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IS THE HOSPITALITY INDUSTRY READY FOR THE ARTIFICIAL INTELLIGENCE REVOLUTION?

GORDAN MARIUS-IONUȚ¹, ADAMOV TABITA CORNELIA¹, IANCU TIBERIU¹, MILIN
IOANA ANDA¹, ANKA ROXANA PASCARIU¹

¹*University of Life Sciences "King Mihai I" from Timișoara, Faculty of Management and
Rural Tourism, Romania*

Abstract: *The advent of artificial intelligence (AI) is poised to revolutionize industries across the globe, and the hospitality sector is no exception. While ranking-based AI has been completely integrated into various aspects of the hospitality and travel industry, for example by online travel agencies that provide personalised ordered lists of accommodation units to each customer, the widespread access to generative AI poses new challenges and opportunities for all stakeholders in hospitality. This paper addresses the readiness of the hospitality industry to embrace and utilize AI by analyzing current adoption levels, potential benefits, and the challenges inherent in integrating AI technologies.*

• Introduction

The newfound accessibility and power of artificial intelligence (AI) has catalyzed a transformative wave across various sectors, redefining operational paradigms and customer engagement strategies. From social networks to retail, AI technologies have been employed to personalize experiences, optimize operations, and gain competitive advantages. Notably, two distinct branches of AI—ranking AI and generative AI—have played pivotal roles in shaping modern digital landscapes, each with unique impacts and implications. Ranking AI functions by sorting and prioritizing content based on user preferences, behaviors, and interactions. Predominantly used by social media platforms and search engines, it enhances user engagement by delivering tailored content. However, this personalization has a double-edged effect. While it makes content more relevant to individual users, it also contributes to the formation of echo chambers and filter bubbles. Users become increasingly exposed to homogeneous information that reinforces their existing beliefs, potentially leading to societal polarization and a diminished exposure to diverse perspectives. In contrast, generative AI represents a leap forward in AI capabilities, enabling machines to create new content such as text, images, music, and even complex data simulations. Technologies like OpenAI's GPT-4 and image generation models have demonstrated the potential to produce human-like responses, craft personalized narratives, and generate creative outputs that were previously the exclusive domain of human ingenuity. Generative AI opens up possibilities for more dynamic and interactive user experiences, moving beyond mere content curation to content creation.

Material and method

A qualitative framework of research was utilised in this paper, in the form of a literature review conducted to evaluate the readiness of the hospitality industry for the artificial intelligence (AI) revolution, with a particular focus on the distinctions between ranking AI and generative AI. The review aimed to gather scholarly articles, industry reports, and case studies that provide insights into the implementation, challenges, and impacts of AI technologies within the hospitality sector.

• Results and discussions

Ranking AI, primarily in the form of recommendation systems and personalization algorithms, has seen moderate adoption in the hospitality sector.

Key applications identified include:

- **Personalized Marketing and Promotions:** Hotels and travel agencies use ranking AI to tailor marketing content and promotions based on customer preferences and past behaviors, leading to increased engagement and conversion rates.
- **Booking Platforms:** Online travel agencies (OTAs) and hotel websites employ ranking algorithms to sort and recommend accommodations, activities, and services that align with user profiles.
- **Loyalty Programs:** Ranking AI helps in customizing loyalty rewards and recognizing high-value customers by analyzing spending patterns and engagement levels.

Generative AI represents a newer frontier with emerging applications in hospitality:

- **Chatbots and Virtual Assistants:** Hotels have begun deploying AI-powered chatbots to handle customer inquiries, reservations, and concierge services, providing 24/7 support with human-like interactions.
- **Personalized Content Creation:** Generative AI is used to create personalized itineraries, promotional materials, and even dynamic pricing strategies based on real-time data analysis.
- **Virtual and Augmented Reality Experiences:** AI-generated simulations offer virtual tours of properties and destinations, enhancing marketing efforts.

Conclusions

The industry has moderately embraced ranking AI, utilizing recommendation systems and personalization algorithms to enhance marketing efforts, booking platforms, and loyalty programs. The industry's readiness is uneven, influenced by factors such as technological infrastructure, workforce skills, investment capacity, and organizational culture.