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THE ARTIFICIAL INTELLIGENCE USAGE AND BENEFITS IN TOURISM MARKETING

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Abstract: This study explores the impact of artificial intelligence (AI) on tourism marketing through a comprehensive bibliometric analysis of research published up to 2025. It aims to identify trends, challenges, and opportunities in AI adoption within the tourism industry, focusing on its implications for marketing strategies and customer experiences. In the light of the rapid evolution of AI technologies, the analysis also points to the growing influence of generative AI models, such as ChatGPT, in content creation and customer interaction. A bibliometric analysis was conducted using Web of Science, which involved refining an initial pool of 528 results to 225 relevant articles. Advanced analytical tools, including R (bibliometrix) and VOSviewer, were utilized to scrutinize publication trends, identify key contributors, explore thematic areas, and map research networks. The study integrates a range of analytical techniques, including factor analysis, thematic mapping, and network analysis, to provide a holistic view of the field. Findings indicate a significant surge in AI-related tourism marketing research, with emerging themes encompassing AI's pivotal role in enhancing customer engagement, optimizing experiences, and fostering entrepreneurship. The findings suggest that while AI can significantly enhance operational efficiency, maintaining the human element in tourism services and marketing remain crucial for customer satisfaction. The study also highlights the ethical considerations associated with AI adoption, emphasizing the necessity for balanced implementation to maximize benefits while addressing critical challenges such as data security, authenticity, data privacy, transparency ansd intellectual property concerns. This research contributes novel insights into the rapidly evolving landscape of AI in tourism marketing, offering valuable perspectives for both academics and practitioners. Additionally, it highlights the importance of ongoing research in this area to ensure that AI technologies are harnessed effectively to drive innovation and sustainability in the tourism industry, while exploring the long-term impacts of AI integration on both business performance and customer trust, ensuring that innovation aligns with the core values of the tourism industry. Furthermore, the study's findings have implications for policy makers and industry stakeholders seeking to leverage AI for competitive advantage while ensuring responsible and ethical practices.

Keywords: AI, ChatGPT, data security, content production, SEO, neutral network, research agenda

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INTRODUCTION

We've been living in the era of Web 3.0, the biggest challenges of which are dealing with the excessive flow of information. Information overload exists for almost as long as information does. The 21st century brought an unprecedented growth, (Bawden & Robinson, 2020) using the opportunities provided by artificial intelligence and machine learning. We can already see the signs of artificial intelligence in marketing (Nalbant & Aydin, 2025), it brings huge changes in tourism marketing as well. In recent years, machine learning-based systems have undergone major changes, in their study Wu et al. (2023) presented the process of this development, during which the AI-based systems used today may be able to process large amounts of data and perform specific tasks with the help of language models, efficiently for communication in Table 1. Naimi and co-authors leveraged machine learning to identify geosites (Naimi et al., 2024).

Table 1. List of approaches and impact they make

Approach	Impact	Source
Machine learning	gathering experience, recreating tasks based on the errors	Dairo and Szűcs (2025), Cardona-Acevedo et al. (2025)
Neural network models	the use of signal processing and thinking mechanisms of human brain nerves with the model	Zhang and Liu (2025); Skaar (2020), El Youbi et al. (2025)
Generative models	enabling the execution of tasks by algorithms	Goodfellow et al. (2020), Tomczak (2022)
Large Language Models (LLMs)	performing language tasks, for example understanding languages, writing texts	Devlin et al. (2019), Arora (2024), Adams (2024)

Several large companies, including Facebook, Google, Walmart, Amazon, eBay, ASOS, and IKEA, have used or are using artificial intelligence for their various optimization processes (Haleem et al., 2023). New artificial intelligence-based

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systems are able to create various online marketing content (blog articles, landing pages, ad texts, image and video content). One of the most well-known artificial intelligence programs is ChatGPT (Dai et al., 2024), which already has more than 2,96 billion users and answers users' requests and questions with the help of a language model. In the background, the generative pre-training transformer (i.e. GPT) processes human language using a transformer-based large language model, and then it can create human-like texts such as different stories or even articles used in online marketing (Wu et al., 2023). According to some sources, the ChatGPT training data set based on the 3.5 model consists of nearly 1 trillion words (Wu et al., 2023), but the more recent version 4.0 has already been published, which is available with a subscription, and according to the news, version 5.0 will also be launched soon. The chatbots operating on the OpenAI model are able to generate even marketing content, which can help certain processes and shorten work sessions. However, the quality, legality, and reliability of these contents raise many questions, which we would like to deal with in our article.

Content can be generated with the help of artificial intelligence, by which we mean writing such as blog posts, articles, landing pages, product descriptions, and other marketing materials that are created by machines. This can lead to various problems. Not only mistakes, potential errors, and misinformation caused by artificial intelligence can cause problems, but marketing professionals have to face the lack of uniqueness, personal voice, and other important issues. According to (Melumad & Meyer, 2020) the more space we give to intelligent systems and machine thinkers, the greater the chance that due to an accidental or possibly intentional error, something will go astray. Although AIGC (artificial intelligence-generated content) is fast and cost-effective (Cao et al., 2023), users have to face data protection, legal and ethical challenges. Online marketing has changed a lot in recent years, new marketing tools, opportunities, and applications are constantly appearing (Ivancsóné Horváth et al., 2025). However, search engine optimization is still one of the most effective and most rewarding online marketing tools. Forbes (2024) in his article presenting the latest digital marketing trends put it as follows: SEO can provide organizations with an ROI of up to 700% or more. This tool can also be used very effectively in tourism.

In order to succeed in inbound marketing, it's crucial to develop tailored, original content that resonates with your target audience profiles (Saavedra-Azabache, 2024). An important cornerstone of the methodology is search-engine optimization, as almost half of product purchases begin with a Google search (Sutherland & Wark, 2024). Unique, quality content is an increasingly important ranking factor on search engines, among many other settings (Ziakis et al., 2019). This raises the question of whether it is possible to use artificial intelligence-based systems to create quality, unique content tailored to the needs of potential customers? Large-scale, pre-trained AI models learn automatically from data, which is why it can be said to function similarly to the human brain (Geary, 2021). The great challenge of the Web 3.0 era is the fight against high-level information dumping. There are problems not only with the amount of information, but also with security (Vayadande et al., 2024). Artificial intelligence maps this information, it is questionable whether it can distinguish between facts and expert opinions supported by real data and not necessarily authentic false information, which may even be spread intentionally. Online text content can be divided into two parts: structured and creative writing. Structured writing includes the core of the content, the structured data part, while creative writing adds added value, personal content, i.e. it is tailored to the brand personality, the company, making it attractive to the target audience (See et al., 2017). Creative writing is the real marketing task, which is essential for creating content, artificial intelligence is currently not capable of producing independent, original content (whether text or multimedia content) (Wu et al., 2023). At this point, the question arises whether it is possible to produce quality content with the help of artificial intelligence, since the creation of unique and creative texts is essential in online marketing. Can the uniqueness of a person, his sense of humor, creative ideas, and identification with customers be replaced? Despite the fact that artificial intelligence systems also have a huge vocabulary, they are not necessarily able to use every word in the right place, use familiar word combinations, expressions that make the content more enjoyable and memorable. In the absence of the right tone, the content created by AI can become completely impersonal and spam-like (Bonifacio et al., 2022). Although algorithms are not able to produce unique value, they show countless examples of how well they can learn, even when reworking the ideas of others. This can also be considered creative value, but copying raises various legal and ethical problems, when AI use and paraphrase sources they find on the Internet, but do not refer to them (Fry, 2018). As our test showed, it often conveys the same content in slightly different wording. And plagiarism entails legal problems. Countless legal cases have been started in this regard, so last year the EU issued a related legal position (The Artificial Intelligence Act, 2023). Another problem with these copied contents is that Google also penalizes them (Google Search Central, 2008), which can damage the search engine optimization of the site, which, as explained above, is a very important factor in online marketing. Artificial intelligence is already included in Google's latest guidelines: they explain that content produced with the help of artificial intelligence is not a disadvantage, as long as it meets the other criteria. However, low-quality content is a problem. It is still important for Google to create useful, helpful, original and search-intent-satisfying content (Google Search Central, 2023).

AI systems also raise various data protection and security concerns, which professionals must deal with (Tian, 2022). The widely used ChatGPT is able to memorize conversations, interactions and entered data (Menon & Shilpa, 2023). This opens a new window for data misuse (Wang et al., 2023). This is precisely the reason why the use of ChatGPT was banned in Italy (Eulerich et al., 2024). Even big names like Samsung have already fallen victim to this (Kong et al., 2023). Moreover, we also have to consider the risk of data poisoning (Ding et al., 2019). Notwithstanding the challenges, AI-powered content creation shows immense promise, offering the ability to produce complete articles within minutes (Bevilacqua et al., 2025). AI systems can help in defining the topic, confirming information, searching for data, gathering inspiration, proofreading, correcting incorrect texts, and can even statistically reduce the proportion of unfinished sentences (Michelet, G., Breitinger, F., 2024). In addition to speeding up content production, AI-based systems can also help in SEO processes such as collecting relevant keywords and important related terms (Sharma et al., 2019). It can also help with creative ideas and topic

suggestions (Ippolito et al., 2022), but it is questionable how unique these ideas are. That is why it is worth using AI-assisted content creation, when an artificial intelligence system provides assistance to content creators, even creating complete texts and images, but these are reviewed by human intervention before publication. In contrast, many people publish independent content created by artificial intelligence - this is much faster, more efficient, but it excludes the possibility of correcting errors and creativity, and thus risks creating poor-quality content (Wu et al., 2023). In many cases, systems based on various algorithms perform much more efficiently than human work, which can even be used in tourism (Fry, 2018). Artificial intelligence can surpass human operation in many tasks, both in efficiency and speed. Therefore, it is clear that we need to deal with artificial intelligence and its possible uses in online marketing and tourism marketing, but we should not rely entirely on systems. Some concerns of AI particularly in tourism marketing had been articulated by Fallah (Fallah et al., 2023).

MATERIALS AND METHODS

Our study aims to consolidate the current state-of knowledge of AI on Tourism Marketing, based on bibliometric analysis of studies published until end of 2024, similar research was published (Thakur & Kushwaha, 2024; Ezeh & Dube, 2025; Vu et al., 2025; Prerana et al., 2024). It focuses on the following research questions:

Q1. How does the landscape of artificial intelligence research in tourism and hospitality manifest in terms of influential publications, prominent scholars, leading institutions, and contributing nations? What patterns emerge in the collaborative networks of authorship and the interconnections among key research terms?

Q2. What are the primary research themes that dominate the discourse on artificial intelligence in tourism and hospitality? How can these themes be categorized into core driving forces, fundamental and cross-cutting concepts, emerging areas of interest, and niche or peripheral subjects within this field of study?

Q3. Based on current trends and developments, what are the anticipated future trajectories and promising avenues for further investigation in the domain of artificial intelligence applications in tourism and hospitality?

We used Web of Science as source and performed analysis by R (bibliometrix) and VOSViewer. Search query used: ALL = ((tourism marketing) AND ("artificial intelligence" OR "AI")) resulted in 528 elements which was refined based on review of results to ALL=(("marketing" AND "tourism*") AND ("artificial intelligence" OR "AI")) https://www.webofscience.com/wos/woscc/summary/eedc3659-be04-4275-a83a-30c086cfc0ce-01383d268d/relevance/1

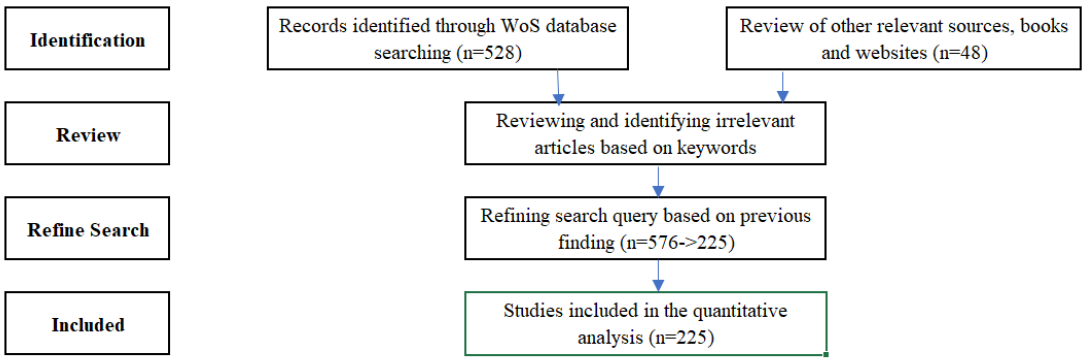

Figure 1. Process of articles selection

The earliest document on AI and Tourism marketing found in this query was published in 2001. Figure 2 shows the distribution of the publications per year between 2001-2024 period. The total result was 225 articles, most of which (176) were published in the past 5 years: 63 in 2024, 51 in 2023, 21 in 2022, 15 in 2021, 16 in 2020 and 10 in 2019. Another slight peak was in 2015.

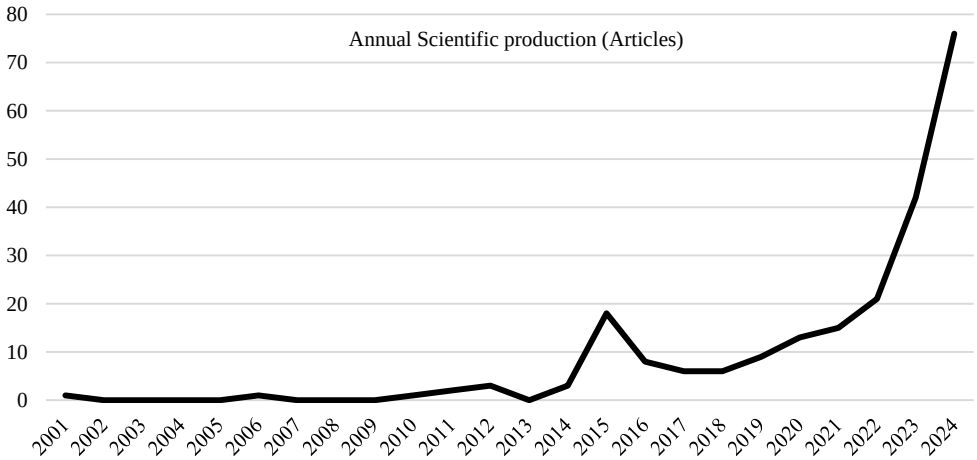

Figure 2. Quantity of annual research on AI and Tourism marketing created using R bibliometrix

Table 2 lists the journals that have been cited mostly. International Journal of Information Management has the largest number of citations, article of (Dwivedi et al., 2023) where they review opportunities and challenges of generative AI content creation. Even though it is not a tourism specific publisher, that article includes several marketing and tourism aspects. Second most cited is Journal of Hospitality and Marketing Management with multiple articles.

Table 2. List of the journals with the largest number of citations

Journal	Authors	Title	Number of citations	Year of publication
International journal of information management	Dwivedi, Kshetri and Wright	"So what if ChatGPT wrote it?" Multidisciplinary perspectives on opportunities, challenges and implications of generative conversational AI for research, practice and policy	988	2023
Journal of hospitality marketing & management	Lin, Chi, and Gursoy	Antecedents of customers' acceptance of artificially intelligent robotic device use in hospitality services	186	2020
Tourism management	Wu, Cheng and Ai	A study of experiential quality, experiential value, trust, corporate reputation, experiential satisfaction and behavioral intentions for cruise tourists: The case of Hong Kong	177	2018
Journal of hospitality marketing & management	Chi, Denton and Dogan	Artificially intelligent device use in service delivery: a systematic review, synthesis, and research agenda	149	2020
Journal of hospitality marketing & management	Prentice, Lopes and Wang	The impact of artificial intelligence and employee service quality on customer satisfaction and loyalty	133	2020
International journal of consumer studies	Paul, Ueno and Dennis	ChatGPT and consumers: Benefits, Pitfalls and Future Research Agenda	121	2023
International journal of hospitality management	Prentice, Weaven, and Wong	Linking AI quality performance and customer engagement: The moderating effect of AI preference	120	2020
Journal of tourism futures	Samala, Katkam, Rodriguez	Impact of AI and robotics in the tourism sector: a critical insight	95	2020
Journal of hospitality marketing & management	Gursoy, Li and Song	ChatGPT and the hospitality and tourism industry: an overview of current trends and future research directions	84	2023
Journal of destination marketing & management	Grundner and Neuhofer	The bright and dark sides of artificial intelligence: A futures perspective on tourist destination experiences	79	2020

A total number of 703 authors contributed to the publications and the most relevant productivity over time is shown in Figure 3. The most productive are Sara Quach and Park Thaichon, with 11 articles, all published in 2023. Ana Isabel Rodrigues, follows them with 6, with a smooth distribution over the past 12 years. Antonia Correia, Dolores M Frias-Jamilena, Francisco Peco-Torres, Catherine Prentice, Anamaria-Catalina Radu, and Hung Che Wu have 5 and Chi Han Ai has 4.

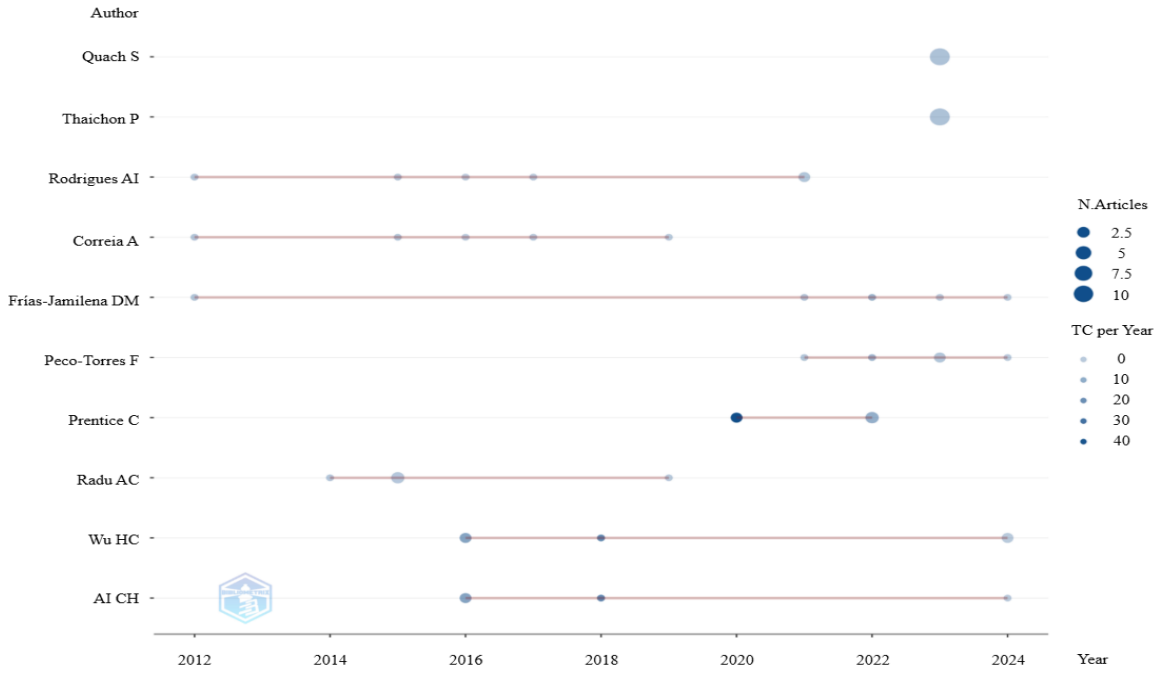

Figure 3. Top authors' productivity over time created using R bibliometrix

Figure 4 ranks the publications' related universities. Griffith University of Australia is the leader with 17 articles, second in the row Hainan University of China. Egyptian EKB is number 3 with 12 and State University of Florida has 11. The rest have less than 10.

Figure 5 a Sankey diagram depicts the flow of authors, countries and research keywords. The diagram shows the most relevant research topics for each country. Most of Australian production is co-authored by Sara Quach and Park Thaichon. Jochen Wirtz, currently dean at National University of Singapore contributed to multiple countries' production. The right side of the figure shows the connection between countries and keywords. Artificial intelligence is certainly the most studied topic in all countries. Tourism was mostly contributed by China.

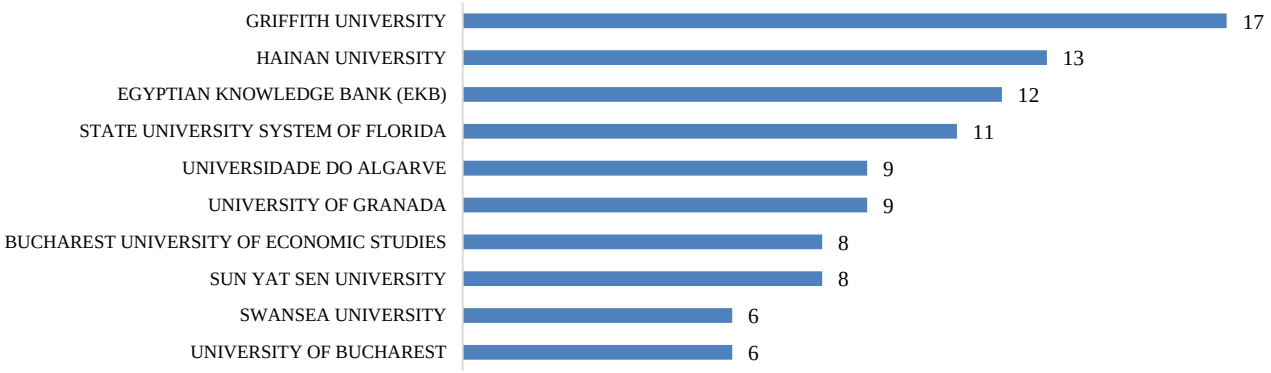

Figure 4. Most Relevant Affiliations created using R bibliometrix and MS Excel

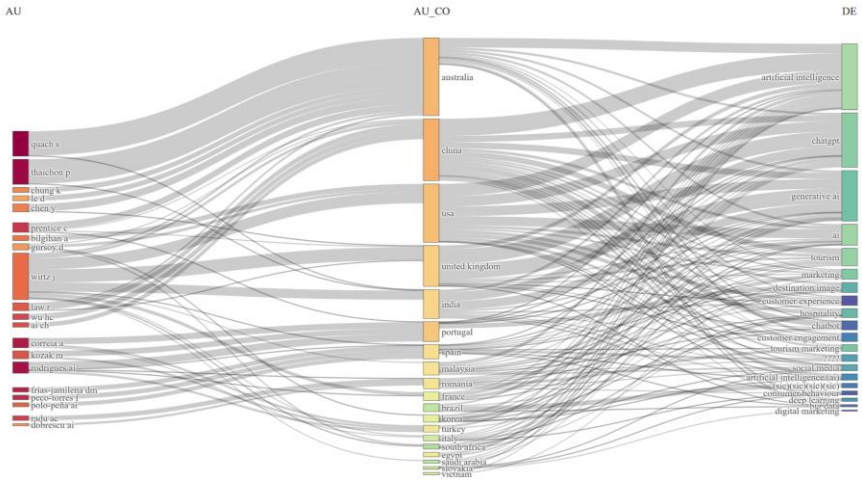

Figure 5. Three-field plot: Authors, their countries and keywords - created using R bibliometrix

In total 1179 keywords were found and 66 had at least 5 occurrences (5,5%). 928 had only 1 occurrence which is 79%. Artificial intelligence and tourism and their related versions had been removed from the network view, because they were part of the search keywords, and their high occurrence is expected. Removing them helps to illustrate the other keywords better (Figure 6.). Their numbers were: Artificial Intelligence (47), tourism (36), AI (21), artificial-intelligence (24) tourism marketing (9) and artificial intelligence (AI) (5). They form 4 clusters, have 603 links and the total link strength is 837.

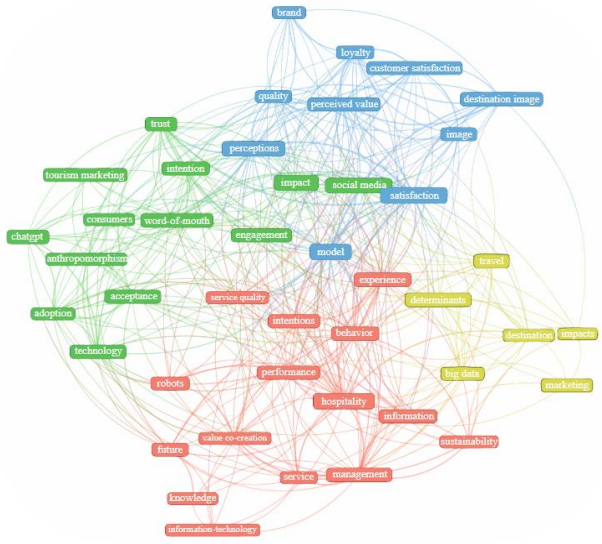

Figure 6. Keywords co-occurrence - created using VOSViewer

Beyond Artificial Intelligence and tourism, the most popular keywords were satisfaction, hospitality, model, impact, perceptions and social media as shown in Table 3.

Table 3. List of keywords with their number of occurrences

Keywords	Occurrence	Keywords	Occurrence
Satisfaction	21	Trust	12
Hospitality	21	Technology	10
Model	18	Behavior	10
Impact	17	Perceived value	9
Perceptions	15	Experience	10
Social media	15	Information	9
Management	12	Acceptance	9

In Figure 7, the countries' number of articles are shown, single or multi country distribution. China is leader, but UK which was mostly cited is only in the middle here which means the less articles were more cited.

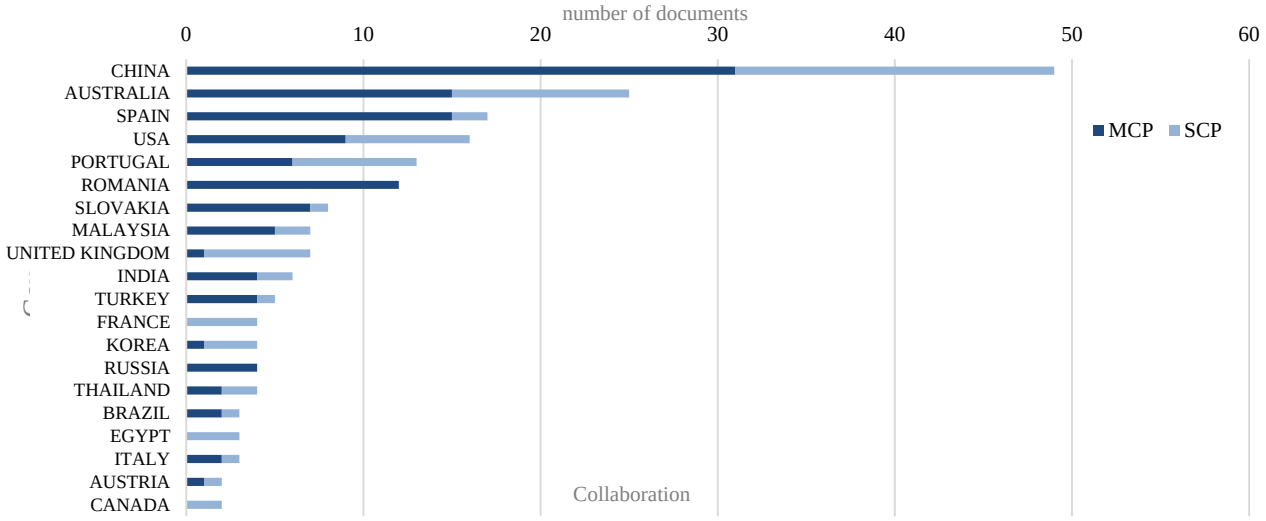

Figure 7. Corresponding author's countries, including single-country (SCP) and multi-country (MCP) publications - created using R bibliometrix

Figure 8 shows a 2 dimensional factor analysis plot, displaying various concepts and their relationships. Dim 1 (x-axis) explains 27.86% of variance and Dim 2 (y-axis) explains 13.29% of the variance. The variance here refers to the variability in the relationships between the keywords or concepts displayed in the figure. This type of analysis is derived from a correspondence analysis, which reduces high-dimensional data into two dimensions for easier visualization. The goal is to capture as much of the original data's structure and relationships as possible in these two dimensions.

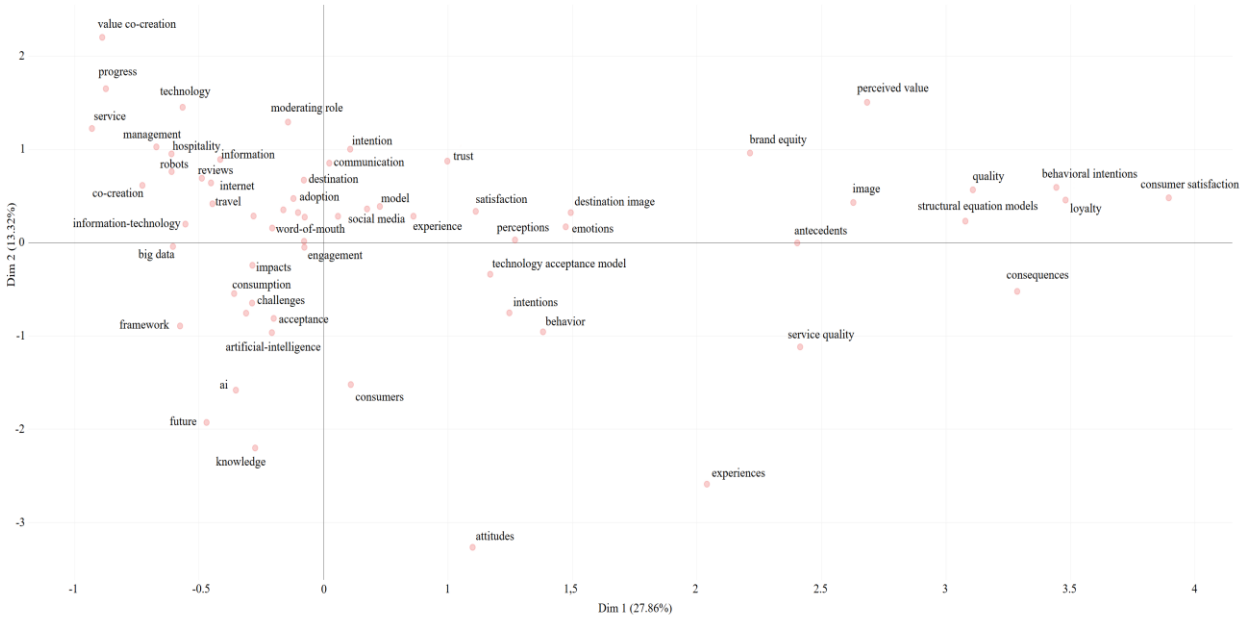

Figure 8. Factorial analysis created using R bibliometrix

The variance reflects how well these two dimensions summarize the co-occurrence patterns or thematic relationships among the keywords extracted from the research corpus. Technology and Service cluster is located in the upper left quadrant containing terms like “value co-creation”, “service”, “technology” and “robots”. Consumer behavior cluster centered in the middle of the plot includers terms like “trust”, “behavior”, “technology acceptance model”. On the Customer Experience cluster, which is located on the right features terms like “loyalty”, “customer satisfaction”, “quality”, and “perceived value”. Finally, AI and Future Technologies located in the lower left, contains “AI”, “Artificial intelligence”, “knowledge” and “big data”. The proximity of the terms suggests thematic relationships, the ones closer to each other being more related. The visualization effectively maps out the intellectual structure of what appears to be research in technology acceptance, service quality and customer experience domains.

The thematic map on Figure 9. provides additional strategic insights when analyzed alongside the factor analysis, revealing a comprehensive research landscape. The visualization is divided into four quadrants: relevance degree (x-axis, centrality) and development degree (y-axis, density). The ‘motor themes’ (upper-right) represents mature and central research topics: customer satisfaction, loyalty, tourism models, and hospitality management.

It shows a strong connection between consumer experiences, attitudes, and behaviors. ‘Basic themes’ (lower-right) contains fundamental, but not-yet fully developed concepts, like food, consumption and photography themes. ‘Niche themes’ (upper-left) shows specialized topics with high development, but lower centrality containing economic growths and United States related themes. ‘Emerging/declining themes’ (lower left) represent potential future research directions including entrepreneurship, work motivation, and self-determination theory.

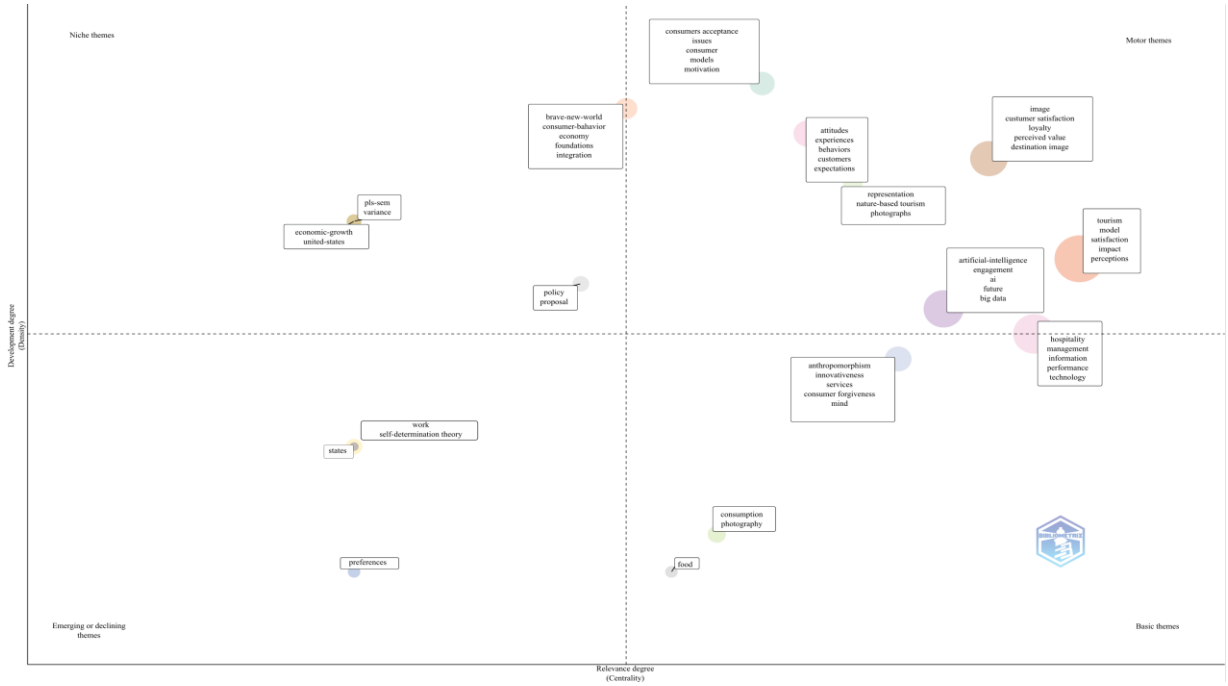

Figure 9. Thematic Map created using R bibliometrix

When comparing both visualizations they confirm the central role of customer satisfaction and loyalty in the research field. Consumer behavior and experiences are consistently shown as core research areas. Technology and AI-related concepts appear as emerging or transformative elements. Motor themes align with the right-side clusters in the factor analysis, confirming their established nature. Emerging themes in the lower-left quadrant correspond to the technology and AI clusters in the factor analysis, suggesting future directions.

RESULTS AND DISCUSSION

Findings of top cited papers

The mostly cited study provides a comprehensive overview of the opportunities, challenges, and implications of generative AI technologies like ChatGPT across various domains including education, business, and society (Dwivedi et al., 2023). Opportunities and potential benefits include Enhanced productivity and efficiency in tasks like content creation, coding, and information retrieval, improved business activities in areas like management and marketing, Augmentation of human intelligence and creativity. Concerns consists of potential for biases, misinformation, and misuse, disruption to existing practices in education and other fields, difficulty in differentiating AI-generated from human-generated content, threats to privacy and security, ethical and legal issues around authorship, plagiarism, and intellectual property. The paper concludes that while generative AI like ChatGPT offers significant opportunities, it also presents complex challenges that require further research and careful consideration as the technology continues to evolve and be adopted more widely (Dwivedi et al., 2023).

Customers' willingness and objection to using AI robotic devices in hospitality services (Lin et al., 2019) builds upon and extends the Artificially Intelligent Device Use Acceptance (AIDUA) theory. The study validates and extends the

AIDUA framework in the hospitality service setting, demonstrating its applicability in explaining customers' acceptance of AI robotic devices. Customers' intention to use AI devices is influenced by social influence, hedonic motivation, anthropomorphism, performance and effort expectancy, and emotions toward the devices. Full-service hotel customers rely less on social groups when evaluating AI robotic devices compared to limited-service hotel customers. Full-service hotel customers' emotions have less impact on their objection to AI device use.

The study found a direct relationship between customers' hedonic motivation and their positive emotions toward AI service devices, with hedonic motivation being the most critical factor encouraging AI robotic service use. The study found a direct relationship between customers' hedonic motivation and their positive emotions toward AI service devices, with hedonic motivation being the most critical factor encouraging AI robotic service use. The study concludes that customers' AI device acceptance behavior is context-dependent and suggests the need for further research as AI technology rapidly develops. Cruise tourists in Hong Kong were examined (Wu et al., 2018), focusing on experimental quality, value, satisfaction and behavioral intentions. Survey data was collected from 677 tourists.

Outcome quality and interaction quality were the most important dimensions of experiential quality. Functional value positively influenced experiential satisfaction. Experiential quality and satisfaction positively influenced trust. Trust, corporate reputation and experiential satisfaction positively influenced behavioral intentions. The study contributes to understanding how cruise tourists evaluate their experiences and what factors influence their satisfaction and future behaviors. This can help cruise companies improve their offerings and marketing approaches (Wu et al., 2018). Mispresenting quality might significantly damage trust (Hassan et al., 2024).

Systematic research on AI use in service delivery focusing on the hospitality industry summarizes 63 publications (Chi et al., 2020). AI applications in the service industry are still transitioning from basic automation to more advanced analytical capabilities. The hospitality sector is seeing increased use of AI for tasks like check-in, concierge services, and room service. Research shows mixed impacts of AI anthropomorphism on customer attitudes. Factors like the AI's behavior, functionality, and the service context influence customer acceptance. The paper discusses several frameworks for understanding AI acceptance, including the Artificially Intelligent Device Use Acceptance (AIDUA) theory. Key drivers include cost savings, addressing labor shortages, and enhancing service quality. However, there are challenges around customer and employee acceptance (Chi et al., 2020). Overall, the review highlights that AI adoption in hospitality services is still in the early stages, with significant potential for transformation but also important challenges to address.

AI's impact on loyalty was examined in Portugal (Prentice 2020a) in multiple hotels focusing on departing guests who had experienced both AI and employee services. The AI services had five dimensions: concierge robots, digital assistance, voice-activated services, travel experience enhancers, and automatic data processing. When analyzed together, AI service quality showed a negative effect on overall service quality assessment, while employee service quality (mostly empathy) made a substantially significant contribution (Prentice, 2020a). The study concludes that while AI services are important, customers still prefer and value human interaction in the hotel industry. It suggests that hotels should balance AI implementation with maintaining high-quality employee services to enhance customer satisfaction and loyalty (Prentice, 2020a).

ChatGPT's potential impact on consumer behavior and marketing was examined by J. Paul (Paul et al., 2023). Some of the benefits include improved customer experience, cost-effectiveness, improved marketing campaigns, potential pitfalls around misinformation, inaccuracies, privacy- and security concerns, and ethical considerations. The paper emphasizes the need for interdisciplinary research involving marketing scientists, statisticians, psychologists, economists, sociologists, and natural science researchers to fully explore the potential of ChatGPT in consumer studies and marketing.

The relationship between AI quality performance and customer engagement in the hotel industry was studied through affordance theory, positioning AI as a commercial service in the hotel context (Prentice et al., 2020b). AI service indicators significantly influence customers' perceptions of AI information quality and system quality. AI satisfaction (both information and system) is positively and significantly related to customer engagement. Ai preference has a significant moderation effect on the relationship between AI information quality and satisfaction, suggesting customers perceive AI primarily as an information generation tool. The study contributes to AI research by extending it into marketing and customer relationship management. (Prentice et al., 2020b) It introduces a new measure of service quality by including AI-empowered services in quality assessments. Impact of AI and robotics in the tourism sector was explored by (Samala et al., 2020). Their findings were mostly around chatbots, translations, virtual reality, simplifying travel arrangements, personalized experiences, leading to improved customer satisfaction, while saving costs for the businesses.

Augmented reality and virtual experiences can help provide a preview of the destinations. Challenges and concerns include potential reduction in human jobs and interactions, privacy and data security issues, technological limitations and malfunctions (Samala et al., 2020). Their final conclusion is that AI is expected to transform various aspects of travel planning and post-trip engagement, its implementation needs to be carefully managed to address concerns and maximize benefits for both businesses and travelers. Can machines think? Question posed by Alan Turing 70 years ago. (Grundner & Neuhofer, 2020) explore the potential impact of AI on tourist destination experiences in the year of 2025 using a futures wheel method. Their study aims to understand how AI might create or destroy value in tourism contexts.

The model outlines four main areas of AI impact, examining both positive (value co-creation) and negative outcomes (value co-destruction): (1) Interaction and co-creation, (2) Information, (3) Personalization and (4) Integration. AI can potentially understand human needs and emotions, leading to personalized experiences, however there are concerns about reduced human interactions and over-dependency on AI. While providing real-time, contextual information, there's a risk of information overload and distraction from authentic experiences. AI can tailor experiences and increase efficiency but might lead to unrealistic expectations. Finally, AI might seamlessly integrate with other technologies like VR, it could

potentially diminish the authenticity of destinations. The study suggests that tourism businesses and destinations need to find a balance in AI implementation to enhance experiences without compromising authenticity. It also highlights the need for further research on AI's impact across different stages of the tourist experience.

Future research agenda

There is a need for further research involving marketing scientists, statisticians, psychologists, economists, sociologists, and natural science researchers to fully explore the potential of AI in consumer studies and tourism marketing. Further investigation is required on how AI affects different phases of the tourist experience, from pre-trip planning to post-trip engagement. Research should focus on finding the optimal balance between AI-powered services and human touch in the hospitality industry. Studies are needed to address the ethical considerations, privacy concerns, and legal challenges associated with AI use in tourism marketing. More research is required to understand factors influencing customer acceptance and trust in AI-powered tourism services. Longitudinal studies should examine the long-term impact of AI adoption on customer satisfaction, loyalty, and overall tourism industry performance.

CONCLUSION

The integration of AI in tourism marketing presents both significant opportunities and challenges. While AI has the potential to enhance productivity, personalization, and customer experiences, it also raises concerns about privacy, authenticity, and the potential loss of human touch in tourism services. Key findings suggest that AI can significantly improve efficiency and personalization in tourism marketing and services. However, customers still value human interaction, especially in high-touch hospitality settings. Therefore, implementation of AI in tourism needs to be carefully managed to maximize benefits while addressing potential drawbacks. AI is expected to transform various aspects of travel planning and experiences, but its adoption should be balanced with maintaining authenticity and meaningful human connections. As AI technology continues to evolve rapidly, the tourism industry must adapt strategically, focusing on leveraging AI to enhance rather than replace human-centric experiences.

The future of AI in tourism marketing lies in finding the right balance between technological innovations and preserving the essence of hospitality and authentic travel experiences. The accelerating pace of evolution exceeds all previous estimations according to Prof Geffrey Hinton who was awarded Nobel Prize in physics for his work on AI (Guardian, 2024). OpenAI's O3 released in December 2024 - might be a step closer to AGI (artificial general intelligence) - is currently under testing at the moment but seems to be doing better on benchmarks which require human-line problem solving approach. These urge the continuation of the research in AI not only in tourism marketing but all fields of its application.

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