

Applications of Artificial Intelligence as a Modern Approach to Enhance the Competitiveness of Hotel Institutions – The Case of the United Arab Emirates

تطبيقات الذكاء الاصطناعي كتوجه حديث لتحسين تنافسية المؤسسات الفندقية "تجربة الإمارات العربية المتحدة نموذجا"

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Abstract:

This study aimed to highlight the role of artificial intelligence applications in enhancing the competitiveness of hotel institutions. It focused on key concepts related to artificial intelligence and its applications, emphasizing the role it plays in boosting the competitive capacity of hotel establishments. The pioneering experience of the United Arab Emirates in this field was used as a model in this study. The study concluded that employing artificial intelligence applications in hotel institutions has become essential to achieving better performance, strengthening their competitive position in the markets, and keeping pace with the technological revolution the world is witnessing. The UAE's experience with artificial intelligence has made it a leader in this field, establishing it as a global tourism destination.

Keywords: Artificial Intelligence Applications; Competitiveness Enhancement; Hotel Institutions; United Arab Emirates.

Jel Classification Codes: O33; L83; Q56

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Introduction:

In light of rapid global developments, the environmental pressures facing the business environment, and the expansion of economic globalization which has connected the world through an extensive network of advanced technology and information systems, a breakthrough known as "artificial intelligence" has emerged as one of the most significant technological advancements of the Fourth Industrial Revolution. This marks a significant scientific breakthrough in the business sector, driving firms to abandon old management and production practices in favor of the most modern technical programs and approaches. Organizations want to boost efficiency by automating processes and tasks that previously required human labor, assuring their growth and sustainability in the face of tough competition. As a result, all firms must now adopt this new approach in order to compete in today's market.

Hotels, like service firms, are working to incorporate artificial intelligence into hospitality because of its exceptional capacity to emulate and duplicate human intelligence. This shift shifts service delivery from human to digital interaction, allowing services to be delivered with high quality and precision while satisfying clients. As a result, the hotel business gains new opportunities and hospitality institutions' competitiveness improves. According to estimates, the artificial intelligence market in the tourism and hospitality business would be worth more than \$8.4 billion by 2026, with an annual growth rate of 47.8%, reaching \$158.40 billion by 2030.

*** Based on the preceding, we asked the following research question:

How do artificial intelligence applications help hotels become more competitive?

The following sub-questions can also be asked:

What are the components of artificial intelligence systems? How has the UAE benefited from artificial intelligence applications?

*** To answer the stated research issue, we developed the following hypotheses:

- Artificial intelligence technologies help to improve the competitiveness of hotel facilities by increasing operational efficiency and customer happiness.
- There are different components of artificial intelligence systems that can be classified as subfields within the larger field of artificial intelligence.
- The UAE has benefited from artificial intelligence applications by implementing a digital transformation strategy, investing in people, and creating a conducive environment for developing and organizing AI technology tools, resulting in an integrated digital ecosystem that serves its various vital sectors, particularly tourism.

The study's significance stems from the emerging trend of artificial intelligence and its potential uses in hotels. It seeks to reach high levels of performance and efficiency, allowing hotels to compete in the market while meeting client needs and requests with high quality, precision, and speed.

Study Objectives: The study attempts to: Highlight the notion of artificial intelligence and its uses in the tourism industry; Determine the effect of utilizing artificial intelligence technologies on the competitiveness of hotel businesses.

Study Methodology: The study employs the descriptive-analytical method, presenting specific concepts related to artificial intelligence and competitiveness, investigating how artificial intelligence contributes to increasing the competitiveness of hotel establishments, and drawing conclusions about the study topic.

Prior Research:

- Sarvang Gandhi and Roshni Rawal's 2019 study, "Artificial Intelligence in Hotel Management and the Hospitality Sector in India." The goal of the study was to comprehend how artificial intelligence affects hotel administration and hospitality, as well as how it is applied to provide superior services and satisfy patrons. According to the survey, artificial intelligence is currently only used in 1% of Indian hotels.
- Samer Ali Hussein Al-Shami, Abdullah Al-Mamoun, Al-Sadiq Musa Ahmed, and Norulizwa Rashid conducted a study in 2021 called "Artificial Intelligence Toward Competitive Advantage for Hotels - An Exploratory Study in the United Arab Emirates." The purpose of the study was to demonstrate how hotels implement and provide services using artificial intelligence. For the field study, five five-star hotels in the United Arab Emirates were chosen as a sample. According to the study's findings, hotels in the United Arab Emirates have a comparative edge when it comes to the usage of artificial intelligence in their planning management for room and reception services.
- In 2021, Chaki Hicham and Bukhari Soumaya conducted a study titled "Artificial Intelligence Technologies and Their Role in Activating the Digital Tourism Industry - An Analytical View of the Case of Algeria during the Period (2000-2020)." The goal of the study was to draw attention to how crucial it is to use artificial intelligence technology to advance and assist the digital tourism sector both domestically and internationally. According to the study's findings, decision-makers in the tourism industry now rely heavily on artificial intelligence technologies. In order to establish a digital tourism environment, it advises Algerian authorities to give the deployment of AI technologies top priority.
- According to a study by Bouzeid Sofiane (2022), Employing Artificial Intelligence Applications in E-Marketing. In specifically, the study sought to demonstrate the value of e-marketing and the use of artificial intelligence technologies in the marketing process for businesses.

The research findings indicate that marketers can obtain deeper and more actionable information by utilizing artificial intelligence solutions. A qualitative change has been

brought about in e-marketing through the integration of artificial intelligence applications with contemporary technology.

- Researchers Jacques Bulchand- Gidumal et al. (2023) conducted a study named "The Impact of Artificial Intelligence on Hospitality and Tourism Marketing: Exploring Key Themes and Facing Challenges." The purpose of the study was to demonstrate how artificial intelligence affects hotel marketing. In addition to the numerous improvements AI is anticipated to bring to the marketing of hospitality and tourism, it was decided that AI helps hotel marketing by re-engineering processes and procedures.

I-Artificial Intelligence Concepts:

I-1- Definition of Artificial Intelligence:

Artificial intelligence is the phrase used to describe a group of technologies that can mimic and simulate human intelligence in order to solve problems, make decisions, and carry out tasks. One of the main engines of the Fourth Industrial Revolution is artificial intelligence (AI), which has the power to significantly alter businesses and organizations ([Bulchand-Gidumal et al., 2024, p. 2345](#)).

It can also mean that computers can simulate human cognitive processes by analyzing large volumes of data and turning them into information that can be used to improve practical results. Furthermore, people are inspired to work more intelligently by artificial intelligence, which improves their talents and capacities ([Limna, 2023, p. 1309](#)).

According to the earlier definitions, artificial intelligence represents the most recent development in the information revolution. It describes how computers and other digital gadgets can behave and think like human minds, mimicking human behavior to solve issues and complete jobs fast and accurately.

The ability to think and perceive, continuous learning from accumulated experiences, effective problem-solving, and assistance for managerial decision-making are some of the essential qualities that make artificial intelligence (AI) revolutionary. AI systems can handle enormous amounts of data, learn and apply information with ease, and react quickly to catastrophes. These characteristics enable AI to carry out mental and cognitive tasks that have historically been completed by people, making it relevant in a variety of institutions to improve performance effectiveness and efficiency ([O. K. Jamaï, 2023, p. 45](#)).

I-2- Different forms of artificial intelligence include:

The following categories apply to artificial intelligence ([Diab, 2022, p. 68](#)) :

- **The most basic and common kind of AI is narrow AI**, which is specialized on a single field and made for particular purposes. Chatbots, personal voice response services, and social media sites devoted exclusively to facilitating conversation within a community are a few examples.

- **The goal of general artificial intelligence (AI)** is to enable robots to think and plan autonomously in a manner akin to human reasoning. It operates with cognitive capacities similar to those of humans. Drones, automated teller machines (ATMs), self-check-in and self-insurance systems, and self-driving autos are a few examples.
- **Super AI is the term used to describe AI** that has the ability to outsmart humans and outperform specialized humans in certain jobs. Scientists hope to further develop these models, which are now at the experimental stage.

I-3- AI Tools and Uses

According to scientists, AI systems consist of the following:

- Expert systems are computer programs that use artificial intelligence to solve certain, well-defined problems. They are a practical representation of human skill. These systems offer expert knowledge-based problem-solving guidance, typically integrating facts and rules to arrive at conclusions. These systems are designed to support an organization's higher management (Toul & Bekkar, 2023, p. 466) .
- Neural networks are knowledge-rule-based networks that are intended to resemble the composition and operations of the human brain. They can intelligently and quickly handle large amounts of data and information and store it for use in similar future scenarios (Ahmed,2022,p.32).

These networks' unique characteristics include (U. K. Jamai, 2023, p. 45) :

their capacity to handle data that is noisy, incomplete, or full of outliers in order to integrate heterogeneous data and information; Their ability to draw lessons from the past makes them an effective statistical analysis tool; Exceptional quickness in achieving outcomes and high realism and accuracy in forecasting future values.

- Using methods influenced by natural evolution, genetic algorithms are computer programs that mimic biological processes in order to identify and create practical fixes and alternatives for issues. They are referred to be "genetic" since they use genetic trait simulation to arrive at the best answer. For instance, a variety of criteria must be taken into account as a foundation for selection when there are many applicants for a bank loan. John Holland at the University of Michigan introduced genetic algorithms in 1975, and they evolved in the early 1980s to become one of the best instruments for dealing with challenging research problems and locating the best answers (Jabari, 2017, p. 133).
- An application for data mining from online databases or the internet is known as a "smart agent." It functions by use of a software program that carries out particular repetitive or predicted chores or duties for the user. In addition to ensuring prompt responses to consumer requests and messages, smart agent systems also assist in easing the difficulties associated with electronic management and give feedback on the caliber of goods and services rendered (Othmania, 2019, p. 20).

II-Hotel Establishments' Competitiveness:

Both domestically and globally, competitiveness has attracted a lot of attention and is now seen as one of the most important issues for businesses and nations to stay up with the quick changes in the business environment and technological breakthroughs. Due to fierce competition in the market, hotel facilities have come to understand that successful investment in and integration of contemporary digital technologies into the hotel industry determine profitability. This forces them to look for ways to improve their competitiveness and make the most of these technologies in order to gain market share. Artificial intelligence systems are among the most well-known of these solutions, and they have significantly improved both the travel and hospitality industries.

II-1- The meaning of competitiveness:

The World Tourism Organization defines macro-level competitiveness as the increase in production and improvement in the quality of goods and services offered to satisfy consumer preferences, as well as a country's ability to generate resources and capabilities that outperform its competitors in global markets (Al-Sheikh & Ratoul, 2021, p. 326). Competitiveness is defined at the organizational level as an organization's ability to design, produce, and market distinctive products that surpass those offered by competitors, with this advantage potentially arising from factors such as price, quality, advanced technology, and more (Depperu & Cerrato, 2005 p. 04).

This concept places emphasis on factors like design quality and contemporary technology that allow a business to outperform its rivals.

As stated in the definition, it is the ability of hotel establishments within a country to withstand competing institutions by offering goods and services characterized by high quality, ensuring that guests' needs and preferences are met.

II-2- Hotel Competitiveness Indicators The institution's market position can be assessed by measuring its performance effectiveness using the following indicators:

- **Profitability:** This is one of the most important indicators of an institution's competitiveness, reflecting the efficiency and effectiveness with which it generates profits through optimal use of its resources and assets compared to its competitors (Atiya, 2020, p. 87).
- **Total Factor Productivity:** This measures the effectiveness with which an institution converts a set of production factors into outputs over a specific period. It is an indicator of institutional success, providing a greater ability to compete in the markets (Mabani, 2017, p. 87).
- **Market Share:** One of the most obvious measures of an organization's competitiveness is its market share. "The portion of the market that the institution holds, providing an accurate picture of the institution's activities and also reflecting its ability and efficiency in controlling the market through optimal use of its resources" is what Simon defines as market share (Al-Aidani, 2017, p. 65).

- **Production Cost:** An institution's competitiveness can be determined by comparing its production costs to those of its rivals. If an organization can operate at a lower overall cost than its rivals, it has a cost advantage and can generate more income, particularly if its goods are of superior quality ([Mujahid & Weis, 2022, p. 636](#)).

II-3- Applications of Artificial Intelligence's Effect on Hotel Facilities:

The hotel industry has undergone a significant transformation in recent years due to the revolution brought about by artificial intelligence and its applications in how hotels operate, improving performance efficiency, and enhancing guest experiences and satisfaction with the services provided. Below is an overview of the main impacts of using artificial intelligence applications on the competitiveness of hotel establishments ([Khalifa, 2024](#)).

- **Enhancing Operational Efficiency and Improving Customer Service:** AI-powered chatbots provide 24/7 interactive customer service, reducing response times and quickly addressing guest inquiries, booking requests, and other tasks, which increases guest satisfaction and loyalty.
- **Predicting Customer Behavior, Preferences, and Trends:** AI applications analyze data to anticipate guest needs and preferences.
- **Reducing Wait Times:** Facial recognition check-in technology eliminates the need for direct staff intervention, reducing wait times and enhancing the overall guest experience.
- **Revenue Management:** AI greatly improves hotel revenue management through predictive modeling to analyze data and forecast future demand and revenue.
- **Dynamic Pricing:** AI helps set prices based on demand and hotel occupancy levels.
- **Optimizing Inventory Management:** By predicting demand and adjusting room availability accordingly, AI helps increase revenue by selling more rooms at higher rates during peak times.
- **Enhancing Security and Privacy:** AI-based security and surveillance systems provide a safer experience for guests.
- **Accurate Translation:** AI chatbots offer quick and accurate translations by recognizing multiple languages, expanding the potential customer base.
- **Improving Sales through Service Personalization:** Targeted and personalized selling allows AI to suggest specific room types or amenities based on the guest's previous behavior, increasing revenue by reaching the right guests with the right offers at the right time.
- **Facilitating Travel Planning:** AI-powered applications, such as Trip Advisor, help travelers plan their trips based on millions of reviews from past visitors. Global booking platforms like Booking.com, supported by AI, and smartphone applications like Google Maps, play a significant role in helping tourists navigate and explore destinations ([Marzouki, 2021, pp. 31-32](#)).

Additionally, by offering a sizable customer database that improves client interactions and facilitates quick reaction to their wants, artificial intelligence assists hotel management in creating, executing, and innovating suitable marketing plans. Additionally, it lowers expenses by drastically cutting down on labor hours, and the interactions AI generates increase the hotel's market share. According to the aforementioned, hotel facilities can stay ahead of the competition by incorporating AI technologies, which present a chance to develop and improve visitor happiness and trust. In the context of the contemporary digital revolution, achieving high competitiveness necessitates not only implementing and turning on AI technology in hotel operations but also setting aside a portion of the budget for these developments.

III-The Experience of the United Arab Emirates with Artificial Intelligence Applications

III-1-Overview of the United Arab Emirates:

Abu Dhabi serves as the capital of the United Arab Emirates (UAE), a federal Arab state in Southwest Asia situated northeast of the Arabian Peninsula. Abu Dhabi, Dubai, Sharjah, Ajman, Umm Al-Quwain, Ras Al Khaimah, and Fujairah are its seven constituent emirates. The United Arab Emirates was founded in 1971 and has a total area of 71,023.6 km², of which 74% is desert. The largest of the seven emirates, Abu Dhabi, is the focus of the nation's oil industry, while Dubai, a coastal emirate, is one of the main financial and economic hubs of the area, home to skyscrapers and a number of global firms.

According to the Federal Competitiveness and Statistics Authority, the population of the United Arab Emirates, comprising both citizens and permanent foreigners, reached 11,143,626 in 2024, with approximately 200 different nationalities represented and a yearly growth rate of 3.41%. The UAE passport is regarded as the strongest in the world, granting visa-free entry into 179 countries, 132 of which do not require prior visas and 47 of which allow admission with an electronic visa ([Facts and Figures, 2018](#)).

III-2-Distinctive characteristics of the United Arab Emirates:

The United Arab Emirates is a prominent tourist destination due to its strategic location bridging East and West, excellent connectivity with major global airlines, and robust tourism-supporting infrastructure. It offers a diverse range of accommodations to suit all budgets and preferences and hosts events and activities year-round for all ages. The UAE's unique biodiversity includes deserts, oases, mountains, valleys, plains, and beaches. Additionally, the country's strong commitment to religious and cultural tolerance fosters inclusivity, while low crime rates and widespread peace and security contribute to a safe, welcoming environment for all visitors ([UAE is the ideal tourist Destination, 2024](#)).

III-3-Applications of Artificial Intelligence in the United Arab Emirates Hotel Industry

The tourism sector in the United Arab Emirates is one of the most important pillars of the national economy. The UAE has adopted digital and information transformation as part of its

strategic vision to make the tourism sector more efficient and attractive, thereby enhancing the UAE's appeal as a premier global tourist destination.

The UAE is among the leading countries that quickly implemented artificial intelligence technologies across various sectors as the first major project within the UAE Centennial 2071, fully aware of AI's positive impact on transforming service delivery and enhancing customer experience. This vision was realized through the launch of the UAE's Artificial Intelligence (AI) Strategy in October 2017, marking the first of its kind in the region and the world, making the UAE a model to follow. Through this strategy, the UAE aims to achieve [\(UAE Artificial Intelligence Strategy, 2023\)](#)

Reach the UAE Centennial 2071 goals and expedite the implementation of developmental programs and projects to reach the future; rely on AI in services and data analysis at a rate of 100% by 2031; improve government performance and establish innovative and creative work environments; establish the UAE as the world leader in AI investment across various critical sectors; establish a new market with high economic value in the region; support private sector initiatives, boost productivity, and establish a solid foundation in R&D; effectively invest in the newest technologies and AI tools across all fields; maximize the use of all energies and make innovative and creative use of human and material resources.

This approach has focused on a number of areas, including as traffic, education, the environment, renewable energy, water, transit, health, and other amenities that visitors need while visiting. Following the smart government, this effort marks a new stage in which the UAE seeks to lead the globe in every aspect. AI integration in a number of services has improved all of these categories, including the following [\(Accommodations, 2023\)](#).

Accommodations: The UAE boasts luxury hotels that have successfully invested in artificial intelligence applications, offering guests comfort, luxury, and a premium stay experience, such as the Emirates Palace (Abu Dhabi), Burj Al Arab (Dubai), Marriott, Hilton, and Royal Mirage, among others. Additionally, various accommodations are available for different budgets, including guesthouses and youth hostels. For those seeking peaceful and relaxing environments, there are luxurious seaside resorts, as well as desert resorts that provide tourists with a unique experience, such as Jumeirah Hotels in Dubai and Atlantis the Palm Resorts

According to a report by the UAE Ministry of Economy, hotel revenue increased by 12% year-on-year in January and February 2024, reaching over AED 24.6 billion in the first half of 2024. Hotel occupancy rates exceeded 82.6%, among the highest achieved by leading tourist destinations worldwide. Furthermore, 15.3 million guests were hosted in the first six months of 2024, marking a growth of 10.5% compared to the same period in 2023(UAE hotel revenues rise to AED 24.6 billion in H1 2024)

For Dubai alone, hotel capacity is expected to reach 154,888 rooms by the end of 2024, with an additional 4,597 new hotel rooms scheduled to open this year. Dubai achieved a major milestone last year by reaching 150,000 hotel rooms, further solidifying its position among the world's largest tourist cities (Daoud, 2024).

The following figure illustrates the number of hotels by category and key performance indicators as of January 2024:

Figure 01: Number of Hotels by Category and Key Performance Indicators



Source: Tourism Performance Report - January-June 2024

We observe from the figure an increase in the number of hotel establishments over one year, from 814 to 824 establishments, across various classifications from one-star to five-star. Additionally, there has been an increase in the hotel occupancy rate, reflecting the growing development in the tourism sector, which has made the UAE an outstanding global tourist destination.

Transportation: The UAE possesses robust transportation facilities and infrastructure, which are among the best and most advanced in the world, working together to support growth across all sectors of the economy, business, and tourism. This includes buses, metro, tram, and taxis that connect urban areas with maritime transportation. The UAE has also introduced smart mobility solutions and applications that enable tourists to reach their destinations, saving time and distance. Examples include the widely used Google Maps, the "Sinyar" app, which provides a unified navigation system and helps users locate addresses easily, and the "Darb" website, which offers mobility solutions based on geographic information. Additionally, the "Smart Drive" app, along

with the "**Makani**" and "Here" systems, facilitate route planning and location finding without the need for an internet connection ([Mobility and Transportation, 2024](#)).

Along with one of the smart transportation options, the "self-driving aerial taxi" or "flying taxi," which is a component of the Roads and Transport Authority's **2030** objectives. People can travel without the need for human intervention thanks to its automated and self-driving flying capabilities and electric power operation. This is one of the ways the United Arab Emirates is implementing artificial intelligence technologies in the transportation sector ([Smart Transportation Solutions,2024](#)).

The UAE's mobility and transportation performance metrics are shown in Figure No. 02.

Figure 02: Performance Indicators for Transportation in the UAE



Source : [Transportation and UAE Vision 2021.2024](#)

In 2024, the United Arab Emirates topped the global rankings in several competitive indicators related to the civil aviation sector. It ranked first worldwide in the "Air Transport Infrastructure Quality Index" within the "Travel and Tourism Development Index 2024" issued by the World Economic Forum. It also ranked first globally in the "Air Transport Quality Index."

Additionally, it ranked first in the Middle East and North Africa region for the "Operating Airlines" and "Air Transport Agreements" indicators. These pioneering results reflect the forward-looking vision of the United Arab Emirates ([The UAE ranks first globally in the "Air Transport Infrastructure" index, 2024](#)).

Smart Payment via Devices: In line with the UAE's direction towards a smart government, many mobile smart applications have been developed to pay for various services, such as paying bills and fines at any time, and payment cards for transportation services like the "Mawaqif" card,

the "Nol Smart Card," and the "Sayer" card, which allow tourists to pay for tickets electronically ([Smart channels for paying government service fees, 2024](#)).

Other Smart and Fast Applications: The UAE has provided other useful applications for planning travel, booking hotels, conducting official transactions, and checking various offers at shopping centers. The most notable of these applications are: ([Applications that make our lives easier and more flexible in Dubai, 2024](#))

- **Time Out Dubai:** An excellent tool for staying up-to-date on all events and activities in Dubai and accessing exclusive offers from top restaurants, cafes, and hotels.
- **Entertainer DXB:** This app offers thousands of deals with discounts up to 50% or buy-one-get-one-free offers. It also provides a list of restaurants and hotels participating in the program, allowing users to enjoy various promotional offers.
- **Beam:** This app saves effort and time, allowing users to make payments in stores via smartphones after registering and entering bank card information.
- **Dubai Mall App:** Provides information on over 1,200 stores and more than 200 restaurants, along with entertainment facilities, and sends notifications about various available offers.
- **Zomato:** A unique app that helps users discover important restaurants and cafes before visiting them by viewing experiences and reviews from various patrons, along with access to menus and meal prices.

These applications and others have made the UAE a leader in the tourism field. The digital government has invited all individuals, including citizens, residents, and tourists wishing to visit, to download smart tourism applications on their mobile phones to facilitate movement and enhance their experience during their stay.

In the future, we are expected to see what has been called "**Hotels of the Future**," where hotel rooms automatically adapt to guests' tastes and preferences specified during booking. These rooms will integrate the latest technologies in voice recognition, allowing guests, for example, to order pizza in forty different languages. Door locks will also become smart, opening and closing via the guest's **WhatsApp app**. Additionally, virtual reality glasses, which have become widely used in the tourism sector, will serve as interactive tourist guides.

Conclusion:

Integrating artificial intelligence (AI) into the hotel industry is not merely a modern trend but represents a profound transformation shaped by scientific and technological advancements in today's world. This shift underscores the demand for creativity, innovation, and entrepreneurial skills, especially in enhancing leisure and luxury hotel experiences. The UAE stands out as a pioneer, actively adopting AI technologies and positioning itself as a leading destination in tourism. This approach not only aims to attract tourists and provide them with greater comfort but also

boosts operational efficiency through innovative services, increasing guest satisfaction, enhancing competitiveness, and maintaining a leadership position. The UAE is expected to continue advancing its status as a premier global tourist destination.

Our study highlighted several key findings. First, AI applications have become indispensable within the tourism sector, enabling rapid collection and analysis of visitor data. The use of AI in hotels enhances operational efficiency and the competitiveness of tourism organizations. Furthermore, AI applications significantly improve tourist experiences and contribute to the overall effectiveness of the industry. By adopting these technologies, hotels can streamline their operations, reduce costs, and provide a better customer experience.

AI also offers countries and institutions a substantial competitive advantage in the global job market and economy by enabling more accurate data analysis, faster insights, and better strategic decision-making tailored to market demands. The UAE is a global leader in AI adoption, with a robust infrastructure that supports its application across various critical sectors. This strategic implementation has contributed to exceptional visitor experiences, positioning the UAE as a top-tier tourist destination. AI also empowers UAE hospitality institutions to gain deeper insights into customer behavior, preferences, and trends, enabling them to identify patterns, anticipate guest needs, and proactively deliver personalized services and recommendations.

Based on these findings, we propose several recommendations. AI applications present a valuable opportunity for hotel institutions to improve their performance, making them more efficient and productive. Recognizing AI as an urgent necessity within the current digital transformation era, institutions should invest in attracting and training employees for future AI-supported roles. Supporting talent, fostering innovation, and creating a conducive environment for AI application are essential steps. The UAE's exemplary experience in AI adoption within the tourism and travel sectors offers a model that other regions could follow. Investing in modern technologies to enhance performance and improve customer service is crucial for staying competitive.

Finally, adopting clear strategies for AI implementation in the tourism sector is essential to maximize its benefits and achieve development goals. To truly benefit from AI, developing a forward-looking infrastructure and comprehensive systems that incorporate AI across all critical fields is necessary. This approach should include creating a thriving environment that meets high safety and privacy standards, thereby fostering community trust in these applications and setting the stage for sustainable, AI-driven growth in tourism.

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