interaction with guests and travellers. As the tourism industry is working as the catalyst for creating a super-smart society, it needs to ensure the amalgamation of AI technologies and AI integration in every sphere (Cheng & Zhang, 2020). The revolutionary power of AI can analyze and process vast amounts of data, identify working patterns, and make effective and efficient decisions. It triggers the transformation of the business environment and the industry, too. For the economic development of any country and to contribute to the global economy, the tourism industry plays a vital role as it generates substantial revenue, creates millions of jobs, and drives cultural exchange (M.-H. Huang et al., 2019). Including AI in the tourism industry influences improving business operations and efficiency, increasing customer experience, and steering innovation (Mohammad et al., 2024). By analyzing vast databases, AI technologies can find the inherent insights to understand the needs and demands of consumers and their behavioural patterns, optimizing the quality of service based on the market with greater accuracy and efficiency (Robinson et al., 2020).

Artificial Intelligence (AI) in tourism includes utilizing advanced technologies and applications to intensify the service quality provided by the travel and hospitality industry (A. Huang et al., 2022). With the advancement of AI technologies and applications, the tourism industry is expanding its branches and enabling its related sectors to adapt to the upgraded consumer preferences and serve them more efficiently (Doborjeh et al., 2022). It contemplates using machine learning, natural language processing (NLP), robotics, and other intelligent systems and applications to ensure personalized service per guest requirements, increase work efficiency, and optimize tourism-related operations. The adoption of advanced AI-driven technologies is assisting various sectors, including airlines, hotels, travel agencies, and online travel platforms to expedite their services by doing predictive analytics to make proper decisions, providing visual and automated customer service, and also enhancing efficiency and customer satisfaction (Ivanov & Webster, 2019). AI-driven technologies benefit tourism businesses by increasing efficiency at work, minimizing operating costs, increasing personalized marketing, increasing revenue from business operations, and driving economic growth (Qin et al., 2024). This chapter highlights the interconnectedness of AI and tourism, the significance of AI applications in the tourism business, the economic contribution, and the future possibilities. Tourism-related service providers used computerized reservation

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