Chapter 8
Artificial Intelligence in the Delivery of Mobile Tourism Services

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ABSTRACT

Tourists are more attached to mobile phones which oblige tourism businesses to give importance to the automated services in mobile phones for better services. This chapter discussed the artificial intelligence-integrated mobile technologies in tourism in terms of technological, marketing, and managerial perspectives. The integration of artificial intelligence-based open access application programming interfaces such as language translation, recommendation making, mapping, etc. to the mobile technologies created great changes in tourist behavior and business processes in tourism. Moreover, businesses can provide automated and contactless services by using mobile big data and analyze better the needs of the tourists, especially in the post-pandemic era. Finally, a framework has been proposed for artificial intelligence integration to mobile tourism services, and theoretical-managerial implications were developed.

INTRODUCTION

Mobile phone usage is one of the most important issues that have come to the fore recently. Studies and practitioners in tourism developed a better experience for tourists with new technologies such as data analytics, machine learning, and artificial

DOI: 10.4018/978-1-7998-6904-7.ch008

intelligence (AI) (Gretzel et al., 2015; Tussyadiah, 2020). The use of technology in tourism literature is generally discussed in terms of technological, managerial, and marketing perspectives. The technological perspective has focused on technical and computational developments in tourism, mostly on hardware infrastructure and algorithm-oriented developments. The managerial perspective is concerned with the changes that technologies created in tourism organizations and business processes. These changes reformed the competition due to the increase in the use of technology and the technological developments in the market. The common point in all perspectives is that new technologies destroy the old ones and thus force businesses to become innovative. However, one of the issues that have shown itself more recently with the inclusion of large companies in business processes is AI. Both the augmented use of mobile phones and the developments in AI make tourism more complex to handle processes. The traditional tourist who was obliged to travel with a camera, clock, folding map, tourist guide and who was looking for a payphone to communicate has left its place to the modern tourist who can do all these and more just with a mobile phone. On the other hand, self-guided tours have emerged that provide intelligent and comprehensive tour support by using IoT technologies. They can provide tourists with a choice of popular and theme routes so that users can plan their itineraries based on the recommendations (W. Wang et al., 2020). Besides, tourism is an industry that is quite open to information production and digitalization due to its intangible structure. Especially, by using smartphones, travelers can generate more information about their trip, accommodation, and transportation even while they are away. One of the biggest benefits of the mobile internet is that tourists can exchange information when they want to access the information they need during the trip. Also, with the integration of AI into mobile computing, tourists and tourism businesses have gained advantages in all processes of traveling. In the light of the aforementioned issues, in this book section, the literature review for research on mobile computing and AI in the field of tourism is systematically presented, and at the end of the chapter, a process framework for AI integration into mobile applications and some recommendations for future researches are presented.

TECHNOLOGICAL PERSPECTIVE

Studies on AI date back to ancient times and have become very popular in the information age. The "Bombe", which was worked on by the British physicist Alan Turing to solve the Enigma used by the German army in secret communication during the First World War, is the first example of this. The article "Computing Machines and Intelligence", published in 1950 and is still in use of the determination of the cognitive ability of systems, stated that machines could be smart when they