

Encourage the Hotel Sector to use AI Technologies

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Abstract: Artificial intelligence (AI) is rapidly transforming many industries, including the hotel sector. AI technologies have the potential to improve operational efficiency, enhance customer service, and reduce costs for hotels. However, many hotels are hesitant to adopt AI due to a lack of understanding of the technology, concerns about cost and complexity, and worries about potential job losses.

This research article aims to encourage the hotel sector to use AI technologies by providing a comprehensive overview of the benefits and opportunities of AI for hotels. The article also addresses common concerns and challenges associated with AI adoption, and provides recommendations for hotels on how to successfully implement AI technologies.

Although intelligent technologies are widely used in many facets of contemporary life, services should adopt certain strategies. Basic relationships are those in which the parties in charge of providing services to customers are supported by the customers themselves. The paper's objective is to assess and examine the most recent uses of artificial intelligence (AI) in the hospitality sector. According to our research, the main applications are related to in-person customer care, chatbots and messaging platforms, machine learning-powered business analytics tools, and virtual and augmented reality. The article makes an effort to explain how prospective clients may encourage the hotel sector to use particular AI technologies

Keywords: Artificial Intelligence; Hotel Industry; Applications

I. INTRODUCTION

The hotel sector is facing a number of challenges, including rising costs, increasing competition, and changing customer expectations. Artificial intelligence (AI) has the potential to help hotels overcome these challenges and improve their overall performance.

AI technologies can be used to automate tasks, improve decision-making, and personalize the guest experience. For example, AI-powered chatbots can provide 24/7 customer service, answer guest questions, and make recommendations. AI can also be used to optimize revenue management, improve energy efficiency, and reduce food waste.

The role of the service sector in contemporary society has grown during the past few decades. A number of industries have effectively incorporated intelligent technology; however, customer-focused industries, namely those associated with meeting their demands and developments aimed at the hospitality sector, appear to have considerable promise and be well-received by consumers.

Businesses in the hospitality sector can use artificial intelligence (AI) to enhance customer experiences by optimizing on-site services and operations. It is crucial to stay in contact with guests and attend to their demands in order to maintain overall quality. Since AI makes it possible to give individualized experiences, the idea of a "smart hotel" has lately gained traction in both the corporate and academic worlds.

To the best of our knowledge, nevertheless, not many studies have examined how artificial intelligence (AI) applications are being adopted by the hotel sector.

By incorporating AI technology into the decision-making processes with corporate strategy, automation and robotization of business operations have proven to give significant competitive advantage, regardless of the industry. Furthermore, there's a ton of evidence to suggest that AI will spur innovation by speeding up the creation of new products and services.

What exactly is artificial intelligence?

It is the engineering and science of creating intelligent devices, particularly computer programs. While the aim of utilizing computers to comprehend human intelligence is similar, artificial intelligence (AI) is not limited to techniques that may be observed through biological means.

Artificial intelligence (AI) has been making inroads into a variety of commercial sectors in recent years, including the hotel sector. AI is typically viewed as a supporting tool, processing and analyzing vast volumes of data to improve customer-oriented procedures, rather than as a means of replacing humans. The ability to improve organizational performance and expedite the achievement of strategic goals appears to be the main argument in favour of applying AI. Objective:

The objective of this research paper is to encourage the hotel sector to use AI technologies. The paper will do this by:

Discussing the benefits of AI technologies for the hotel sector

Providing examples of how AI technologies are being used successfully in the hotel sector

Addressing the challenges of implementing AI technologies in the hotel sector

Offering recommendations on how to overcome these challenges

II. REVIEW OF LITERATURE

A growing body of research is examining the benefits and challenges of AI adoption in the hotel sector. Some of the key findings from this research include:

AI can improve operational efficiency by automating tasks such as check-in/check-out, room service, and guest communication. This can free up staff to focus on providing more personalized and value-added services to guests.

AI can enhance customer service by providing guests with personalized recommendations, 24/7 support, and real-time information about the hotel and its amenities. This can improve the overall guest experience and lead to higher customer satisfaction.

AI can reduce costs by optimizing revenue management, improving energy efficiency, and reducing food waste.

AI can also help hotels to attract new customers and increase market share by personalizing their marketing campaigns and targeting potential guests with relevant offers.

It is anticipated that robotics and AI will have a significant impact on the nature, organization, and circumstances of employment. While study and implementation of artificial intelligence in the hotel sector are still in their infancy, there are already some promising real-world uses for the technology.

Recognizing that this is a two-sided coin is crucial. Hoteliers will be in higher demand than ever if they can use AI technologies to increase their productivity and effectiveness. People who don't educate themselves might encounter additional difficulties.

Professionals in the hotel business need to be aware of the most recent developments in artificial intelligence since they have a big influence on how we run our businesses and serve our customers. By automating monotonous chores, artificial intelligence (AI) frees up hotel personnel time for more strategic endeavours like building connections with important clients and offering visitors individualized care. Hotel managers may make better informed decisions and create more successful marketing campaigns by using predictive analytics to evaluate data, estimate consumer behaviour, and identify industry trends. Based on each guest's preferences, prior behaviour, and demographics, AI-powered customization and recommendation engines can offer more tailored experiences.

Hotel employees will be able to communicate with visitors in real-time and offer individualized advice and support thanks to chatbots and virtual assistants driven by AI. AI-integrated smart room technology can make visitors' stays more convenient and comfortable. AI can also be used to track and anticipate room maintenance requirements, improve pricing and inventory choices, estimate demand and modify room availability appropriately, maximize energy efficiency, and lower hotel management and operational expenses. Professionals in the hotel business may maintain their competitiveness and give their customers better service by being aware of these developments.

The effects of artificial intelligence on every department of a hotel.

Hotel Operation

Artificial intelligence (AI) has the potential to significantly enhance hotel operations by automating tedious procedures like reservation and contactless check-in, freeing up employees to concentrate on offering visitors individualized attention. Through the use of chatbots and virtual assistants that can help customers with reservation booking, answering questions, and recommendation making. Artificial intelligence (AI) can also improve customer service. AI can also enhance pricing and revenue management through data analysis and predictive modelling, optimize

housekeeping room assignments and maintenance through the use of sensors and cameras to monitor and control the temperature, lighting, and security of guest rooms, and enhance energy efficiency through the use of smart building systems.

By employing AI for demand forecasting, inventory control, and logistics optimization, AI may also increase the overall effectiveness of hotel operations. In the end, this will improve the visitor experience by offering more individualized experiences and recommendations.

Revenue Management for Hotels

By applying predictive modelling to evaluate historical data and forecast future demand and income, artificial intelligence (AI) may greatly improve hotel revenue management. Pricing and availability can then be optimized to maximize revenue. AI can also help with dynamic pricing, which increases income by charging more for rooms during peak hours and less during off-peak hours based on demand, occupancy, and other criteria. By anticipating demand and modifying room availability in accordance, AI can also improve inventory management. This increases income by enabling the sale of more rooms at higher prices during peak times and decreases unsold inventory during off-peak times.

AI may also target the right guests with the right offers at the right time, helping hotels to maximize revenue by personalizing pricing and offers to individual customers based on their preferences, prior behaviour, and demographics. In addition, AI can improve pricing and inventory decisions in real-time depending on market conditions, guest behaviour, and other factors. It can also spot chances for upselling and cross-selling to guests. Hoteliers can uncover new revenue opportunities and trends by using artificial intelligence (AI) to find patterns and anomalies in revenue data.

Hotel Promotion

AI is predicted to transform hotel marketing by making it possible to create more individualized and targeted advertising campaigns based on demographics, prior behaviour, and guest preferences. By automating time-consuming and repetitive processes like client segmentation, campaign management, and data analysis, artificial intelligence (AI) can free up hotel marketers to concentrate on more strategic endeavours. AI will also make it possible for hotel marketers to forecast market trends and customer behaviour by analyzing vast amounts of data and using predictive analytics. This will lead to the development of more successful marketing plans and data-driven choices. The use of chatbots and virtual assistants in hotel marketing will increase since they let establishments communicate with visitors in real time and make tailored recommendations and offers.

AI will help hotels monitor social media platforms and analyze consumer feedback, sentiment, and brand mentions in order to immediately respond and enhance the guest experience. It will also play a part in finding and targeting the most effective influencers for hotel campaigns. By determining the most successful channels, audiences, and times to advertise, artificial intelligence (AI) will enable hotels to automate and optimize their digital advertising campaigns, making better use of their advertising budget.

Hotel Sales

By using predictive analytics to estimate future demand for group sales, hotel group sales managers can leverage artificial intelligence (AI) to attract more business travellers. This will enable them to proactively target potential business travellers and anticipate changes in demand. AI-driven recommendation and personalization engines can help create packages and sales presentations that are specifically tailored to the demands of business travellers. Sales managers may concentrate on building connections with important clients and closing deals by using AI to automate monotonous duties like data input, follow-ups, and lead generation. Artificial intelligence (AI)-driven chatbots and virtual assistants can help business travellers make reservations, get answers to their questions, and make recommendations around-the-clock.

AI can assist with customer data management and analysis as well. It can help discover the most lucrative business traveller categories and offer insights into the most effective ways to target and interact with them. AI may help with optimization by making decisions in real-time based on market conditions, visitor behaviour, and other factors, as well

as real-time analytics to track group sales success and pinpoint areas for improvement. AI can also help with discovery of new revenue streams.

Experience of the Guest

In the coming years, artificial intelligence will completely transform the hotel guest experience by utilizing recommendation and personalization engines, virtual assistants, smart room technology, automation of repetitive tasks, and concierge services to deliver more effective and personalized service. By keeping an eye out for possible dangers and proactively offering visitors the services and amenities they want, AI will also improve safety and security. AI will also be used with augmented reality and virtual reality to provide visitors immersive experiences like virtual events, virtual tours, and virtual room choices. AI will also make automated check-out possible, enabling visitors to receive their bill via text or email and check out from their room using a mobile device or voice commands.

For instance, in an effort to engage its increasingly mobile clientele, Marriott Hotels has introduced a mobile application that enables visitors to check into a hotel using their mobile device. According to the hotel brand, this is the most comprehensive smartphone application available.

Marriott Hotels Mobile check-in - Guests must check in up to two hours prior to their arrival or after 4 p.m. the day before their reservation in order to use the Marriott Hotels app. Once at the hotel, visitors can pick up their pre-programmed key card right away at a Mobile Check-In desk. The app will also send out an automatic notification to guests when their accommodation is ready.

Also a hotel chain that has embraced AI technology is Hilton, which uses data analytics to increase customer satisfaction and retention in addition of deploying AI-powered virtual assistant like Connie in rooms and at the front desk.

Alexa is yet another illustration. There are a number of fascinating ways in which the Alexa for Hospitality service may enhance the client experience. The service may be customized for any location, linking it to features like room service options and restaurant reservations, and enabling customers to place food orders or reserve a table just by speaking.

In addition, the gadget has the ability to be linked to room controls, including lighting, heating, ventilation, and air conditioning. This could imply that the lights can be turned off from anywhere in the room, even in the bed, with only a simple voice command like "Alexa, turn off the lights."

Additionally, Amazon has declared plans to advance the technology, enabling visitors to hotels to link their Amazon accounts to the Amazon Alexa Echo speakers. With users able to access their playlists, audiobooks, and music, this creates a huge opportunity for increased customisation.

Human Resources and Labour

Artificial intelligence (AI) is predicted to bring about a number of changes in the hotel sector with regard to labour and human resources, including hiring. One approach is to automate time-consuming processes like background checks, interview scheduling, and resume screening. For human resources experts, this will free up time and resources so they can concentrate on more strategic tasks like building connections with important clients and offering guests individualized service. Hotels may make data-driven decisions and create more successful recruitment strategies by utilizing AI to evaluate data and apply predictive analytics to forecast employee behaviour and market trends.

Artificial intelligence (AI)-driven chatbots and virtual assistants can also be utilized to engage with prospective employees and offer tailored support and details regarding available roles and the application procedure. By predicting demand and modifying staffing levels accordingly, artificial intelligence (AI) can also be utilized to optimize scheduling and workforce management, leading to a more effective use of hotel resources. AI is also useful for tracking employee engagement, identifying training needs, and analyzing employee performance and providing feedback. Hotels can establish initiatives to enhance employee happiness and retention by using data analytic findings. By keeping an eye out for any threats and notifying hotel management in the event of an emergency, artificial intelligence (AI) can be utilized to improve worker safety and security. AI integration in labour, human resources, and recruitment will increase productivity and effectiveness in the hotel sector, improving guest service and promoting staff development.

In the hospitality sector, those hoteliers who do not educate themselves on artificial intelligence (AI) run the risk of slipping behind. Hoteliers who do not adopt artificial intelligence (AI) will be missing out on the advantages this

technology can offer their establishments such as higher revenue, better visitor satisfaction, and a competitive edge over rival hotels. From property management systems to messaging and social media, the application of AI technology in the hospitality sector has the potential to completely transform hotel operations. As a result, hoteliers that do not stay up to date with the newest advancements may find it difficult to compete in the market.

Scope of Study:

- Despite the many benefits of AI, many hotels are still hesitant to adopt AI technologies. This is due to a number of factors, including:
- A lack of understanding of AI technologies and their potential applications in the hotel sector.
- Concerns about the cost and complexity of AI implementation.
- Worries about potential job losses due to AI automation.
- This research article addresses these concerns and provides recommendations for hotels on how to successfully implement AI technologies.

III. CONCLUSION

AI has the potential to revolutionize the hotel sector. By automating tasks, improving decision-making, and personalizing the guest experience, AI can help hotels to improve their operational efficiency, enhance customer service, reduce costs, and attract new customers.

Hotels can overcome the challenges of AI adoption by:

Educating themselves about AI technologies and their potential applications in the hotel sector.

Starting with small-scale AI projects and gradually scaling up as they gain experience.

Partnering with experienced AI vendors to implement AI technologies in a cost-effective and efficient manner.

Focusing on how AI can be used to improve the guest experience and create new value for guests.

Communicating with staff about the benefits of AI and how it will impact their roles and responsibilities.

One important and vital component of economic development is the application of AI. Additionally, the use of AI technology as digital assistants is growing. They support companies in the hotel sector by enhancing customer service, increasing operational capacity, and cutting expenses, among other things. The development of AI is not without risk, though. Some of these include losing one's employment in low-tech industries, losing control over autonomous robots, and privacy, security, and safety issues. AI technologies affect the workforce and job employment in the hotel sector in both positive and negative ways.

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