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REVISTA TURISMO y SOCIEDAD

ARTIFICIAL INTELLIGENCE IN TOURISM: SOCIAL AND ETHICAL IMPLICATIONS

INTELIGENCIA ARTIFICIAL EN EL TURISMO: IMPLICACIONES SOCIALES Y ÉTICAS

Abstract

Disruptive technologies create opportunities to enhance the tourist experience. Companies in this sector face the challenge of integrating artificial intelligence (AI) into service quality to meet tourists' expectations. This study surveys the social and ethical impacts of using AI in tourism and proposes solutions for its ethical and responsible application. It also aims to understand the limits of AI's autonomy and determine what is desirable for an intelligent system to make decisions involving trip aspects. A qualitative approach was used, with data collected through questionnaires sent to seven Brazilian tourism companies that utilize AI systems. The results indicate positive impacts of AI on internal activities and customer data collection, along with some negative impacts. The study concludes that establishing ethical standards for AI use in tourism is necessary to address privacy, equity, and responsibility in AI system development. These standards are essential to ensure responsible use of AI technologies for the benefit of businesses and tourists.

Keywords: artificial intelligence, technology, social impact, ethics, tourism

Resumen

Las tecnologías disruptivas crean oportunidades para mejorar la experiencia turística. Las empresas del sector enfrentan el reto de integrar la inteligencia artificial (IA) en la calidad del servicio para satisfacer las expectativas de los turistas. Este estudio

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examina los impactos sociales y éticos del uso de la IA en el turismo y propone soluciones para su uso ético y responsable. Asimismo, busca comprender los límites de la autonomía de la IA y determinar qué se considera adecuado para que un sistema inteligente tome decisiones relacionadas con los viajes. Se empleó un enfoque cualitativo, con datos recopilados por medio de cuestionarios enviados a siete empresas turísticas brasileñas que utilizan sistemas de IA. Los resultados muestran impactos positivos en las operaciones internas y la recopilación de datos de clientes, junto con algunos efectos negativos. El estudio concluye que es fundamental establecer normas éticas para el uso de la IA en el turismo con el fin de abordar temas de privacidad, equidad y responsabilidad. Estos estándares son necesarios para garantizar un uso responsable de las tecnologías de IA en beneficio tanto de las empresas como de los turistas.

Palabras clave: inteligencia artificial, tecnología, impacto social, ética, turismo

1. Introduction

The current tourist market should adapt to the new algorithmic era to remain competitive. There is no evolution without innovation and disruption. The adoption of disruptive technologies is a necessary step for tourist activity to continue growing. Machine learning, deep learning, virtual and augmented reality, chatbots, blockchain, 3D, drones, the internet of things (IoT), big data, open data, and beacon technology are examples of disruptive technologies that will continue to impact tourism by recreating all kinds of travel environments and new forms of leisure, as well as opportunities to improve the traveler experience through online platforms and smartphones based on customer travel choices (Más et al., 2020).

By implementing robotics, artificial intelligence (AI), and service automation (RAISA) technologies in tourism companies, it is possible to improve operational processes, reduce operational costs, create customer experiences, and increase service quality (Ivanov & Webster, 2017).

AI is a branch of computer science that aims to develop computational systems to solve problems through diversified techniques, models, and technologies. AI can solve problems of searching, reasoning, perception, planning, language processing, and more (Seshia et al., 2022; Sichman, 2021). The low cost of memory and processing, the spread of neural networks, and the large amount of data available on the internet with networks and social media have generated enthusiasm about these technological advances that provide a new paradigm (Sichman, 2021).

AI solves problems through algorithms, which consist of a finite sequence of actions that calculate and process data, capable of planning and making decisions. However, when such an innovation is introduced into the organizational processes of society, it is necessary to regulate its use (Sichman, 2021). Efforts are needed to make AI more reliable, with an approach based on verification and validation methods. In the social domain, this technological development has brought with it a myriad of risks and concerns, including bugs in AI software and cyberattacks (Seshia et al., 2022).

What are the limits of the autonomy that AI should be given? To what extent is it desirable for an intelligent system to make decisions about a travel booking? In general, technical resources have subsidized human decisions, but the insertion of AI into certain systems empowers it to make decisions in the absence of any human interaction (Sichman, 2021).

Facing the disruptive technological reality which tourism is already experiencing, the question that arises is how ethical and social issues are being addressed in the sector? Despite the growing adoption of AI in the tourism sector, with studies exploring the social and ethical impacts of this technology, particularly in terms of privacy, security, and service automation, there is still a significant gap in understanding how AI integrates with consumer expectations across different cultural and regional markets, such as Brazil. Challenges such as algorithmic discrimination, information manipulation, and the lack of transparency in automated decision-making demonstrate that merely formulating principles is not sufficient to prevent the negative impacts of AI on society (O'Neil, 2016).

Therefore, democratic societies face the challenge of balancing technological innovation with the protection of fundamental rights, ensuring that AI serves the common good without deepening inequalities or compromising individual autonomy. Kwet (2019) warns of the risks of digital neocolonialism, in which the concentration of technological power in a few dominant nations may perpetuate inequalities—a phenomenon particularly evident in Global South countries such as Brazil. These perspectives underscore the importance of a comprehensive ethical debate on AI, one that considers social and cultural contexts to foster a more equitable and inclusive technological development.

Democratic societies face the challenge of balancing technological innovation with the protection of fundamental rights, ensuring that AI serves the common good without deepening inequalities or compromising individual autonomy. Kwet (2019) warns of the risks of digital neocolonialism, where technological power concentrated in a few dominant nations may perpetuate inequalities, particularly in Global South countries like Brazil. This highlights the need for a comprehensive ethical debate on AI, considering social and cultural contexts to foster more equitable technological development. In tourism, this involves ensuring that emerging technologies are used responsibly and that their benefits are shared justly with local communities.

Most studies have focused on developed regions, while the impact of AI in emerging markets like Brazil, particularly regarding service personalization and ethical responsibility, remains underexplored.

This research seeks to fill this gap by investigating in greater detail how Brazilian tourism companies are utilizing AI and what the specific ethical and social implications are in this context. This study aims to provide an overview of the social and ethical implications of the use of AI in tourism, as well as solutions for its ethical and responsible use.

The article is organized into five parts: 1) The *introduction* contextualizes the topic of the study by providing an overview of the ethics and social impacts of AI technology in tourism. 2) The *literature review* examines the relevant literature on the ethics and discussions related to technology, with a focus on access to information and AI applications in

tourism. 3) The *methodology* describes the methods used in the research, including the data collection and analysis procedures. 4) The *findings and discussions* present the results of the research and discusses the ethical and social implications of the use of AI in tourism. This section also proposes recommendations for the ethical and responsible promotion of AI in tourism. 5) The *conclusions* summarize the study's outcomes, including limitations and suggestions for future research.

2. Literature Review

2.1 Ethics, Technology and AI

Ethics is the study of moral behavior in social environments. It takes moral diversity as a starting point, as well as values, principles, and norms. Morals and ethics are manifested in everyday practices, and as society changes, they change with it (Souza et al., 2018).

Everyone who travels leaves a digital footprint in the form of raw data that provides valuable information about their consumption patterns. If all behaviors while traveling were analyzed, the internet would open a vast source of knowledge to understand, measure, and predict the dynamics of tourism activity (Más et al., 2020). Indeed, the internet has changed the way people plan, act, consume, and spend their money by allowing travelers' needs and behaviors to be tracked and measured (Santos & Inácio, 2018).

Information and communication technologies (ICTs) offer increasingly effective solutions, but they can also create new challenges, ethical and social issues that are difficult to resolve, such as privacy. Due to the increase in economic and social complexity and the lack of trust in commercial and public relations in society, social responsibility must be assumed with greater awareness, as it can create a social-ethical issue by the increasing violation of privacy. It is no coincidence that protection laws were created after the diffusion of ICTs, although concerns about privacy predate ICTs, it is their large-scale diffusion that has given rise to the issue of privacy protection (Maggiolini, 2014).

The uncertainties and impacts associated with the creation and use of AI technologies and data are unavoidable for their creators, regulators, and users (Munn, 2023). Their practical outcomes cannot be fully predicted. However, ethical positioning on the development of digital technologies and awareness of the implications of their use should be prioritized (Munn, 2023; Perino et al., 2022). This must guide the actions of scientists, service providers, industry, engineers and public managers in the responsible creation and operation of technologies. It will also raise awareness among internet users and content consumers of the implications of their use, leading to a more conscious use of digital technologies (Collins et al., 2023; Holanda et al., 2018).

The potential of technology and its growing spread can promote human well-being, accelerate development, and address important issues such as contributing to humanitarian aid, screening of refugees, and facilitating access to the appropriate support they need (Al-Saqaf & Seidler, 2017; Collins et al., 2023). However, technology can also be used in harmful and inhumane ways, physically, intellectually, and emotionally (Górniak-Kocikowska, 2007).

Ethical AI is committed to preventing manipulation, avoiding biased decisions, and the generation of false content (Generalitat Valenciana, 2019). Therefore, technological development must follow an ethical commitment, considering all dimensions and implications of new technologies, such as the impact on individuals, social consequences, and the unpredictability of their overall impact (Manya & Kizito, 2023; Stahl et al., 2017).

It is necessary to understand the following issues about AI adoption in tourism, such as the types and amounts of data that the technology will acquire and generate (Santos et al., 2024); who has access to the data and what inferences can be drawn from it; the extent to which the technology monitors and controls behavior, attitude, emotion, thought, mood, action, and decision, and whether these decisions are based on ethics; how this technology may affect people's daily lives and how it may enhance human independence; how the technology obtains informed consent when necessary; how events that occur in the virtual world can negatively affect the real world (Stahl et al., 2017).

Given this context, ethical tourism faces significant challenges due to the complexity of the tourism industry, requiring the responsible use of technology. The absence of a specific code of ethics may lead to negative impacts on both tourists and stakeholders, highlighting the need for clear guidelines to ensure that technological innovations are applied in ways that minimize such effects. Gretzel (2021) emphasizes the importance of integrating ethical values into the development of smart tourism, ensuring that all actors involved adopt a mindset guided by sustainable principles. She further warns that a lack of focus on these values may result in fragmented and short-term initiatives without transformative impact. To prevent this, it is essential for stakeholders to define and clearly communicate the values that should guide smart tourism, fostering an innovative tourism future that is also ethical, equitable, and responsible.

Therefore, it is essential to examine how technology reshapes human capabilities in task execution, influences the manner in which tasks are performed, and impacts users' self-perception and their interactions with others. As Tsvyk and Tsvyk (2022) have noted, it is imperative to comprehend the vulnerabilities engendered by technology and to develop methodologies for their management and protection, in addition to the application of existing security solutions to AI technologies. Moreover, it is imperative to comprehend the broader societal ramifications of technology, particularly its impact on social participation and the potential repercussions of its pervasive adoption on marginalized groups. This understanding is fundamental to ensuring its responsible and equitable integration.

2.2 The Social Impact of Technology

Science and technology have been responsible for the construction of the information society. In this society, information is highly specialized and fast, and access to it is dynamic and instantaneous (Andrade, 2007). The process of technological insertion generates changes in cities and transforms space through information networks that connect different sectors. However, this process is not always available to the whole of society, which can lead to inequalities in economic and social growth (Deep, 2023).

A society's ability to understand technology, incorporate its transformations, and decide on its technological potential changes it at an accelerated pace and determines its history and social destiny (Albuquerque & Albuquerque, 2023). However, these changes do not occur equally, uniformly, or instantaneously everywhere, but rather through a time-consuming process (Castells, 1999).

The changes brought about by technological progress can be categorized as a contemporary revolution in the rise of digitalization and information in the development of society (Albuquerque & Albuquerque, 2023). Over time, information has gone from local to global, reconfiguring time and space and shortening distances. This has made possible a new way of socializing where physical presence is no longer necessary to relate, with the possibility of interacting with whomever you want, whenever you want, and participating in society through a virtual environment (Kohn & Moraes, 2007).

Advances in technology have made it possible to access data and information from anywhere at any time, eliminating the need to travel to solve various problems in daily life (Geraldo & Mainardes, 2017; Gouvêa et al., 2013). This demonstrates the positive social impact of technology in solving mobility problems. Consequently, the proper use of technology in cities can be a major step towards their development, giving the population more time to invest in what really matters: their quality of life (Santos & Inácio, 2018).

The use of technology can make some jobs obsolete, but it also has the potential to create new ones. As traditional jobs disappear over time, new ones will emerge to take their place (Aly, 2022). However, some jobs cannot be completely replaced by robots or machines because they require human skills such as flexibility, judgment, hospitality, and common sense (Lloyd & Payne, 2023).

The rise of digitalization has brought many challenges to employment, from the replacement of human labor by machines to the income inequalities that these processes create (Trang, 2023). In addition, the technical knowledge and skills required by the workforce are constantly evolving, creating further challenges for workers (Más et al., 2020).

As new jobs emerge, countries will need to learn how to combine human intelligence with technological and artificial intelligence, so that they can coexist in a symbiotic relationship (Aly, 2022). The evolution of knowledge in society has been shaped by technological advances, with the tools used to define, shape, and influence its evolutionary process (Kohn & Moraes, 2007).

Technological transformations raise several ethical and social issues that need to be addressed in the following areas: individual behavior, privacy, autonomy, identity, security, social behavior, exclusion; inappropriate surveillance, cultural dynamics, human-machine interaction; and in knowledge, intellectual property, distortion of reality, fake news, and augmented reality (Stahl et al., 2017). Social, cultural, and economic habits, as well as the tourism sector, have been profoundly transformed by the knowledge society.

2.3 Artificial Intelligence and its Applications in Tourism

The starting point of AI is generally traced back to the 1956 Dartmouth College conference, which is considered the computer founding event (Wang & Zhou, 2023). Since then, AI has gone through periods of high investment and excitement, as well as periods of scarcity and lack of funding, known as AI winters. The two most notable AI winters occurred in the mid-1970s and late 1980s (Sichman, 2021).

Recent years have seen a significant acceleration in the development of AI, thanks to computational advances such as the increased speed and capacity of microprocessors (Pichler, 2016), machine learning by testing outputs and accumulating information, deep learning or electronic neural networks that simulate brain connections, and artificial vision or the ability to process images and speech recognition (Ferràs et al., 2020).

Artificial intelligence (AI) is based on self-learning capabilities that evolve over time. Its machines are based on technology with higher levels of productivity and output creation, with the potential to drive growth in significant ways, such as the creation of new (virtual) workforces at reduced costs (Gowda et al., 2023). AI also acts as a complementary and enabling tool to existing human capital, supporting innovative and technological advances (Aly, 2022).

In the tourism sector, the potentialization of labor does not mean replacing workers with RAISA (Robotics, Artificial Intelligence, and Service Automation), as the current state of technology does not allow robots or chatbots to perform complex tasks independently (Ivanov & Webster, 2017). Rather, RAISA are technological tools and extensions of human capital that can be used to increase productivity and serve more customers through the current workforce (Kumar et al., 2023).

Another perspective of the evolution of the tourism sector is the rise of technological platforms such as online travel agencies (OTAs), which allow any tourist to plan, compare prices, and book in a simple, objective, and interactive way (Silva et al., 2019). Through AI, these platforms gain deep knowledge of the market and tourists' needs through algorithms that learn and feedback data to predict, recommend, and optimize revenue. They also create value through user-generated content from the information and opinions of millions of travelers (Más et al., 2020). It is important to note, however, that algorithms can generate restrictions on information related to other services or destinations that do not fit a particular profile.

Big data and AI bring new perspectives to smart tourism by enabling the processing of large amounts of data generated by tourists (Tang, 2023). This can be used to enhance the tourist experience by providing personalized recommendations and services, and to better understand tourist behavior by identifying trends and patterns (Li et al., 2018). AI can recognize external information, ingest it, make decisions, and learn from its own experience. This makes it a powerful tool for smart tourism, as it can be used to automate tasks, make predictions, and improve decision-making (Ferràs et al., 2020).

The application of AI in tourism supports a better understanding of traveler trends, by collecting information in real time through Big Data and Open Data. This is one of the specialties of smart tourism destinations, where destination managers must use and manage the information obtained through technological resources to promote the offer of competitive and quality services (Tang, 2023). Therefore, smart tourism must be based on an information system for data collection, processing, and analysis (Arévalo et al., 2022).

Smart tourism should improve the infrastructure and connectivity of cities to make them accessible, permeated by technology, efficient, and monitored in real time to gather useful information that is the basis for the development of organizations and innovative projects (Arévalo et al., 2022). Silva et al. (2019) also highlight that smart tourism provides practical insights for stakeholders involved in the co-creation of value, such as urban planning authorities, destination management organizations (DMOs), travel agencies, hospitality, leisure, and cultural heritage organizations.

In this sense, AI has the potential to improve the performance of smart tourism by facilitating the interaction and integration of visitors with the environment through the destination's technology during their stay, creating valuable tourist experiences (Aliyah et al., 2023). A successful case of AI integration in tourism is the island of Lanzarote, part of the Canary Islands, which is home to a pioneer in the introduction of AI in the tourism experience. The CACT Lanzarote app is an interactive virtual assistant that answers users' questions in a natural voice through a cognitive system capable of adapting to each user's preferences to increase their satisfaction (Ferràs et al., 2020).

The more it is used, the better the level of interaction with the system, which allows the AI algorithm to feed more data and provide tourists with accurate information based on their location and preferences (Liu et al., 2023). The digital assistant allows visitors to Lanzarote to plan their stay, set up a schedule and get answers to their most immediate questions. This type of technology transforms and personalizes the tourist experience, enhancing it by creating differentiated services and strengthening the destination brand, turning the island of Lanzarote into an intelligent and tourist-friendly island (Ferràs et al., 2020).

Another application of AI in tourism is in Nouvelle-Aquitaine, France, where the tourism promotion organization uses AirDNA to generate monthly reports on private sector tourism traffic. These reports help compare the evolution of supply and occupancy across the region, compare regional tourism performance, track tourism capacity in the region, measure and evaluate tourism promotion campaigns, and manage tourism in the region (Invat·Tur, 2020).

AirDNA's system collects booking data from rental websites such as Airbnb and Vrbo, specifically information about current room rates, cancellation policies, and booking wait times. AirDNA aggregates and processes extensive data on more than 10 million properties in over 120,000 international destinations by scraping data from many servers (Invat·Tur, 2020).

Thus, AI systems have several applications in tourism (see Table 1). From a consumer perspective, AI can help tourists find better and more relevant information, improve their

decision-making process, and ultimately provide a better tourism experience (Gretzel, 2011; Tussyadiah & Miller, 2019). From a business perspective, AI can be used in destination management as a strategic tool to promote tourism destinations (Diantoro et al., 2023).

Table 1. Uses and applications of AI in tourism

Application Area	*AI Use*	*Benefits*
Service Automation (RAISA)	Technological tools that extend human capital without replacing workers.	Increased productivity and improved customer service without the need to reduce staff.
Customer Service	Use of chatbots and virtual assistants (e.g., CACT Lanzarote).	Fast and personalized responses, enhancing the tourist experience.
Travel Platforms (OTAs)	Recommendation algorithms and user preference analysis.	Personalized offers, price optimization, and greater convenience for travelers.
Big Data and Smart Tourism	Real-time data collection and analysis (e.g., Smart Tourist Destinations – DTI).	Better understanding of tourist behavior and service optimization.
Infrastructure and Connectivity	Real-time monitoring and efficiency of tourism activities.	Improved accessibility, urban planning, and innovation in the sector.
Destination Management	AI-driven data analysis (e.g., AirDNA in France).	Tourist flow monitoring, campaign evaluation, and efficient service supply management.
Value Co-Creation in Tourism	AI applications to facilitate interaction among stakeholders.	Enhanced collaboration between tourists, residents, governments, and businesses, promoting sustainable development.

Note. Own construction (2025).

3. Methodology

This study was designed using a qualitative research paradigm, which allowed us to develop rich descriptions from the perspectives of authors through books and papers on technology and tourism. These descriptions served as the basis for a survey on the ethics, social impact, and application of AI in the tourism sector.

After carrying out the research construction, a questionnaire with 16 questions was created, which was designed to complement the theoretical part with the experiences of professionals who work with AI. This was done to compare the data with its applicability and use in tourism. The questionnaire is a data collection technique in which the researcher wants to know what the interviewees think, represent, and explain about the object of study (Severino, 2013).

A pretest was conducted in early February 2023 with AI technology experts from the retail and financial sectors. The purpose of the pretest was to validate the effectiveness of the questions by ensuring that they were accessible to respondents and that they would provide

accurate and precise data. The results of the pretest were used to revise the questionnaire before it was administered to the full sample (Marconi & Lakatos, 2003).

The final questionnaire was developed using the Google Forms platform and is divided into two parts. The first part characterizes the profile of the respondent with nine questions, and the second part contains seven questions, mostly subjective (open-ended), regarding the use and impact of AI in tourism and its responsible and ethical application in the sector. Table 2 shows the set of questions aligned to the categories of the questionnaire, to pursue objective research.

Table 2. Questionnaire categories and questions

Categories	*Questions*
The use of AI in the field of tourism and travel	What do you think about the use of artificial intelligence in tourism? What are the social issues associated with the use of artificial intelligence in tourism? How do you see the impact of artificial intelligence on the development of tourism?
Implications of AI for the privacy and security of travelers	What is your view on the impact of artificial intelligence on travelers' privacy and security?
Responsible and ethical AI use in tourism	How can artificial intelligence be used responsibly and ethically in tourism? How do you see the responsibilities of technology developers and tourism professionals in the use of artificial intelligence in tourism? What solutions would you propose to promote the ethical and responsible use of artificial intelligence in tourism?

Note. Own construction (2023).

Brazilian tourism companies that use AI systems and disclose them on their website or social media (Instagram, Facebook, LinkedIn) were selected to answer the questionnaire. The sampling criteria for selecting these companies were based on the following factors: 1) the use of AI systems in their operations; 2) the public disclosure of their AI applications via their official website or social media platforms; and 3) their willingness to participate in academic research. Companies that met these criteria were contacted through phone or social media, after which the questionnaire was sent to the email addresses provided. The research purpose was clearly explained to ensure the academic intent of the study and to guarantee the confidentiality of the data.

Fifteen questionnaires were sent out and seven responses were received. A qualitative, interpretative, and descriptive analysis of the data was carried out. The analysis was supported by bibliographic research to communicate the problems and solutions for the use of AI in tourism in an ethical and socially responsible way.

It is important to note that the questionnaire did not ask for any personally identifiable information (PII) about the company or the respondent, such as mailing address, phone number, name, or other personal information. Respondent anonymity was maintained in the reporting of results to ensure the confidentiality of the data. Therefore, fictitious names were used from Expert 1 (E1) to Expert 7 (E7).

Final data collection took place from February to March 2023, within approximately 30 days. After this step, the seven collected responses were analyzed according to Bardin's technique for content analysis (Bardin, 2016). This technique is structured around three chronological pillars: 1) Pre-analysis: This step aims to systematize and operationalize the initial information and generate an analysis plan. 2) Material exploration through coding: This step transforms the raw data into units that allow a precise description of the content characteristics. 3) Results processing, inference, and interpretation: This step involves processing the results, drawing inferences, and interpreting the findings.

The methodological path outlined highlights the importance of the literature review, and the qualitative analysis of the questionnaires to obtain a synthesis of the main social and ethical impacts that characterize the use of AI in tourism.

4. Findings and Discussions

The application of AI in tourism can have social and ethical implications, depending on the quality and processing of data, as well as programming errors. The use of AI systems in many sectors of the economy raises concerns about their potential negative impacts, while also stimulating the search for ethical and responsible uses of AI. This study focuses on the latter, particularly in the field of tourism.

The following sections present the perceptions of the Brazilian professional respondents on ethical and social issues related to the use of AI. The respondents are between 26 and 45 years old, all have a university degree, and five of them have a postgraduate degree. They work in the private sector, and between five and ten years of experience in their current position (see Table 3).

Table 3. Respondent profile

Identification	*Position*
R1	Local Development Manager
R2	User Experience Manager
R3	Technical Lead
R4	Digital Product Analyst
R5	Product Development Lead
R6	UX Coordinator
R7	Software Engineer

Note. Own construction (2023).

Before the questions about AI in tourism, respondents were asked how AI is used in the company where they work. This was done to understand how AI is used in the daily practices of companies in the tourism sector (see Table 4).

Table 4. Use of AI in the enterprise

Identification	*Answers*
R1	"A collection of algorithms for the identification of patterns of behavior"
R2	"Demand-driven price optimization; analysis of booking data; analysis of customer data; analysis of social media interactions and online surveys"
R3	"Enhance application decision making, with artificial intelligence from a broad range of data"
R4	"Improve efficiency, personalization, and customer satisfaction. Predict prices to offer customers the best deals".
R5	"Creating Custom Itineraries"
R6	"In the areas of marketing, customer service and process optimization"
R7	"Communication channels, security, fraud prevention, privacy and marketplace"

Note. Own construction (2023).

The responses of the interviewees indicate the positive impact of AI in the development of internal activities, and in the collection of data in the search for greater customer assertiveness (Ivanov & Webster, 2017). This is because the interviewees explicitly mention the terms "personalization," "experience," "service," and "efficiency," which characterize the optimization analysis for decision-making. As a result, price maximization in the tourism sector becomes a possibility and an incentive for service providers (Moreno-Izquierdo et al., 2018).

Table 4 highlights a wide range of AI applications across tourism companies. This diversity of responses indicates that AI is not a one-size-fits-all solution, but rather a versatile tool that can be adapted to meet the specific needs of each organization within the sector. The analysis of each response reveals the multifaceted role of AI and its potential to enhance various aspects of business operations.

According to R1, the use of AI to identify behavioral patterns can be observed primarily in companies that deal with large volumes of consumer data. In this case, AI allows for an understanding of customer behaviors, which can be used to improve the personalization of the services offered. Organizations focused on marketing and sales can use this data to adjust their strategies in real-time.

When analyzing R2's response, dynamic price optimization is one of the uses of AI in tourism. Based on booking data, customer behavior, and social media interactions, companies can adjust their prices to maximize revenue while offering personalized deals

to customers. This application is relevant in hospitality businesses, airlines, and online booking platforms, where pricing is a critical factor for competitiveness.

R5's example, in creating personalized itineraries through AI, demonstrates the flexibility of the technology to meet specific customer demands. Travel agencies can use AI to recommend travel packages based on individual preferences, booking history, and even social media interactions. This reflects a growing trend of offering increasingly personalized and unique travel experiences to consumers.

AI is being applied in communication channels, security, and fraud prevention, ensuring the protection of customer data and the integrity of transactions. Overall, the diversity of AI applications in the tourism sector highlights how the technology is being shaped to meet the needs of different organizations, becoming a tool to enhance various operations. Recognizing the diverse use of AI is essential to understanding its potential impact and its role in tourism.

The diversity of responses in Table 4 reveals that tourism companies are exploring AI in a multifaceted way to improve different aspects of their operations. Technology has the potential to transform the sector, from service personalization to price optimization and operational efficiency. However, it is also clear that the adoption of AI depends on the type of service offered by the company, its size, and its strategic objectives.

The following section presents the research findings, which are divided into two topics: ethical and social implications of using AI in tourism, and solutions for using AI in tourism.

4.1 Social and Ethical Implications of AI in Tourism

When asked about the negative social impacts of using artificial intelligence (AI) in tourism, most respondents (five out of seven) cited unemployment (Abuselidze & Mamaladze, 2021; Ping & Ying, 2018), social inequality (Xavier & Sbizera, 2022), and disruption of the human experience. They also cited and contextualized the following impacts:

> Privacy and security: AI relies on access to large amounts of personal customer data, such as browsing history, purchases, and location. This can raise concerns about privacy and cybersecurity (R5).
>
> Technology dependency: Over-reliance on AI can lead to a lack of human skills and knowledge, which can be detrimental in the event of technical failures or other problems (R6).

The respondents' concerns highlight key social and ethical challenges of AI in tourism, particularly regarding unemployment, social inequality, and the disruption of human experiences. AI's potential to displace jobs (Abuselidze & Mamaladze, 2021; Ping & Ying, 2018) and exacerbate socioeconomic disparities (Xavier & Sbizera, 2022) raises critical questions about its responsible implementation. Additionally, AI-driven tourism services rely on extensive personal data collection, which enhances personalization but also presents significant privacy and cybersecurity risks (R5). Without clear regulations, such practices may undermine consumer trust and raise ethical concerns related to consent and surveillance. The sector's increasing dependence on AI further intensifies these challenges, as

excessive automation can weaken essential human skills, such as problem-solving and interpersonal communication, while also making tourism operations vulnerable to system failures and cyberattacks (R6).

To address these issues, tourism stakeholders must adopt a responsible and ethical approach to AI, prioritizing transparency, data security, and workforce adaptation. Ethical AI governance should aim to mitigate job displacement while preserving meaningful human interactions in travel experiences. Maintaining human oversight in AI-driven tourism is crucial to ensuring adaptability and resilience in the sector. By fostering socially sustainable AI implementation, technological advancements can be harnessed without compromising fundamental rights or exacerbating existing inequalities.

4.1.1 Protection of Traveler Information and Privacy

The use of AI in tourism involves processing large amounts of data, including travelers' personal information. It is important to ensure that this data is handled appropriately to protect travelers' privacy and prevent potential misuse. The threat to privacy posed by AI systems is significant because of their ability to derive patterns and information from data.

This has been highlighted by researchers such as Gretzel (2011) and Tussyadiah and Miller (2019), who have found that AI systems can be used to track travelers' movements, predict their behavior, and even identify their emotional state. These concerns are reflected in the following comments from respondents when asked about the impact of AI on travelers' privacy and security (see Table 5).

Table 5. Impact of AI on travelers' privacy and security

Identification	*Comments*
R2	Artificial intelligence (AI) can have a significant impact on the privacy and security of travelers, both positive and negative. On the one hand, AI can be used to collect and analyze large amounts of data about travelers, including their navigation history, travel preferences, shopping behavior, location, and other information. This data can be used to improve the traveler experience by providing personalized recommendations, predicting travel needs, and preventing fraud. However, if used inappropriately, this data can also lead to privacy breaches and risks to traveler safety.
R4	It is essential that tourism companies use AI responsibly and ethically and protect the privacy and security of travelers. This means collecting and using data only for legitimate purposes, ensuring that data is stored securely, and giving travelers control over their data. Companies should also take steps to prevent fraud and misuse of personal data, such as using AI to detect and flag suspicious activity.
R6	Overall, the impact of AI on traveler privacy and security is multifaceted and depends on how it is used. When used responsibly, AI can enhance the traveler's experience and help keep travelers safe. However, when used irresponsibly, AI can pose a serious risk to the privacy and security of travelers.
R7	The use of artificial intelligence (AI) can help organizations detect and prevent fraud or suspicious activity. It can also monitor the safety of travelers by analyzing their personal data, travel history, and even location.

Note. Own construction (2023).

Although personal information shared on location-based social media can enhance the traveler's experience and drive decision making, privacy concerns may prevent users from sharing their location data (Beinat, 2001; Narayanan & Shmatikov, 2009; Vu et al., 2019). "However, it is important to note that AI systems can be used to detect suspicious behavior or risky activities, such as credit card fraud. This can help prevent crime and protect travelers, even when location data is anonymized" (R4).

Cybersecurity is a critical concern when using disruptive technologies. Security breaches can occur through unauthorized access to private data, or the violation of privacy through deep analysis of publicly available data. These issues should be given special attention (Vu et al., 2018), as highlighted by the respondent below:

> It is critical that new technologies are built on an ethical foundation to ensure the safety of travelers and enhance the visitor experience. Existing privacy and security regulations in the tourism sector must be followed and updated as technology evolves (R5).

Artificial intelligence (AI) can exacerbate social and digital inequalities by favoring certain groups over others. For example, recommendation algorithms that are based on historical data can perpetuate discriminatory patterns of behavior because they are trained on data that reflects existing inequalities.

This means that they may continue to recommend products or services to certain groups of people over others, even if those groups are not actually more likely to be interested in those products or services. AI can negatively impact the opportunities available to some groups and contribute to the spread of stereotypes and discrimination (Kim, 2017; Xavier & Sbizera, 2022).

> One respondent also highlighted the issue of the digital divide, noting that AI requires access to data and technology to function effectively. This can lead to disparities between tourism destinations that have access to advanced AI technologies and those that do not (R6).

The respondents demonstrate a strong awareness of AI's role in enhancing tourism services and operational efficiency. However, their discussion of privacy and security concerns remains superficial and generalized, focusing on broad principles rather than addressing specific risks or ethical dilemmas. While they acknowledge the dual nature of AI —its ability to both improve and threaten traveler security (R2, R6)— their responses lack depth in discussing how these risks manifest in real-world tourism contexts.

Research has shown that AI's capacity to analyze vast amounts of personal data enables behavioral tracking, emotion recognition, and predictive modeling, raising serious ethical concerns (Gretzel, 2011; Tussyadiah & Miller, 2019). Yet, none of the respondents elaborate on the potential for surveillance, algorithmic bias, or opaque data practices, which are well-documented risks in AI ethics literature (Kim, 2017; Xavier & Sbizera, 2022).

Moreover, while some respondents emphasize the need for responsible AI use and regulatory compliance (R4, R5), their comments reflect an implicit trust in companies' ability to self-regulate, without critically questioning the adequacy of existing policies or enforcement

mechanisms. The digital divide (R6) and algorithmic discrimination are briefly mentioned, but the discussion does not explore how AI-driven tourism platforms might reinforce socioeconomic inequalities or prioritize profit-driven personalization over consumer rights.

This gap between AI optimism and ethical scrutiny suggests that while tourism professionals value AI's potential, there is a lack of deeper engagement with its ethical complexities, reinforcing the need for stronger industry-wide ethical guidelines and transparency measures.

4.1.2 Unemployment

The automation of tasks could lead to job displacement in sectors such as tourism, as AI can automate tasks previously performed by humans. This is because process innovation leads to drastic changes in the way work, markets, and business management are conducted (Abuselidze & Mamaladze, 2021; Ping & Ying, 2018). The respondents also perceive that unemployment is a growing social impact of the use of AI in any field.

> The use of AI in tourism also raises challenges and concerns, such as the privacy and security of travelers' data, the potential negative impact on employability, and the need for appropriate regulation (R2).

The respondents acknowledge AI's potential to increase unemployment in tourism, aligning with studies that highlight automation-driven labor displacement (Abuselidze & Mamaladze, 2021; Ping & Ying, 2018). However, their comments remain generalized and lack a deeper examination of how AI might reshape employment structures in the sector. While concerns about privacy, security, and regulation are briefly mentioned (R2), there is little discussion on how AI could redefine job roles rather than merely eliminate them.

Research suggests that AI in tourism could lead to job polarization, where low-skilled jobs are replaced by automation while high-skilled positions requiring AI expertise become more valuable (Xavier & Sbizera, 2022). The absence of such considerations in the respondents' statements indicates a limited perspective on AI's long-term socio-economic implications, particularly about reskilling and workforce adaptation.

Additionally, the concern that AI could disrupt the human experience by replacing direct interactions with automated systems is valid, yet it is framed in a way that overlooks potential hybrid solutions that integrate AI without diminishing authentic engagement. Ethical AI implementation should focus on augmenting, rather than replacing, human interactions, allowing travelers to retain agency in their experiences. The respondents highlight that AI should remain human-centered, but they do not critically assess whether current AI-driven tourism applications truly uphold these principles.

Studies on AI ethics emphasize the risk of algorithmic manipulation, loss of autonomy, and commercial bias in AI systems, which could shape traveler behavior in ways that prioritize business interests over meaningful experiences (Gretzel, 2011; Kim, 2017). This lack of critical engagement with AI's ethical dimensions suggests that while tourism professionals recognize AI's transformative power, there is still a need for deeper reflection on its structural and ethical consequences.

4.1.3 Disrupt the Human Experience

Overuse of artificial intelligence (AI) can interfere with travelers' ability to have meaningful and authentic experiences. This is because AI can become the primary interface between travelers and destinations. As a result, travelers may be less likely to interact with the people and places that make these destinations distinctive.

AI systems should be human-centered. They should enable human choice and autonomy, and should not subordinate, coerce, deceive, manipulate, or direct humans. Instead, AI systems should augment and complement human cognitive, social, and cultural capacities so that people can make their own choices and experiences.

4.1.4 Data Monopoly

Companies and organizations that possess large amounts of data about travelers can gain a competitive advantage by creating a data monopoly in the travel industry. By not sharing data with other players and improving their own services, technology companies also create a new type of barrier to entry for other players and potential competitors. These competitors will be ignored by consumers in favor of personalized services based on exclusive data and technology (Miranda & Cañada, 2018).

The respondents recognize the increasing role of AI in shaping competition within the tourism industry but fail to critically address the broader implications of data monopolies on market dynamics and consumer choice. While they acknowledge that companies accumulating vast amounts of traveler data gain a competitive advantage, their responses do not explore the ethical and regulatory challenges associated with data concentration. Scholars argue that data monopolies create entry barriers for smaller businesses, reducing market diversity and reinforcing the dominance of a few technology-driven corporations (Miranda & Cañada, 2018). This not only limits innovation but also raises concerns about consumer autonomy, as travelers are funneled into AI-curated experiences designed by companies with exclusive access to user data. Despite these critical implications, the respondents' reflections remain focused on operational benefits rather than considering the risks of an unequal digital ecosystem in tourism.

Furthermore, the ethical implications of data monopolies extend beyond competition to issues of privacy, consent, and algorithmic bias, yet these aspects remain largely unaddressed in the respondents' perspectives. When dominant players control vast amounts of personal data, concerns arise regarding data misuse, lack of transparency in AI-driven recommendations, and the reinforcement of discriminatory practices through biased algorithms (Kim, 2017; Xavier & Sbizera, 2022). Without clear mechanisms for data-sharing regulations and ethical AI governance, the tourism industry risks deepening existing inequalities, where smaller destinations and businesses struggle to compete against AI-driven personalization controlled by a few corporations. The respondents' lack of critical engagement with these broader consequences suggests a gap in understanding, as AI-driven data monopolies may not only shape market competition but also redefine power structures within the tourism industry.

4.1.5 AI x Tourism Development

Artificial intelligence (AI) systems are highly dependent on advanced technology and data. Any failure or vulnerability in the systems can cause significant disruptions in the operation of the tourism sector. In this context, the role of the technology developers is extremely important, as they are responsible for:

> Ensure that their AI solutions in tourism are safe, fair, transparent, and respect user privacy (R1).
>
> Companies must be willing to take responsibility for the impact of their AI solutions, and work to fix problems (R3).
>
> AI must not be used to discriminate against or marginalize groups of people based on race, gender, sexual orientation, age, or any other legally protected human characteristic (R6).
>
> Ensure the security of the data collected for the use of AI and be transparent about how the data is being used. The second point is that this whole initiative should be aimed at improving and facilitating the traveler's experience by providing more services and relevant information (R7).

Despite the potential negative impacts of AI on tourism development discussed, the answers to the question of its impact on the growth of the activity were positive and promising. AI is an essential tool that will contribute greatly to the sector (Table 6).

Table 6. AI in tourism development

Identification	*Comments*
R1	I support the use of AI in tourism if ethical concerns are addressed.
R2	AI has the potential to have a positive impact on tourism growth, both in terms of traveler experiences and the success of tourist businesses and organizations. AI can enhance the traveler's experience by making personalized recommendations, optimizing itineraries, and delivering real-time information. AI can also be used to boost the productivity of tourism firms and organizations by automating tasks, lowering expenses, and increasing profits.
R3	I am quite optimistic about the potential of AI in tourism for process efficiency, improved user experience, and increased accessibility.
R4	AI may be used to increase corporate process efficiency, improve customer experience quality, and provide relevant insights into client preferences.
R5	AI promotes significant growth in the tourism sector, making it feasible to provide better experiences to visitors.
R6	I see it favorably because AI provides plenty of novel features and solutions that can improve the tourist experience.
R7	Personalized services have been available for some time, but it is only with the application of artificial intelligence (AI) that it is feasible to provide travelers with much more convenient, far more personalized and recommendations that fit their needs.

Note. Own construction (2023).

The respondents recognize the importance of secure, transparent, and fair AI systems in tourism, but their reflections remain superficial and overly optimistic, lacking a critical assessment of practical challenges such as cybersecurity risks, data breaches, and algorithmic biases (Kim, 2017; Xavier & Sbizera, 2022). While they emphasize ethical principles like fairness and privacy (R1, R3, R7), they do not discuss how these principles can be effectively enforced or address real-world risks such as AI-driven discrimination and opaque decision-making.

Additionally, their unquestioned optimism about AI's role in tourism growth overlooks structural dependencies, including the dominance of large technology providers and the potential monopolization of AI-driven services (Miranda & Cañada, 2018). Although they stress AI's role in enhancing the traveler experience (R7), they fail to consider how security breaches or system failures could undermine consumer trust in digital tourism platforms. This lack of critical engagement highlights the need for stronger risk assessments, ethical oversight, and regulatory frameworks to ensure AI adoption in tourism is both innovative and socially responsible.

4.2 Suggestions to Promote Ethical and Responsible Use of AI in Tourism

Establishing clear and well-defined ethical standards for the use of AI in tourism, including issues of privacy, fairness, and accountability, is one of the most important solutions that can be provided by technology companies involved in the development of AI systems.

When it comes to security, technologies such as blockchain (Silva et al., 2022) for information verification, facial recognition, data collection, and biometrics will become essential to increase security in tourist destinations, hotels, airports, and even for tourists' safety as well (Más et al., 2020). Therefore, there is a need for adequate security measures to be put in place alongside technological advances to avoid security incidents (Arzadon et al., 2025), following the basic principles of security such as confidentiality, integrity, and availability.

Transparency is another important criterion to ensure that tourist data is used in an accountable and fair way, including information about how it is collected, stored, and used. New technologies, such as blockchain, can be used to increase transparency and provide information in commercial transactions. Blockchain allows the tracking of a particular good from producer to consumer through enabled applications.

AI processes need to be transparent about their potentialities and functionalities. Decisions should be explainable to the parties directly or indirectly affected by them (Generalitat Valenciana, 2019). This issue can be seen in the following comments from respondents:

> Artificial intelligence (AI) can be a powerful tool to improve the traveler experience, but companies and organizations must be transparent about how they are using traveler data. This includes providing clear and concise information about how data is being collected, stored, and used, as well as providing travelers with the opportunity to opt out of certain data collection activities (R1).

> Companies and organizations should also ensure that their AI solutions are transparent and understandable to end users. This means using simple and clear language, avoiding jargon, and providing information about the limitations of AI solutions. By doing so, companies and organizations can help ensure that travelers understand how AI is being used and make informed decisions about its use (R3).

Secretive environments with obscure communication channels and little clarity of information favor the occurrence of corruption and human rights violations. Ethical and privacy considerations should be essential conditions against unwanted surveillance and its excesses (Al-Saqaf & Seidler, 2017). Hence, it is important to design technologies taking into account the provision of information transparency to system, such as blockchains with the ability to track the source of each transaction and follow it easily (Al-Saqaf & Seidler, 2017).

It is worth highlighting the importance of the community participation to involve community in discussions and decisions on the use of AI in tourism, so that the interests of the community are considered and protected.

Public policies in consideration to local and global ethical principles regarding new technologies must be worked out from a participatory perspective with all the involved ones and under multiple perspectives. Thus, the ethical dimension encompasses an individual, collective and organizational panorama and reaches the technological, technical, political, economic, social, cultural, human, and environmental dimensions (Holanda et al., 2018).

Fostering collaboration between technology companies, tourism businesses, and relevant interest groups to address the ethical and social challenges of using AI in tourism is a positive start, and respondents also point out this suggestion:

> Technology developers might work in collaboration with other stakeholders in the tourism sector, such as businesses, consumer organizations and regulators, to ensure that their AI solutions comply with relevant laws and regulations and reflect the needs and concerns of the sector (R2).

> It is important to include collaboration with other stakeholders, such as consumer rights organizations and civil rights groups, to ensure that AI is used fairly and equitably in the tourism sector (R4).

The need for adequate regulation on the ethical and responsible use of AI in tourism was a solution mentioned by all respondents. This is in regard to the increasingly technological scenario in the current society and businesses. As stated by respondent R3: "The use of AI in tourism also presents challenges and concerns, such as the need for adequate regulation on how the technology is used."

Regulation should preserve values such as authenticity, safety, and protection of human being. It should cover ethical issues and conflicts that may arise in human-machine relations for instructing society to guarantee the benefits of AI use by human beings (Santos, 2017). Companies should be responsible for the use of AI in their operations by considering the

development of auditing and monitoring mechanisms to ensure the ethical and responsible use of this technology.

5. Conclusions

The results of the study showed that the use of AI can greatly facilitate operations of the tourism activity. These new technologies generate a major change on individual experiences and interactions with society and information. However, the following reflection is mandatory: for AI to be applied to the operations of the tourism activity, qualified professionals will be needed, and they should be able to configure devices to avoid the spread of prejudice, discrimination, exclusion, or offensive acts.

These professionals should act in a social, ethical, and responsible manner regarding the protection of users' data. They must ensure that equity, transparency, continuous monitoring, and assessment of the ethical and social impact of AI are considered to implement appropriate technological solutions, not only in tourism, but in all sectors that use AI technologies.

It is worth noting that the application of AI technology is currently partly widespread, and the prospects point to significant growth. Consequently, the impact of AI adoption has both positive and negative implications. Therefore, solutions must consider legal and regulatory rigor to contain any threat to individuals and society.

This exploratory study examined how an initial group of Brazilian tourism companies use AI and explored the specific ethical and social implications in this context. By gathering information from industry professionals and analyzing their perspectives, the research provided a detailed, albeit preliminary, due to the sample size, overview of the role of AI in service personalization, while highlighting concerns related to privacy, security, and employment. These findings offer an initial insight into the impact of AI in an emerging market such as Brazil and should be interpreted as indicative of potential trends that require further investigation. However, further research could explore additional nuances in long-term consumer behavior and cultural shifts brought about by AI integration.

For future research, it is suggested to understand how AI affects the structure of the tourism sector and the work of companies. Specifically, what are the main technological, organizational, structural and cultural challenges associated with the implementation of AI in tourism; what are the skills and capacities needed to deal with AI in tourism in the coming years; what are the emerging practices and business models to optimize the performance of AI in tourism; what are the key success factors for AI in tourism; what are the strategic and informational opportunities of AI for tourism businesses; what are the complementary investments that tourism businesses need to make in order to exploit the potential of AI.

Future research should explore in greater depth how consumers in different cultural and regional markets, particularly in Brazil, perceive and respond to the use of AI in tourism. Understanding the expectations and behaviors of consumers when interacting with AI-driven services would provide valuable insights into the broader impacts of AI on

customer experience and satisfaction. Additionally, further studies should investigate how tourism companies are practically implementing ethical responsibilities, such as transparency, fairness, and privacy, in their use of AI. This could include case studies or longitudinal analyses to assess the long-term effects of these practices on both businesses and consumer trust.

Future research could also focus on understanding how consumers in Brazil perceive and interact with AI in tourism. While this study highlights the role of AI in personalizing services and improving efficiency, exploring the consumer side of this interaction could provide valuable insights into concerns about privacy, trust, and service quality. Additionally, examining how different regions in Brazil, with their unique economic and cultural contexts, respond to AI-driven tourism services would be a fruitful area of study.

Another avenue for future research is the exploration of the regulatory landscape and public policies specific to the Brazilian tourism sector. Understanding how these policies can influence the ethical and responsible use of AI could provide guidance for both businesses and policymakers. Finally, longitudinal studies would be valuable in assessing the long-term impact of AI adoption on consumer behavior, company practices, and ethical challenges, as the technology continues to evolve.

It is also important to mention that the outcomes reported here may be comparable to or different depending on the professional's position in working with AI in tourism. Another limiting issue is the quantity of specialists available to answer inquiries about their work as an AI technology specialist in tourism in Brazil.

5.1 Theoretical and Practical Implications

This study stands out in the literature for bringing together in one discussion two important themes for the strategic and operational development of tourism companies: artificial intelligence and the ethical and social impacts of the use of technology in tourism.

In terms of theoretical implications, the establishment of a solid foundation on AI and its applications in the tourism domain, backed up by recent scholarly references, has proven useful in facilitating a comparative analysis with the experiential insights provided by industry professionals, whose input has practical relevance within the tourism sector. This endeavor has not only increased the impetus for additional research into the challenges inherent in the deployment of AI and its subsequent impacts on organizations operating in the Brazilian tourism sector, but it has also contributed to the ongoing enrichment and advancement of the state of knowledge in this specialized field.

The study's practical contributions could result in organizational transformation for organizations in the tourism industry. The analysis of the responses from the research participants can assist firms who have not yet embraced the usage of AI in identifying the hurdles and benefits of utilizing these technical resources.

Demonstrating them as innovative management solutions in accordance with social and ethical precepts allows tourism organizations to increase the efficiency, effectiveness, and

quality of the work process, as well as the protection of corporate and traveler data. It will also bring new insights into the use of AI for companies who already employ it, allowing them to adjust their work processes as a result.

One of the main limitations of this study is the reduced number of respondents, which may restrict the generalizability of the findings. While the interviews provide valuable insights into the perceptions of AI in tourism, a larger and more diverse sample would allow for a more comprehensive analysis of ethical concerns, industry challenges, and regulatory perspectives. Future research should expand the scope of participants, incorporating perspectives from different segments of the tourism industry, including policymakers, technology developers, and travelers, to provide a more holistic understanding of AI's implications. Additionally, cross-cultural studies could offer valuable insights into how different regions perceive and regulate AI in tourism, contributing to a more nuanced global discussion on the topic.

Furthermore, the urgency of developing ethical guidelines for AI applications in tourism cannot be overlooked. In the Brazilian context, in particular, this discussion must be aligned with existing data protection regulations, such as the General Data Protection Law (LGPD). The intersection of tourism, AI ethics, and data privacy raises critical questions about user consent, transparency, and accountability in the collection and processing of personal information. As AI continues to shape the tourism industry, it is essential to establish clear legal frameworks and ethical standards that ensure the responsible use of technology while safeguarding travelers' rights. Regulatory efforts should not only mitigate potential risks, such as bias, discrimination, and data misuse, but also foster trust and equity in AI-driven tourism services.

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