

THE EFFECTIVENESS OF AI-POWERED MARKETING STRATEGIES IN SUSTAINABLE TOURISM

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Abstract: *The scientific paper examines the current impact of artificial intelligence (AI) driven marketing strategies, within the area of sustainable tourism, and with a special focus on the usage of generative AI. Since the modern approach to tourism marketing relies heavily on hyper-personalization within the concept of smart travel, this paper examines how much automated communication and predictive analytics generally aid in creating sustainable tourism practices. The question is followed by an examination of the critical potentials and limitations of AI-related technologies that affect tourists' behavior, perceptions of sustainability, and the overall competitiveness of travel destinations. The main analysis indicates that AI-based marketing strategies can improve promotion effectiveness and tourist experience, but only if paired with ethical, environmental and social concerns. In conclusion, the use of AI is highly desirable for the development of sustainable tourism, but only when appropriately managed.*

Keywords: *Generative AI marketing, hyper-personalization, smart travel, sustainable tourism.*

1 Introduction

AI has introduced a great paradigm shift in the world of business. This shift is ever-growing and unpredictable. Every day, new data emerges about the discovery of new uses of AI, as well as current ones, including, but not limited to, text, images, and videos (Grewal et al., 2025, p. 702). These uses usually promise significant change in the way business is done, but mostly in a general sense. The type of research that seems most needed is the one that meticulously explains how AI can and will change a specific sector of the economy, while outlining the likelihood and potential of change. The sector that was chosen for this science paper to research and discuss the effects of AI is marketing, specifically in tourism.

Since the mid-20th century, marketing has played a pivotal role in determining business success. The main reason is that marketing relies on customer research, both current and potential customers, from a single company's perspective. This way, a company can reliably identify the most relevant market segments to focus on and how to position its product information so it reaches the targeted audience. To do this, companies would rely on market research and customizable marketing models that can be easily adjusted as circumstances demand. The previous seems almost simplistic, failing to take into account that companies cannot focus solely on customers but also on competitors. This pressure companies to create a marketing strategy that enables them to provide goods and services that are easily differentiated from competitors and easily identifiable to customers. Communicating information is also a significant challenge, given that digital media is a promotional channel available to all market participants and, for the most part, free of charge. This fact pushes market participants to create their own product identity, which is segmented into narrower market segments that address the

THE EFFECTIVENESS OF AI-POWERED MARKETING STRATEGIES IN SUSTAINABLE TOURISM

specific needs of current and potential customers. For this science paper, the sustainable tourism sector was recognised as particularly modern in its approach, yet highly market-sensitive and in need of contemporary marketing solutions (Ostian, 2024, p. 20).

Tourism consists of activities that generally provide recreation, relaxation, pleasure, education, and other types of activities and experiences. Those are provided to individuals traveling to specific places of interest that are recognised as more abundant in opportunities that allow the fulfilment of such activities. In general, the market value of tourism can only be measured by observing the reactions of potential tourists to what is promoted or the experiences of current tourists to what has been provided. Tourism is an extremely opinion-sensitive industry (Antczak, 2025, p. 452) that must employ modern solutions for both communication and problem-solving. Given the aforementioned opinion sensitivity, marketing research in the tourism industry must be conducted through open channels of communication, where all parties can ask questions and receive direct answers and suggestions. One result of this approach was the idea and popularisation of integrating the tourism industry with principles of sustainability, which has also been endorsed by certain national governments and international bodies like the United Nations World Tourism Organization (UNWTO), currently known as UN Tourism (Trišić, 2024, p. 259). This type of tourism is not defined primarily by the content of its final destination, but by the impact of travel and stay, which sets it apart from most other types. Sustainable tourism is mainly based on minimizing negative impacts and maximizing positive impacts on the environment, leading to and including the final destination. It also focuses on making a positive contribution to the local culture and economy while emphasizing the importance of social responsibility practice from tourists and other tourism stakeholders.

AI, marketing, and sustainable tourism represent modern, useful concepts that are being carefully studied and whose use is evolving rapidly. Even though they are studied as separate entities in distinct fields, they can be interconnected for the research and practice of all three. AI is recognised to provide the technology or means to create a useful marketing strategy (Cillo & Rubera, 2025, p. 1) that enables sustainable tourism to reach its highest goals – more tourists and destinations with greater environmental, cultural, and social responsibility. That allows concepts like AI and marketing, which can be perceived as untrustworthy or potentially dangerous by the general public, to be used for a clear betterment of society.

This is why the main goal of this science paper is to research AI-based sustainable tourism marketing strategies that are business-worthy and socially responsible, and that have an economic and ethical foundation. The science paper includes research from secondary sources and is therefore primarily a theoretical review article, based on an analysis of relevant scientific literature to provide a comprehensive insight into the researched issue.

2 AI in Tourism

As in many fields, AI is increasingly used in tourism. Concrete examples of the use of AI in tourism can be found in the sphere of personalization of offers. The above implies the collection and processing of data about tourists and, in accordance with established preferences, giving suggestions about trips. In the described way, it is possible to achieve a higher level of satisfaction, as well as loyalty towards the tourist offer provider. In order to achieve interactive communication in real time with as little involvement of people in these tasks as possible, AI assistants or so-called chatbots. Additional examples of the use of AI in tourism include analyzing and forecasting demand, forming smart destinations, more optimal promotion, analyzing reviews to adjust the offer, virtual reality (VR), augmented reality (AR), and the like.

Apart from practical examples, another indicator of the growing importance of AI in tourism is scientific and research publications. It can be stated that research interest in this topic

is growing (Kumar et al., 2023; Knani et al., 2022; Kırtıl & Aşkun, 2021). Among the topics that are present in the papers on AI in tourism are "robot, automation, ChatGPT, technology adoption, and mechanical learning" (Şengel & Işkın, 2024).

Papers on the application of robots in tourism show that this technological segment of research is also in progress. Analyzing the topics that have so far been the subject of research papers in the aforementioned field, it is noticeable that in addition to service robots, an important place is also occupied by AI. AI belongs to the same cluster as the topics "technology, hotel, acceptance, COVID19, automation, employee, management, economy, smartness, and information", which indicates their mutual connection (Garabinović & Lukić Nikolić, 2025). Analyzing the papers of researchers from Central and Eastern Europe, it is confirmed that AI is one of the topics that have been frequently discussed in publications on robotics-based services. It belongs to the same cluster as automation, economy, management, and society, so it is stated that one of the main thematic directions is robotics-based services and "Tourism and hospitality economy based on automation and AI – perspective of management and position of society" (Garabinović & Lukić Nikolić, 2024).

In addition to the growing application and theoretical study, AI also brings with it numerous risks. The potential negative effects of AI in tourism are based on its excessive and inadequate use. They can be manifested in social, cultural, economic, and other elements of the environment, so it is therefore necessary to point out some of the key ones. Tourism is primarily a labor-intensive activity in which man occupies a central position, but the use of AI as a carrier of automation can to a certain extent lead to a reduction in the number of employees in certain workplaces. Violation of privacy is one of the serious ethical issues. Methods of collecting, processing and using personal data should be fully legally regulated and possible abuses reduced. In addition to privacy, as a result of relying on AI-generated data, the safety of tourists may be compromised. Excessive use of modern technological solutions by the carriers of tourist offer, demand, and mediation can cause technological dependence, which results in the potential creation of a similar tourist offer, i.e. gradual unification and reduction of differentiation due to the absence of creativity and spontaneity. In the described way, it is possible for individual carriers of the tourist offer, and especially destinations, to lose their authenticity. AI uses a large amount of electricity, which can increase consumption, but it also has an effect on the environment. For the above reasons, the sustainable use of AI is a necessity in order to achieve sustainable tourism and, in a broader sense, sustainable development.

3 Generative AI in Marketing

For many years, AI has been considered an analysis tool based on complex algorithms that can search for, find, and present data. However, the modern understanding and use of AI are mostly based on Generative Artificial Intelligence (GAI), or AI tools that not only measure but also create new data content. These tools have provided a wide range of opportunities across a variety of fields where creative solutions and adaptability are most important, especially when done in a short timespan. Even though modern AI technology is constantly evolving and its ultimate range of use is still not very well defined, its current usefulness has been enough to attract professionals from different fields.

AI is utilized in various aspects of business today (Ağtaş, 2025, p. 18). One of the fields in which adoption was earliest was marketing. That was not an accident, since marketing departments have always had to work with large numbers of ever-changing variables, based on customer thoughts, impressions, and preferences. This is why the process of market research has always been closely tied to modern technology, which has enabled the creation of analyses, models, and even concrete solutions to marketing problems. In today's digital economy, marketing issues are primarily about finding digital solutions.

THE EFFECTIVENESS OF AI-POWERED MARKETING STRATEGIES IN SUSTAINABLE TOURISM

Therefore, from a digital marketing point of view, AI technology or individual tools, such as ChatGPT and chatbots, can design customised services and recommendations, as well as specific promotions in digital channels, thereby improving customer satisfaction and experiences (Florido Benítez & del Alcáraz Martínez, 2024, p. 1).

To use this new technology for marketing purposes, every creator should be aware of the GAI tools currently in use (Table 1).

Table 1. *GAI tools and their purpose in digital marketing*

Tools	Purpose
ChatGPT	Content creation, image, and text generation
Midjourney, Canva, DALL-E, Adobe Firefly	Image Generation
Faceless video, Playground	Automated Video Post
ElevenLabs	Voiceovers
Descript	Script and Podcast Preparation
REST Runway	Video Generation
Clearscope	SEO Optimization
FeedHive	Conditional Posting
Fireflies	Meeting Transcription
Promptly	Prompt-Based Content Creation

Source: (Joshi, S. et al. 2025, p. 6)

At the time that the research highlighting various GAI tools (Table 1), these tools were best suited to their purpose and were hence the most popular. However, the situation is bound to change over time as AI technology advances and new uses emerge to meet different digital marketing needs within an industry.

Due to its recognition patterns from data (e.g., text mining, speech recognition, facial recognition), the type of AI that provides personalization benefits is Thinking Artificial Intelligence (TAI). In digital marketing, this type of AI personalizes (Huang, M.H., & Rust, R.T., 2021, p. 34):

- products based on customer preferences,
- prices based on customer willingness to pay,
- frontline interactions.

However, it should be noted that scientific studies have not fully explored how plain GAI or TAI can better engage customers and enhance brand performance across companies. These aspects are particularly crucial because the success of GAI adoption hinges not only on its technological capabilities but also on its ability to drive meaningful engagement and foster loyalty (Giri, A. et al., 2026, p. 2). GAI allows advertisers to create and even automate the customization of content marketing strategies for each user based on their preferences and behaviors, thereby strengthening the bond between consumers, brands, and content (Joshi, S. et al. 2025, p. 1).

In addition to the numerous advantages previously mentioned, GAI use also poses major challenges, including accuracy, reliability, bias, and toxicity (Monteith, S. et al., 2024, p. 34).

To avoid potential risks, four ethical guideline principles are most commonly suggested (Rossi, S. et al., 2024, p. 6):

- GAI results need to be checked, preferably by humans, before they are used for final marketing solutions.
- GAI tool names should be disclosed to the public to avoid suspicion.
- GAI model documentation should be provided, listing all the prompts and parameters used.
- GAI raw data must be saved and made transparent upon request.

4 Hyper-Personalization as a Driver of Tourist Engagement

As previously stated, AI enables hyper-personalization, which entails the capacity to adapt offerings and interactions in real-time to the specific needs and preferences of the user (Dalton, 2025, str. 88). Hyper-personalization uses AI and advanced analytics to create a unique experience for each user, based on their preferences, previous purchases, and online activities (Thangavel & Sinha, 2025). For example, the concept of Big Data enables brands to analyze vast amounts of information and obtain insights into consumer trends, preferences, and user behavior almost in real time (Kostovski & Djukic, 2025, p. 231). Unlike traditional personalization, which relies on past data when tailoring offerings to a target group, Kostovski and his co-author (2025) emphasize that real-time engagement also plays a key role in contemporary marketing strategies. Hyper-personalization, therefore, goes a step further, as it uses AI and real-time user data to create offerings at a given moment. The question arises: Is hyper-personalization important for attracting and retaining tourists in contemporary tourism?

The answer is affirmative, and the explanation can be found in the changing role that tourists have in today's market. Namely, contemporary tourism trends have introduced new types of tourists (Stojanovic, 2023, p. 13), so it can be said that the role of modern tourists has evolved from passive to active. They are no longer merely passive observers guided by price-based vacations. Today's tourists are technologically empowered explorers who, with high standards and a more developed environmental and social awareness, seek authentic and personalized experiences. In addition, with the development of civilization, the status of tourism is shifting from being socially desirable to essential, and in this sense, every individual has the right to participate in tourism, which has a positive impact on emotional well-being, personal development, and the quality of life of individuals (Milovanovic et al., 2022). However, many people face limitations in using tourism services, primarily due to health and economic reasons, as well as lifestyle, lack of foreign language skills, needs arising from religion or culture, the desire to travel with pets, and so on (Milovanovic et al., 2022). Hyper-personalization provides tourism entities with the opportunity to create highly personalized tourism offerings based on monitoring and analyzing tourists' behavior and preferences. In this way, it can greatly enhance the user experience, as tourists receive information and services that are relevant to them.

Hyper-personalization generates a range of positive effects in the tourism sector. By analyzing data on tourists' behavior, preferences, characteristics, and needs, tourism service providers can offer services that are fully aligned with their requirements and desires, which can have a positive impact on their satisfaction and engagement. In addition, hyper-personalization improves the flexibility of the tourism offering, operational efficiency, business performance, and the reputation of tourism service providers. On the other hand, it shortens the search and demand time for the ideal offer and facilitates the decision-making process for tourists. Hyper-personalization also supports the development of sustainable tourism. For example, Stojanovic (2023) refers to so-called eco-tourists, describing them as those tourists who primarily see nature as their main interest, as they protect and explore the environment and pay attention to the local population. Such tourists are often highly educated and members of various ecological movements and environmental protection organizations (Stojanovic, 2023, p. 13). Based on the analysis of such users' interests, the system can guide them toward more environmentally sustainable offerings, which is crucial for the development of sustainable tourism practices. On the other hand, tourism service providers must also consider the potential risks associated with the hyper-personalization process (such as privacy protection, tourists' exposure to large amounts of information, ethical aspects, etc.) and, accordingly, strive to mitigate the risks while maximizing the benefits.

5 Smart Travel

Travel is an indispensable component of tourism. The reason for the above is the geographical difference between the destination where the tourist lives and the destination to which he travels. Modern technologies provide numerous opportunities to improve travel and thereby improve the tourist experience. Smart travel is the basis of smart tourism. Gretzel et al. (2015) define smart tourism as "tourism supported by integrated efforts at a destination to collect and aggregate/harness data derived from physical infrastructure, social connections, government/organizational sources and human bodies/minds in combination with the use of advanced technologies to transform that data into on-site experiences and business value-propositions with a clear focus on efficiency, sustainability and experience enrichment." They distinguish three of its components, which are smart: (1) experiences, (2) business ecosystem, and (3) destination. They also emphasize that e-tourism and smart tourism should not be equated. It could be concluded that smart travel includes the use of modern technological solutions in all stages of the travel process (from planning to implementation), at destinations (emissive, transit, receptive), by persons involved in the tourism-hospitality process (tourists as carriers of demand, intermediaries and carriers of tourism offers) with the aim of more adequate tourism-hospitality services (personalization, better experience, sustainability, etc.).

The most significant keywords, which show the main topics in scientific papers from the sphere of smart tourism, are (in order of decreasing number of occurrences and total link strength): smart tourism, digital technology, smart city, internet of things, big data, AI, augmented reality, digital transformation, mobile application, intelligent systems, smart destination, information and communication technologies (ICT) (Shasha et al., 2025).

In the analysis of smart travel experiences, it was established that there are several main domains of knowledge (Au et al., 2024):

- Experiences design,
- Structural equation modeling methodology,
- Role of technology,
- Destination ecosystem.

Also, five current fields of research were highlighted (Au et al., 2024):

- Conceptualization,
- Technology adoption,
- Destination management,
- Innovation,
- Co-creation.

Smart destinations are an important element of smart tourism. Scientific and professional papers on smart destinations started to be relevant in the second decade of the 21st century. The most important keywords in these papers are foundation, city, and technology. Internet, experience, hospitality, ICT, China, information technology, and management are represented in a smaller number. Taking into account the centrality degree, the most important topics are technology, hospitality, experience, foundation, management, internet, value creation, model, city, and co-creation (Ercan, 2023).

In accordance with the increasing use of mobile devices, mobile applications have a growing importance in the field of tourism. The analysis of mobile travel apps showed that as a form of smart technology, they are highly rated by users and thus well received by them. Three main functions of such applications have been identified: (1) geolocation tracking, (2) travel itinerary generators, and (3) real-time personalization and recommendations. Location, investment and privacy are the main challenges of their use (Sia et al., 2023). Factors influencing the adoption of smart itineraries in travel planning applications are (Khan & Mehmood, 2024):

- Usage,
- Value,
- Risk,
- Traditional barriers.

The use of different devices and their connection via the Internet is also used in the sphere of smart tourism. Rosário & Dias (2024) discussed the role of the Internet of Things (IoT) in the sphere of smart tourism from the aspects of technology, usage and challenges. In accordance with the above, they singled out:

- IoT Technologies for Smart Tourism: Big Data, Cloud Computing, Machine Learning and AI, Smart Sensors, Wearable Devices and Mobile Applications, Virtual Reality and Augmented Reality;
- Applications of IoT in Smart Tourism: Recommender Systems, Smart Cities, Payment Transactions, Electronic Ticket Systems, Sustainable Tourism Destinations, Intelligent Tour Guide System, Area Capacity Early Warning System, Voice Assistant, Smart Support System, Health Tourism Monitoring System;
- Challenges Hindering Effective Application of IoT in Smart Tourism: Security and Privacy, Software Complexity, Scalability, and Interoperability.

6 AI-Based Sustainable Tourism

Sustainable development represents one of the most pressing topics of today, permeating all spheres of society, including the tourism sector. The intensive development of tourism has both positive and negative implications. Although it significantly contributes to economic growth, cultural exchange, and the creation of new jobs, its uncontrolled expansion often leads to environmental degradation, erosion of cultural systems, and socio-economic imbalances (Rane et al., 2023). The increase in the number of travelers generates higher greenhouse gas emissions, leads to excessive waste production, the destruction of natural habitats, and increasing pressure on local infrastructure, among other issues. Venice is a typical example of a city where mass tourism disrupts the quality of life of the local population and threatens the cultural identity of the destination (Nolan & Séraphin, 2019, p. 139). This leads us to the conclusion that the positive effects of tourism on the economy and society can be nullified if tourism directly threatens the environment, making it therefore important for tourism to develop in a sustainable manner (Tenderis & Usta, 2026, p. 2). Sustainability impacts every facet of business and demands to be recognised, at a global level, as a strategic pillar to be tackled by the wider organization (Adejuge, 2024, p. 166). In this context, the concept of sustainable tourism has emerged, taking into account the economic, ecological and social aspects of its activities.

AI represents one of the fundamental technological tools that can facilitate the implementation of sustainable models in the tourism sector. It becomes an important mechanism for establishing a dynamic balance between tourism growth, the needs of the local population, and environmental protection. The application of AI enables personalized services, optimizes operational efficiency, and supports sustainable activities (Trifunovic, Spalevic & Markovic, 2024, p. 130). As such, it offers innovative solutions that directly contribute to the development of sustainable tourism practices. Some of these include:

- automation and optimization of activities,
- waste reduction,
- smart energy management,
- preservation of biodiversity and water resources,
- promotion of local destinations,
- protection of cultural and historical heritage,

THE EFFECTIVENESS OF AI-POWERED MARKETING STRATEGIES IN SUSTAINABLE TOURISM

- educating tourists through personalized notifications (for example, about choosing accommodation with an eco-certification, selecting transportation that contributes to reducing harmful gas emissions, and similar),
- changing the way tourism services are created,
- simplifying the travel planning and organization process for tourists,
- guiding tourists toward sustainable decisions,
- promoting environmentally responsible behavior among tourists.

In addition, Alves and co-authors (2025) emphasize that by using AI, recommendation systems and chatbots offer personalized offerings and thereby help in the even distribution of visitors. In this way, the problem of overtourism is directly addressed, and a more stable development of destinations is promoted, leading to balanced and sustainable tourism. However, Hermosa and co-author (2024) emphasize that despite the continuous development of high-tech services, innovative technologies have still not been fully considered, nor have they been sufficiently utilized to improve the quality and sustainability of travel and tourism experiences. Areas where the potential of AI has still not been fully utilized particularly include the application of robotics for monitoring and protecting natural and cultural heritage, the development of information systems for detecting inappropriate behavior in protected zones (Hermosa & Castro, 2024, p. 161), and the involvement of local populations in the decision-making process regarding the development of local tourism. In addition, there is significant room for advancement in digital visitor education and early warning systems for natural disasters, which represents a priority in the fight against climate change (Hermosa & Castro, 2024, p. 162). AI systems promise widespread benefits for society, while also presenting substantial risks in almost all sectors (Puran, 2024, p. 245). Caution regarding the broader and faster application of AI may also stem from its inherent limitations. Data privacy, digital literacy, the digital divide based on economic inequality, over-reliance on AI leading to a loss of authenticity, and biased information are just some of them. Considering the fact that the contemporary environment faces increasingly pronounced ecological, economic, and social challenges, the promotion of sustainable tourism becomes a fundamental prerequisite for the long-term stability of the modern tourism sector. In this context, it is essential to engage all available resources and maximize the potential offered by AI.

7 Conclusions

Today, the world faces significant economic, ecological, and social challenges. In addition to other actors, the intensive development of the tourism sector makes a significant contribution. That is why there is a need to identify innovative approaches that can advance sustainable practices in tourism. AI is one such approach, and it can play an important role in the development of sustainable tourism. However, for it to become a key ally in the creation of sustainable tourism practices, it needs to be used effectively, that is, in a way that maximizes its positive aspects and neutralizes its negative sides. That is why the main objective of this scientific paper was to identify and explain the current impact of generative AI-driven marketing strategies, specifically in sustainable tourism, to increase the competitiveness of these travel destinations. That was successfully done by proving and concluding that the use of generative AI is highly desirable in creating, controlling, analyzing, and evolving marketing strategies. Furthermore, this scientific paper points out that hyper-personalization in marketing can contribute most to the sustainable development of tourism by creating a unique, personalized offer that respects the ecological, social, and economic aspects of tourism. In addition, it can positively impact the business performance of the tourist organization and the satisfaction and trust of tourists.

The theoretical implication of the science paper is to broaden a very limited body of knowledge that combines research on AI, marketing, and sustainable tourism. For the same reason, the practical implications are also connected to the prior combination, but with a focus on increasing the effectiveness of AI-based digital marketing strategies to improve business operations. One notable shortcoming of the science paper is the absence of a conceptual model, developed and explained as a possible tool to enhance the effectiveness of AI-powered marketing strategies in sustainable tourism. To rectify the previously mentioned shortcoming, the introduction of an original conceptual model would be a logical addition to the research presented in this science paper.

This science paper also supports existing theoretical views that AI can significantly enhance the effectiveness of marketing strategies, especially through process automation and personalized offers. Regarding sustainable tourism, the science paper confirms that AI facilitates the establishment of a balance among the economic, environmental, and social aspects of tourism development.

What makes this science paper stand out compared to existing research is the connection of AI with the concept of hyper-personalization in the context of sustainable tourism, which led to the most significant finding of the science paper - an adequately used AI can simultaneously increase tourist satisfaction, improve the performance of tourist organizations, and enable the sustainable development of the tourism sector.

REFERENCES

1. Adejugbe, B.T. (2024). Navigating the interplay: esg, sustainability, and sustainability reporting-an examination of regulatory risks and opportunities, *AGORA International Journal of Juridical Sciences*, 18(2), 165-182. DOI: [10.15837/aijs.v18i2.6988](https://doi.org/10.15837/aijs.v18i2.6988)
2. Ağtaş, E. (2025), The double-edged impact of artificial intelligence on corporate reputation: opportunities and threats, *AGORA International Journal of Economical Sciences*, 19(2), 16-32. <https://doi.org/10.15837/aijes.v19i2.7307>
3. Alves, J., Arantes, L., & Moreira, A. (2025). AI-powered sustainable tourism: Aligning innovations with the sustainable development goals, *Tourism and Hospitality Research*, <https://doi.org/10.1177/146735842514094>.
4. Antczak, B. O. (2025). The impact of Artificial Intelligence on tourism industry: a marketing perspective. *Journal of Modern Science*, 62(2), 450–472. <https://doi.org/10.13166/jms/208128>.
5. Au, W. C. W., & Tsang, N. K. F. (2024). Smart Travel Experiences: A Bibliometric Analysis of Knowledge Domains and Research Areas. *Journal of Hospitality & Tourism Research*, 48(5), 920-936. <https://doi.org/10.1177/10963480221130998>.
6. Cillo, P., & Rubera, G. (2025). Generative AI in innovation and marketing processes: a roadmap of research opportunities. *SSRN Electronic Journal*, 1-33. <https://doi.org/10.2139/ssrn.5120059>.
7. Dalton, S. (2025). Analiza uticaja AI rešenja na poboljšanje poslovanja restorana, *Stručno-naučna konferencija „Održivi resursi, ekologija i turizam Jugoistočne Srbije“ 22. novembar 2025, Sijarinska Banja, Republika Srbija*, 86-95.
8. Ercan, F. (2023). Smart tourism destination: A bibliometric review. *European Journal of Tourism Research*, 34, 3409. <https://doi.org/10.54055/ejtr.v34i.2788>.
9. Florido-Benítez, L. & del Alcázar Martínez, B. (2024). How Artificial Intelligence (AI) is powering new tourism marketing and the future agenda for Smart Tourist Destinations. *Electronics*, 13, 4151. <https://doi.org/10.3390/electronics13214151>.
10. Garabinović, D., & Lukić Nikolić, J. (2024). Analysis of scientific literature on robotics-based services and processes in tourism and hospitality – contribution of Central and

THE EFFECTIVENESS OF AI-POWERED MARKETING STRATEGIES IN SUSTAINABLE TOURISM

- Eastern European Countries. *BizInfo (Blace) Journal of Economics, Management and Informatics*, 15(2), 1–10. <https://doi.org/10.5937/bizinfo2402001G>.
11. Garabinović, D., & Lukić Nikolić, J. (2025). The application of robots in the tourism and hospitality industry: A bibliometric analysis. *Teme*, 49(2), 319-340. <https://doi.org/10.22190/TEME240318022G>.
 12. Giri, A., Chakrabarty, D., Lim, W. M., Mangla, S. K., & Hollebeek, L. D. (2026). Can generative artificial intelligence enhance brand performance in tourism? A mixed-methods study integrating service-dominant logic, social exchange theory, and uncanny valley theory. *Tourism Management Perspectives*, 60, 101442. <https://doi.org/10.1016/j.tmp.2025.101442>.
 13. Gretzel, U., Sigala, M., Xiang, Z., & Koo, C. (2015). Smart tourism: foundations and developments. *Electron Markets*, 179–188. <https://doi.org/10.1007/s12525-015-0196-8>.
 14. Grewal, D., Satornino, C. B., Davenport, T., & Guha, A. (2024). How generative AI is shaping the future of marketing. *Journal of the Academy of Marketing Science*, 53(3), 702–722. <https://doi.org/10.1007/s11747-024-01064-3>.
 15. Hermosa, P., & Castro, M. (2024). Artificial intelligence (AI) in sustainable tourism: bibliometric analysis, *Cuadernos de Turismo*, 53, 157-185.
 16. Huang, M.H., & Rust, R.T. (2021). A strategic framework for artificial intelligence in marketing. *Journal of the Academy of Marketing Science*, 49, 30–50. <https://doi.org/10.1007/s11747-020-00749-9>.
 17. Joshi, S., Bhattacharya, S., Pathak, P., Natraj, N. A., Saini, J., & Goswami, S. (2025). Harnessing the potential of generative AI in digital marketing using the Behavioral Reasoning Theory approach. *International Journal of Information Management Data Insights*, 5(1), 100317. <https://doi.org/10.1016/j.ijime.2024.100317>.
 18. Khan, S., & Mehmood, S. (2024). Antecedents the adoption of tour itineraries from smart travel apps: an integration of experiential consumption theory and innovation resistance theory. *Journal of Science and Technology Policy Management*, 17(4), 968–994. <https://doi.org/10.1108/JSTPM-06-2023-0095>.
 19. Kırtıl, İ. G., & Aşkun, V. (2021). Artificial intelligence in tourism: A review and bibliometrics research. *Advances in Hospitality and Tourism Research (AHTR)*, 9(1), 205-233. <https://doi.org/10.30519/ahtr.801690>.
 20. Knani, M., Echchakoui, S., & Ladhari, R. (2022). Artificial intelligence in tourism and hospitality: Bibliometric analysis and research agenda. *International Journal of Hospitality Management*, 107, 103317. <https://doi.org/10.1016/j.ijhm.2022.103317>.
 21. Kostovski, J., & Djukic, T. (2025). Savremena komunikacija i transformacija marketinga u digitalnom dobu, *Međunarodna naučna konferencija „Mediji i ekonomija“, Banja Luka*, 229-235.
 22. Kumar, D., Shandilya, A. K., & Choudhuri, S. (2023). Artificial Intelligence-Enabled Bibliometric Analysis in Tourism and Hospitality Using Biblioshiny and VOSviewer Software. In A. Khang, V. Abdullayev, B. Jadhav, S. Gupta, & G. Morris (Eds.), *AI-Centric Modeling and Analytics*, 260-291. <https://doi.org/10.1201/9781003400110-15>.
 23. Milovanović, V., Mandarić, M., & Borović, S. (2022). Savremeni trendovi u turizmu I ugostiteljstvu-implikacije na marketing i menadžment preduzeća, *Naučno-stručna konferencija Trendovi u poslovanju 2022, Kruševac*, 255-268, ISBN-978-86-7566-062-0.
 24. Monteith, S., Glenn, T., Geddes, J. R., Whybrow, P. C., Achtyes, E., & Bauer, M. (2024). Artificial intelligence and increasing misinformation. *The British Journal of Psychiatry*, 224(2), 33–35. <https://doi.org/10.1192/bjp.2023.136>.
 25. Nolan, E., & Séraphin, H. (2019). Venice: capacity and tourism, *Overtourism - Issues, realities and solutions*, 139-151, ISBN 978-3-11-060408-5.

26. Ostian, Z. (2024). Promoting tourism services through AI-driven social media marketing: a case for small businesses. *EUREKA: Social and Humanities*, 6, 16–27. <https://doi.org/10.21303/2504-5571.2024.003665>.
27. Puran, A.N. (2024). Dimensions of artificial intelligence ethics from an international and EU perspective, *AGORA International Journal of Juridical Sciences*, 18(2), 245-251. <https://doi.org/10.15837/aijjs.v18i2.6994>.
28. Rane, N., Choudhary, S., & Rane, J. (2023). Sustainable tourism development using leading-edge Artificial Intelligence(AI), Blockchain, Internet of Things (IoT), Augmented Reality (AR) and Virtual Reality (VR) technologies, *SSRN Electronic Journal*, <https://doi.org/10.2139/ssrn.4642605>.
29. Rosário, A. T., & Dias, J. C. (2024). Exploring the Landscape of Smart Tourism: A Systematic Bibliometric Review of the Literature of the Internet of Things. *Administrative Sciences*, 14(2), 22. <https://doi.org/10.3390/admsci14020022>.
30. Rossi, S., Rossi, M., Mukkamala, R. R., Thatcher, J. B., & Dwivedi, Y. K. (2024). Augmenting research methods with foundation models and generative AI. *International Journal of Information Management*, 77, 102749. <https://doi.org/10.1016/j.ijinfomgt.2023.102749>.
31. Şengel, Ü, & Işkın, M (2024). Intellectual structure on artificial intelligence studies in tourism and hospitality: a bibliometric analysis. *Worldwide Hospitality and Tourism Themes*, 16(2), 202–215. <https://doi.org/10.1108/WHATT-03-2024-0070>.
32. Shasha, Z. T., Weideman, M., Sun, H., & Liu, G. (2025). A Bibliometric Review of Research Progress, Trends, and Updates on Smart Tourism Research. *Businesses*, 5(3), 39. <https://doi.org/10.3390/businesses5030039>.
33. Sia, P. Y.-H., Saidin, S. S., & Iskandar, Y. H. P. (2023). Systematic review of mobile travel apps and their smart features and challenges. *Journal of Hospitality and Tourism Insights*, 6(5), 2115–2138. <https://doi.org/10.1108/JHTI-02-2022-0087>.
34. Stojanović, V. (2023). Turizam i održivi razvoj, PMF, Departman za geografiju, turizam i hotelijerstvo, Novi Sad, ISBN 978-86-7031-648-5.
35. Thangavel, V., & Sinha, S. (2025). Revolution of AI in hyper-personalization marketing of FMCG, *Journal of Dalian University of Technology*, 32(8), 299-313.
36. Tenderis, A., & Usta, T. (2026). Environment, Tourism, and the Sustainable Development Goals (SDGs) in Sustainable Cities, *Journal of Lifestyle and SDGs Review*, 6(1):e08145, 1-12. <https://doi.org/10.47172/2965-730x.sdgsreview.v6.n01.pe08145>.
37. Trifunović, I., Spalević, Ž., & Marković, S. (2024). Legal regulation of the use of artificial intelligence in the development of the tourism industry. *Ekonomija: Teorija i Praksa*, 17(2), 115–133. <https://doi.org/10.5937/etp2402115t>.
38. Trišić, M. (2024). Managing digital visibility of ecotourism, sustainable and green tourism. *Conference proceedings: The Eighth International Scientific Conference – Tourism and Green Investments*, 8(1), 258-268. <https://doi.org/10.52370/TISC24258MT>.