

# AI and hotel employees' coexistence: a helpful tool or a threat to job loss?

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## Abstract

**Purpose** – The aim of the study is to understand employees' feelings towards artificial intelligence (AI) in relation to their job performance and productivity, as well as their opinion of the risk of being displaced by AI. **Design/methodology/approach** – The study employed a self-administered questionnaire targeting hotel employees. The results were analysed through exploratory factor analysis to validate constructs and test hypotheses.

**Findings** – In particular, the results of the study indicate employees' insecurity of job losses when it comes to incorporating AI applications into operational processes. However, it is crucial for employees to understand that embracing AI can boost job productivity, thereby enhancing employee and guest satisfaction.

**Originality/value** – This study is original because it examines a new topic, concerning AI in hotels and evaluates how hotel employees perceive it in relation to their job security.

**Keywords** Artificial intelligence, Job insecurity, Hotel industry, Guest satisfaction

**Paper type** Research paper

## 1. Introduction

Following the COVID-19 pandemic's impact on hospitality and tourism services, heralded a new era through the advancement of artificial intelligence (AI) in these services, establishing an innovative approach (Putri *et al.*, 2023). AI technology designates a promising way of delivering tourism and hospitality services in an accurate manner, especially when standardised procedures are concerned, such as scheduling, check-in/check-out processes and inventory management (Khaliq *et al.*, 2022; Nam *et al.*, 2021). According to Industry ARC (2023), the industry will record a dramatic increase with the predicted value of the AI market, which is expected to surpass the milestone of \$1.2bn by 2026. In a service-related industry, AI impacts the chain of operations by providing customised services and experiences through an uninterrupted process (Takyar, 2023).

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*Corrigendum:* It has come to the attention of the publisher of *Worldwide Hospitality and Tourism Themes* that the following article by Pericleous, K., Liasidou, S. and Dyankov, T. (2025), "AI and hotel employees' coexistence: a helpful tool or a threat to job loss?", *Worldwide Hospitality and Tourism Themes*, Vol. 17 No. 1, pp. 132-143. <https://doi.org/10.1108/WHATT-01-2025-0001>, incorrectly referenced an article listed as Ivanov, S. (2019), "The impact of artificial intelligence on hospitality: what are the consequences for hospitality managers?", in *Advances in Hospitality and Tourism Research (AHTR)*. The correct reference is Webster, C. and Ivanov, S. (2020), "Robotics, artificial intelligence, and the evolving nature of work" in George, B. and Paul, J. (Eds), *Digital Transformation in Business and Society. Theory and Cases*, Palgrave-MacMillan, pp. 127-144. This has now been corrected in the online version of the paper. The authors sincerely apologise for any inconvenience caused.



AI revolutionised the business environment by advancing technological capabilities. Adopting the newest technological application establishes business entities as pioneering and innovative. In the hospitality industry, AI has the potential to expand across all operational layers, leading to more effective management practices. Additionally, the scope of hotel services is expanding to encompass more effective aspects of delivering hospitality services. However, it raises questions about the loss of human touch and interaction in relation to the perceived essence of customer service (Reis *et al.*, 2020). The aim of this study is to understand how AI integration impacts hotel employees and service. The research questions of the study are as follows:

- RQ1. Does the use of AI technologies affect the human touch in hotel services?
- RQ2. Does the use of AI technologies have an impact on guests' and employees' safety?
- RQ3. Does the use of AI technologies negatively impact employees' job performance and creativity?
- RQ4. Is the lack of human touch in hotel services perceived as a threat to job security due to the use of AI technologies?
- RQ5. Does concern for guests' and employees' safety have a positive impact on employees' job insecurity?
- RQ6. Do improvements in employees' job performance and creativity impact employees' job insecurity?
- RQ7. Does employees' job insecurity have a positive impact on job turnover?

The structure of the paper is as follows: the theoretical part discusses, firstly, the implications of AI technologies on hotels; secondly, it focuses on the perception of employees' coexistence with AI. Next, the methodology is presented, followed by the research findings and, lastly, the conclusion.

## 2. Theoretical background

### 2.1 AI and hotels: implications

AI is defined as the ability to make machines resemble humans (Reis *et al.*, 2020). To achieve this, the machines need to be stored with data as information that commands the execution of various applications. AI is machine learning or deep learning that emphasises its connection to a neural network. The structure consists of layers of nodes, also known as artificial neurons, which include an input layer, one or more hidden layers and an output layer (Gursoy *et al.*, 2023). Each node connects to others and has its own associated weight and threshold. In particular, AI-involved digital assistants, autonomous vehicles and generative AI tools (like OpenAI's Chat GPT) are just a few examples of AI in the news and our daily lives (Kim *et al.*, 2024; Khaliq *et al.*, 2022).

Over the last years, the hospitality industry has witnessed a phenomenal alteration in the management and operations in the next step of the technological revolution that involves AI technologies. Scholarly research is associated with a variety of AI and hospitality industry topics, for instance, marketing procedures (Bulchand-Gidumal, William Secin, O'Connor and Buhalis, 2023), acceptance of AI (Roy *et al.*, 2020), benefits and challenges (Rather, 2024; Gursoy *et al.*, 2023; Mingotto *et al.*, 2021), service robots (Reis *et al.*, 2020; Granström *et al.*, 2023) and consumer perceptions (Nozawa *et al.*, 2022).

The use of AI-driven data analytics enables enterprises to gain a deeper understanding of visitor preferences and feedback, allowing for proactive service enhancements and the ability to anticipate guest requirements. AI enables the accuracy of service delivery; however, with the lack of human characteristics (Granström *et al.*, 2023). Employees in the hospitality industry are witnessing the replacement of human-touch services with

automated AI machines (Roy *et al.*, 2020; Granström *et al.*, 2023; Astuti *et al.*, 2024). Hospitality services provide a new stance by setting up self-service machines, for instance, the automated check-in processes. Additionally, the aspect of providing concierge information through AI chatbots is popular. Attesting to the role of hotel employees, the main issue is that AI is used as a tool that can provide more automated services in an effective way (Kim *et al.*, 2024). Additionally, AI is an enabling tool that enhances service delivery. Robots can execute accurately many hotel tasks, such as concierge, housekeeping, room service and uniformed staff. Automation of hotel services is a fact, whereas humans must learn to adjust to the trends of the industry (Granström *et al.*, 2023).

AI is increasingly integral to the advancement of the hotel industry; it is obvious that AI presents a potential risk to human employment as a result of its ability to imitate human behaviour. The potential exists for AI to effectively manage extensive amounts of data and execute tasks on behalf of individuals in the future (McClure, 2018). The study conducted by Li *et al.* (2019) reveals that AI and robotics have a substantial influence on various aspects of employment, including job profiles, employee relations, working hours and wage patterns. Consequently, AI is revolutionising the manner in which individuals engage in work and the execution of various activities (Braganza *et al.*, 2021). While reflecting on the AI role in the hospitality industry, it is important that managerial suggestions be based on the functional areas of its front-of-house and back-of-house hotel operations. Back-of-house department areas seem to be easy for automation, like food and beverage, human resources, accounting and finance and sales and marketing (the standard operations and procedures). There is a notion that housekeeping and maintenance are still challenging for successful automation (Ivanov *et al.*, 2023). On the other hand, the levels of complexity, frequency and standardisation of tasks should be considered as decisive factors for planning the optimal efficiency of AI implementation in a particular hotel unit/hotel chain (Ivanov *et al.*, 2023). For example, repetitive tasks are considered to be highly replicable by AI agents, while any complex, in frequent and relatively diverse tasks in hospitality cannot be easily automated.

At the same time, cognitive tasks are more prone to automation compared to physical and emotional efforts in hospitality. Physical tasks may include cognitive tasks through the implementation of robots, while emotional intelligence is still a delicate area for AI agents in the communication process with hotel guests. The decision for AI orientation in hospitality is also based on the specifics of the hotel guest cycle, e.g. the stages of pre-arrival, arrival, stay, departure and post-arrival (Ivanov *et al.*, 2023). AI, along with other automation technologies, is expected to have several general effects on job positions in hospitality, e.g. the so-called enhancement effect (hotel employees to become more effective and efficient when serving guests), the substitution effect (replacement of employees or serving a greater number of guests with the same or a smaller number of employees) and the transformation effect (binding humans and technology into a specific collaboration).

### 2.2 AI and hotel employees

According to Saini and Bhalla (2022), the inclusion of staff and the human touch is considered crucial in the hotel business. However, the emergence of AI has raised concerns within the industry regarding the potential loss of the personalised human aspect. In their 2023 study, Ersoy and Ehtiyar (2023) investigated the impact of AI on two key categories of employee job outcomes, namely attitudinal and behavioural outcomes. The first category encompasses several elements such as job satisfaction, organisational commitment, well-being, job engagement, burnout and job satisfaction. The second category includes variables such as job performance and inventiveness. The study carried out by Yoo *et al.* (2019) reveals that emotional strain experienced by frontline personnel is a prevalent factor that diminishes their available resources and can lead to job burnout, resignation and reduced motivation. Conversely, workers who receive a poor evaluation of AI may become fearful about losing their jobs in the future should AI take their place.

Koo *et al.* (2021) highlighted that robots can make up 25% of the workforce in the hotel industry and that AI is altering the relationship between humans and machines. As per Yu *et al.* (2023), organisations that integrate AI seek to attain sustainability harmony with employees by means of sociotechnical systems. Collaborative efforts of this nature yield a mutually beneficial outcome, wherein workers exhibit heightened commitment and efficiency, while technology is effectively employed to enhance productivity and working conditions. Productivity in hospitality is a debatable category, as the intangible part of the hotel product makes it difficult for employees to meet certain managerial outcome standards. In other words, the relationship between productivity and customer experience in the hospitality industry may not always hold true in terms of performance outcomes. The interaction between guests and employees in the hotel unit can significantly positively influence the customer experience, more so than the assistance of AI agents. For instance, Sharma (2020) demonstrated that guests in Delhi's hotels are somewhat excited about the introduction of automation through service robots. This is because, during their research, AI and its implementations were novel to the hotel audience. It makes sense that the introduction of new technologies will draw guests' interest at the outset when their curiosity and eagerness to experiment are likely to be high.

Bhargava *et al.* (2021) define job satisfaction as the positive affective state that arises from an individual's occupation and work experience. Numerous enterprises are currently exerting significant efforts to cultivate and integrate AI into their strategic frameworks, with the aim of enhancing production, performance and satisfaction. Recently conducted research has identified two primary categories of factors that exert an influence on employee job satisfaction: personality attributes and work-organisational conditions (Younis *et al.*, 2024). Personal characteristics encompass several factors such as age, gender, health status, educational background and abilities (Chen and Li, 2024). Lyu *et al.* (2022) have identified salary, job security, pressure, autonomy and work environment as salient components of work-organisational settings. Scholarly research has not sufficiently explored the impact of technical improvements in the hospitality sector on the psychological well-being of its workforce (Yu *et al.*, 2023; Younis, 2024; Koo *et al.*, 2021).

The issue of burnout among hotel employees is a notable worry, particularly in an industry renowned for its high-pressure atmosphere and rigorous work schedules (Kong *et al.*, 2021). Burnout is associated with turnover intention of hotel employees since they are feeling exhausted mostly psychologically from the working environment (Chen and Li, 2024; He *et al.*, 2023). Integrating AI in the hotel industry can assist in alleviating certain difficulties, but it also presents its own distinct set of challenges and factors to consider. The burnout is likely to be caused by the insecurity that comes from employees losing their jobs and be replaced by AI technologies (He *et al.*, 2023). Employees tend to feel threatened and stressed about technological engagement, with this to impact their performance. Additionally, the perceived job insecurity of employees may cause, in turn, the deterioration of their physical, emotional and cognitive job engagement with the hotel company. As a result, this deterioration may prompt employees to consider leaving the company (Koo *et al.*, 2021).

In case of safety concerns on the use and deployment of AI in hotels, the main issue with the provision of ongoing education is essential to ensure that personnel are well informed about the latest developments in AI, safety procedures and the optimal use of AI tools (Yu *et al.*, 2023). Belanche *et al.* (2024) have outlined several negative characteristics of AI agents on the side of service encounters like the misuse of information by AI service providers, employment replacement and social inequalities, lack of emotion and empathy of the existing AI systems, lack of consciousness and moral concern of AI systems, especially in sensitive legal situations. Human touch and service are irreplaceable in hotels and an integrated strategy in which AI supports, but it does not replace human engagement and enhance guest experiences. For instance, AI can manage ordinary queries, allowing human personnel to concentrate on generating meaningful connections (Brochado *et al.*, 2018). Koo *et al.* (2021) have identified two crucial aspects of implementing AI agents in the hospitality industry. The first one is about

enhancing opportunities for personalisation with customers based on previous transactions, bookings, purchases and other types of historical data. The second issue has been outlined as an existing paradox about the evidence of more non-contact services between AI agents and customers compared to the opportunities for personalisation.

Employees should consider AI as an enabler tool that can enhance their working conditions. AI systems such as chatbots and virtual assistants provide 24/7 customer support, assisting visitors with queries, reservations and details regarding hotel facilities (Webster and Ivanov, 2020). By automating monotonous processes, this technology enables hotel personnel to concentrate on more intricate visitor requirements. Facilitating the integration of AI technology into hotel staff training can guarantee the provision of a tailored service. In order to achieve this balance, it is essential to educate personnel on how to maximise AI tools efficiently while nevertheless ensuring a pleasant visitor experience (Chathoth *et al.*, 2016).

### 3. Methodology

#### 3.1 Measure instrument

To investigate the hypotheses and address the outlined objectives that were proposed, qualitative research was conducted and a novel measurement instrument was developed. A quantitative questionnaire consisting of seven sections was developed in Greek and English via the Qualtrics platform. The questionnaires were disseminated to 260 employees of 4- and 5-star hotels in Limassol. The survey instrument, which included Likert-scale questions, underwent reliability testing to ensure robust measurement and convenience sampling was employed. The data were analysed using SPSS.

The initial section of the questionnaire comprised the demographic characteristics of the participants. The second section was designed to encourage respondents to express their opinions on the feeling of job performance and creativity on five statements. The third section included five statements evaluating their job turnover intention. The fourth segment, which consisted of six statements, evaluated the feeling of job security, and the fifth section contained five statements that evaluated the value of a human touch in customer service. The final two sections examined the AI safety concerns and their attitudes towards technology adoption, which included five and four statements, respectively. Section two until six, the self-assessment utilised a five-point Likert scale, with 1 representing “strongly disagree” and 5 representing “strongly agree”. In Table 1, the 18 statements of the final model are presented in conjunction with their respective descriptive statistics.

#### 3.2 Participants and procedure

The study’s target population included all employees of 4-star and 5-star hotels located in Cyprus. Convenience sampling was employed as the distribution methodology. Efforts were made to ensure that responses were obtained from individuals across various key departments within the hospitality sector. Out of the 350 distributed questionnaires, 270 responses were successfully completed (response rate: 77.14%).

#### 3.3 Analysis strategy

Exploratory factor analysis (EFA) with a principal component method was implemented to confirm the dimensions of the measurement constructs. The Kaiser–Meyer–Olkin (KMO) measure of sample adequacy and Bartlett’s test of sphericity were used to evaluate if factor analysis was adequate. The KMO sample adequacy test yields a value of 0.60 or above, indicating that the data are acceptable for EFA (Tabachnick and Fidel, 1989). A considerable Bartlett’s test of sphericity is also necessary. After determining the dimensions, a Cronbach’s alpha reliability test was performed on each measuring scale. Any item with an item-to-total correlation of less than 0.50 was deleted (Chen and Hsu, 2001). From the 18 questions included in the questionnaire, 6 factors were extracted, which were used to answer the research questions through correlation tests.

**Table 1.** The descriptive statistics of the 18 items included in the final model

Construct and items	Mean	SD
<i>Job performance and creativity</i>		
JPERCR1. AI technologies have positively impacted my job performance	4.02	0.872
JPERCR2. AI technologies have enhanced my creativity and innovation in my work	3.67	1.025
JPERCR3. AI technologies have affected my loyalty and dedication to the organisation	3.44	1.091
<i>Job burnout and turnover intention</i>		
JBRNTRN1. I feel overwhelmed or exhausted by the demands of working with AI technologies	2.00	1.010
JBRNTRN2. The introduction of AI technologies has affected my intention to leave my current job	1.96	0.960
JBRNTRN3. The introduction of AI technologies has contributed to my overall job stress	1.95	0.994
<i>Job insecurity</i>		
JINS1. The integration of AI technologies is perceived as a threat to your job security	3.04	1.407
JINS2. AI technologies will negatively impact your future professional development in the company	3.19	1.366
JINS3. You fear that automation powered by AI could take the place of or lessen the necessity for human labour in your position	3.48	1.207
<i>Human touch</i>		
HTCH1. AI technologies enable personalised interactions for guests in the hospitality industry	3.58	0.925
HTCH2. Interactions with guests in the hospitality sector maintain a balance between the human touch and AI-driven services?	3.54	0.844
HTCH3. AI technologies can't deliver personalised service to guests better than hotel employees	3.57	1.183
<i>Safety</i>		
SAF1. I received adequate training on the safe use of AI technologies in my work environment	2.33	1.278
SAF2. AI technologies enhance safety measures in the workplace	2.82	1.002
SAF3 I believe that the integration of AI technologies in hospitality poses potential safety risks for guests and employees	3.47	1.090
<i>Technology adoption</i>		
TECH1. The integration of new technologies has significantly improved operational efficiency in the hospitality sector	3.93	0.711
TECH2. I receive adequate training to effectively utilise and adopt to new technologies	2.63	1.098
TECH3. I feel that AI technologies complement my skills and enhance collaboration in my workplace	3.75	1.003
<b>Source(s):</b> Authors		

#### 4. Results

The demographic profile of the 270 respondents is depicted in [Table 2](#). During the EFA, the loadings were investigated using principal component analysis with varimax rotation with Kaiser Normalisation in SPSS 26 software. A score of 0.899 was obtained from the KMO test, which exceeds the minimum permissible score of 0.6. This substantiates the test's high sampling adequacy. Furthermore, the results of Bartlett's sphericity test were statistically significant ( $p < 0.000$ ). A Cronbach's alpha analysis was conducted to address concerns regarding dependability, resulting Cronbach's alpha scores for all factors greater than 0.790.

The result of the principal component factor analysis indicated that there are six underlying dimensions ([Table 3](#)). To ensure that each factor identified by EFA had only one dimension and each attribute loaded only on one factor, attributes that had factor loadings of lower than 0.40 and attributes loading on more than one factor with a loading score of equal to or greater than 0.40 on each were eliminated from the analysis.

Next, the seven hypotheses that had been formulated were subjected to testing in the research questions.

**Table 2.** Profile of the respondents

		Frequency	Percent
Gender	Male	127	47.0
	Female	143	53.0
	Total	270	100.0
Age	18–30	73	27.0
	31–40	70	25.9
	41–50	61	22.6
	Over 50	66	24.4
	Total	270	100.0
Education	High school graduate	79	29.3
	College/university – 2 or 3-year diploma	80	29.6
	College/university – 4-year bachelor’s degree (BSc, BA, etc.)	76	28.1
	Graduate degree – master’s degree (MSc, MBA, MA, etc.)	25	9.3
	Postgraduate degree (Ph.D., doctorate, etc.)	3	1.1
	Other	7	2.6
Department/division	Total	270	100.0
	Senior management – Top management/administration	42	15.6
	Food and beverage division	103	38.1
	Rooms division	58	21.5
	Marketing and sales division	10	3.7
	Human resources division	16	5.9
	Engineering and maintenance	13	4.8
	Other	28	10.4
Level of employment	Total	270	100.0
	Entry-level employee	137	50.7
	Managerial entry-level – supervisory	44	16.3
	Managerial mid-level – department head	59	21.9
	Upper level (top management)	30	11.1
Total	270	100.0	

Source(s): Authors

- H1.* The use of AI technologies positively impacts the human touch in hotel services.
- H2.* The use of AI technologies has a positive impact on guests’ and employees’ safety.
- H3.* The use of AI technologies negatively impacts employees’ job performance and creativity.
- H4.* The lack of human touch in hotel services is perceived as a threat to job security due to the use of AI technologies.
- H5.* The concern for guests’ and employees’ safety has a positive impact on employees’ job insecurity.
- H6.* The improvements in employees’ job performance and creativity negatively impact employees’ job insecurity.
- H7.* The employees’ job insecurity has a positive impact on job turnover.

Pearson’s correlation tests were used to analyse the research hypotheses and examine the correlations between the factors. As shown in Table 4, the use of AI technologies was found to have a positive correlation with human touch in hotel services (H1) ( $r = 0.688, p < 0.01$ ) and with the impact on guests’ and employees’ safety (H2) ( $r = 0.663, p < 0.01$ ). However, a negative correlation was observed between the use of AI technologies and employees’ job

**Table 3.** Model's convergent validity qualities

Item codes	Job performance & creativity (JPERCR)	Job burnout and turnover intention (JBRNTRN)	Job insecurity (JINS)	Human touch (HTCH)	Safety (SAF)	Technology adoption (TECH)
JPERCR1. AI technologies have positively impacted my job performance.	0.712					
JPERCR2. AI technologies have enhanced my creativity and innovation in my work.	0.699					
JPERCR3. AI technologies have affected my loyalty and dedication to the organization	0.798					
JBRNTRN1. I feel overwhelmed or exhausted by the demands of working with AI technologies.		0.722				
JBRNTRN2. The introduction of AI technologies has affected my intention to leave my current job.		0.749				
JBRNTRN3. The introduction of AI technologies has contributed to my overall job stress.		0.754				
JINS1. The integration of AI technologies is perceived as a threat to your job security.			0.749			
JINS2. AI technologies will negatively impact your future professional development in the company.			0.754			
JINS3. You fear that automation powered by AI could take the place of or lessen the necessity for human labor in your position.			0.706			
HTCH1. AI technologies enable personalized interactions for guests in the hospitality industry				0.795		
HTCH2. Interactions with guests in the hospitality sector maintain a balance between the human touch and AI-driven services?				0.810		
HTCH3. AI technologies can't deliver personalized service to guests better than hotel employees.				0.833		
SAF1. I received adequate training on the safe use of AI technologies in my work environment.					0.798	
SAF2. AI technologies enhance safety measures in the workplace.					0.901	
SAF3. I believe that the integration of AI technologies in hospitality poses potential safety risks for guests and employees					0.921	
TECH1. The integration of new technologies has significantly improved operational efficiency in the hospitality sector.						0.697
TECH2. I receive adequate training to effectively utilize and adopt to new technologies.						0.744
TECH3. I feel that AI technologies complement my skills and enhance collaboration in my workplace.						0.789

**Source(s):** Authors

**Table 4.** Summary of hypotheses and results

Hypotheses	Pearson's coefficient	Results
H1: TECH ↔ HTCH	0.688**	Accepted
H2: TECH ↔ SAF	0.663**	Accepted
H3: TECH ↔ JPERCR	-0.298*	Accepted
H4: HTCH ↔ JINS	0.528**	Accepted
H5: SAF ↔ JINS	0.499**	Accepted
H6: JPERCR ↔ JINS	0.099	Cannot be supported
H7: JINS ↔ JTRN	0.575**	Accepted

**Source(s):** Authors

performance and creativity (H3) ( $r = -0.298, p < 0.05$ ). Furthermore, the study found that the lack of human touch in hotel services and concern for guests' and employees' safety had a positive correlation with employees' job insecurity (H4:  $r = 0.528, p < 0.01$ ; H5:  $r = 0.499, p < 0.01$ ). No statistically significant association was found between improvements in employees' job performance and creativity and employees' job insecurity (H6) ( $r = 0.099, n.s.$ ). Lastly, employees' job insecurity showed a positive correlation with job turnover (H7) ( $r = 0.575, p < 0.01$ ).

### 5. Conclusion

The results of the study are indicative and provide an understanding of AI and employees' job performance and job insecurity. In particular, employees feel intimidated by AI-assisted technologies, and this negatively impacts their job performance (Chen and Li, 2024). As a result, employees begin to consider job turnover (Astuti *et al.*, 2024). The top management's role is to foster an environment where humans can co-exist and work together with AI technological tools. Therefore, it's crucial to motivate employees to embrace AI-powered solutions, rather than feeling intimidated by them, and to comprehend that these solutions foster an environment where technology enhances human interaction and elevates the overall guest experience significantly (Khaliq *et al.*, 2022). However, employees are occupied with a feeling of losing their jobs because of AI incorporation in hotel services (Granström *et al.*, 2023). Additionally, employees experience a sense of insecurity as procedures replace human touch by AI (Roy *et al.*, 2020). Although AI has the capacity to improve safety and efficiency in the hotel sector, it is crucial to carefully consider its deployment. By placing emphasis on staff training, ethical standards and strong security measures, hotels may establish a more secure workplace where employees can succeed while taking advantage of technological improvements.

The provision of ongoing education is essential to ensure that personnel are well informed about the latest developments in AI, safety procedures and the optimal use of AI tools. Incorporating AI into the hospitality sector has revolutionised several operational elements of hotels, improving effectiveness and service provision. Yet, preserving a human touch is an essential factor in guaranteeing client pleasure and customising encounters (Belanche *et al.*, 2024). Thus, the role of the management team is to ensure that AI is used as facilitators of the operations, and humans are the quintessence of providing real hospitality services. Successful coexistence will likely hinge on a balanced strategy that utilises AI to enhance efficiency while guaranteeing that personnel receive support, training and integration into the advancing technological environment. By emphasising employee adaptation and client interaction, the hospitality sector can utilise AI as a collaborator rather than a threat. The study provides a foundation for future research that can broaden the scope of the findings. In particular, a future study might examine the way employees react after intensive training in AI competencies. Another avenue for research could involve conducting qualitative interviews with departmental managers to gain a comprehensive understanding of the threats employees

face due to AI while also developing strategies to mitigate any negative feelings of job insecurity that may lead to job turnover.

## References

- Astuti, E., Harsono, I., Uhai, S., Muthmainah, H.N. and Vandika, A.Y. (2024), "Application of artificial intelligence technology in customer service in the hospitality industry in Indonesia: a literature review on improving efficiency and user experience", *Sciences Du Nord Nature Science and Technology*, Vol. 1 No. 1, pp. 28-36.
- Belanche, Belk, R.W., Casaló, L.V. and Flavián, C. (2024), "The dark side of artificial intelligence in services", *Service Industries Journal*, Vol. 44 Nos 3-4, pp. 149-172, doi: [10.1080/02642069.2024.2305451](https://doi.org/10.1080/02642069.2024.2305451).
- Bhargava, A., Bester, M. and Bolton, L. (2021), "Employees' perceptions of the implementation of robotics, artificial intelligence, and automation (RAIA) on job satisfaction, job security, and employability", *Journal of Technology in Behavioral Science*, Vol. 6 No. 1, pp. 106-113, doi: [10.1007/s41347-020-00153-8](https://doi.org/10.1007/s41347-020-00153-8).
- Braganza, A., Chen, W., Canhoto, A. and Sap, S. (2021), "Productive employment and decent work: the impact of AI adoption on psychological contracts, job engagement and employee trust", *Journal of Business Research*, Vol. 131, pp. 485-494, doi: [10.1016/j.jbusres.2020.08.018](https://doi.org/10.1016/j.jbusres.2020.08.018).
- Brochado, A., Morgado, E. and Vilarés, M.J. (2018), "The role of AI and human interaction in the hospitality industry", *Tourism Management*, Vol. 69, pp. 73-86.
- Bulchand-Gidumal, J., William Secin, E., O'Connor, P. and Buhalis, D. (2023), "Artificial intelligence's impact on hospitality and tourism marketing: exploring key themes and addressing challenges", *Current Issues in Tourism*, Vol. 27 No. 14, pp. 2345-2362, doi: [10.1080/13683500.2023.2229480](https://doi.org/10.1080/13683500.2023.2229480).
- Chathoth, P.K., Altintas, M. and Lutz, E. (2016), "Technologies in hospitality: are hotels ready for digital disruption?", *International Journal of Hospitality Management*, Vol. 56, pp. 12-21.
- Chen, J.S. and Hsu, C. (2001), "Developing and validating a riverboat gaming impact scale", *Annals of Tourism Research*, Vol. 28 No. 2, pp. 459-476, doi: [10.1016/s0160-7383\(00\)00059-1](https://doi.org/10.1016/s0160-7383(00)00059-1).
- Chen, F. and Li, R. (2024), "Improvement and replacement: the dual impact of automation on employees' job satisfaction", *Systems*, Vol. 12 No. 2, p. 46, doi: [10.3390/systems12020046](https://doi.org/10.3390/systems12020046).
- Ersoy, A. and Ehtiyar, R. (2023), "The impact of artificial intelligence on hospitality employees' work outcomes", *Advances in Hospitality and Tourism Research (AHTR)*, Vol. 11 No. 4, pp. 505-526.
- Granström, D.E.A.S., Pronk, A.M. and Criscione-Naylor, N. (2023), "Robotic services in the hotel industry: an examination of Henn Na hotels", *International Journal of Gaming, Hospitality and Tourism*, Vol. 3 No. 1, available at: [https://stockton.edu/light/documents/ijght\\_vol.3no.1/robotic\\_services\\_henn\\_na\\_hotels-6.7.23.pdf](https://stockton.edu/light/documents/ijght_vol.3no.1/robotic_services_henn_na_hotels-6.7.23.pdf)
- Gursoy, D., Li, Y. and Song, H. (2023), "ChatGPT and the hospitality and tourism industry: an overview of current trends and future research directions", *Journal of Hospitality Marketing and Management*, Vol. 32 No. 5, pp. 579-592, doi: [10.1080/19368623.2023.2211993](https://doi.org/10.1080/19368623.2023.2211993).
- He, C., Teng, R. and Song, J. (2023), "Linking employees' challenge-hindrances appraisals toward AI to service performance: the influences of job crafting, job insecurity and AI knowledge", *International Journal of Contemporary Hospitality Management*, Vol. 36 No. 3, pp. 975-994, doi: [10.1108/ijchm-07-2022-0848](https://doi.org/10.1108/ijchm-07-2022-0848).
- IndustryARC (2023), "Travel & hospitality AI market– forecast (2021-2026)", available at: <https://www.industryarc.com/Report/18662/travel-hospitality-ai-market.13May2024.html#:~:text=Travel%20%26%20Hospitality%20AI%20Market%20Overview,forecast%20period%202021%20to%202026>
- Ivanov, S., Seyitoglu, F. and Webster, C. (2023), "AI and robotics in the lodging industry", in Fu, R. (Ed.), *Artificial Intelligence, Machine Learning and Robot Applications in Hospitality Business*, Kendall Hunt, pp. 163-180.

- Khaliq, A., Waqas, A., Nisar, Q.A., Haider, S. and Asghar, Z. (2022), "Application of AI and robotics in hospitality sector: a resource gain and resource loss perspective", *Technology in Society*, Vol. 68, 101807, doi: [10.1016/j.techsoc.2021.101807](https://doi.org/10.1016/j.techsoc.2021.101807).
- Kim, H., So, K.K.F., Shin, S. and Li, J. (2024), "Artificial intelligence in hospitality and tourism: insights from industry practices, research literature, and expert opinions", *Journal of Hospitality and Tourism Research*, pp. 366-385, doi: [10.1177/10963480241229235](https://doi.org/10.1177/10963480241229235).
- Kong, H., Yuan, Y., Baruch, Y., Bu, N., Jiang, X. and Wang, K. (2021), "Influences of artificial intelligence (AI) awareness on career competency and job burnout", *International Journal of Contemporary Hospitality Management*, Vol. 33 No. 2, pp. 717-734, doi: [10.1108/ijchm-07-2020-0789](https://doi.org/10.1108/ijchm-07-2020-0789).
- Koo, B., Curtis, C. and Ryan, B. (2021), "Examining the impact of artificial intelligence on hotel employees through job insecurity perspectives", *International Journal of Hospitality Management*, Vol. 95, 102763, doi: [10.1016/j.ijhm.2020.102763](https://doi.org/10.1016/j.ijhm.2020.102763).
- Li, J.J., Bonn, M.A. and Ye, B.H. (2019), "Hotel employee's artificial intelligence and robotics awareness and its impact on turnover intention: the moderating roles of perceived organizational support and competitive psychological climate", *Tourism Management*, Vol. 73, pp. 172-181, doi: [10.1016/j.tourman.2019.02.006](https://doi.org/10.1016/j.tourman.2019.02.006).
- Lyu, Y., Wu, C., Kwan, H.K., Lee, C. and Deng, H. (2022), "Why and when job insecurity hinders employees' taking charge behavior: the role of flexibility and work-based self-esteem", *Economic and Industrial Democracy*, Vol. 44 No. 3, pp. 853-874, doi: [10.1177/0143831x221100852](https://doi.org/10.1177/0143831x221100852).
- McClure, P.K. (2018), "'You're fired,' says the robot: the rise of automation in the workplace, technophobes, and fears of unemployment", *Social Science Computer Review*, Vol. 36 No. 2, pp. 139-156, doi: [10.1177/0894439317698637](https://doi.org/10.1177/0894439317698637).
- Mingotto, E., Montaguti, F. and Tamma, M. (2021), "Challenges in re-designing operations and jobs to embody AI and robotics in services. Findings from a case in the hospitality industry", *Electronic Markets*, Vol. 31 No. 3, pp. 493-510, doi: [10.1007/s12525-020-00439-y](https://doi.org/10.1007/s12525-020-00439-y).
- Nam, K., Dutt, C.S., Chathoth, P., Daghfous, A. and Khan, M.S. (2021), "The adoption of artificial intelligence and robotics in the hotel industry: prospects and challenges", *Electronic Markets*, Vol. 31 No. 3, pp. 553-574, doi: [10.1007/s12525-020-00442-3](https://doi.org/10.1007/s12525-020-00442-3).
- Nozawa, C., Togawa, T., Velasco, C. and Motoki, K. (2022), "Consumer responses to the use of artificial intelligence in luxury and nonluxury restaurants", *Food Quality and Preference*, Vol. 96, 104436, doi: [10.1016/j.foodqual.2021.104436](https://doi.org/10.1016/j.foodqual.2021.104436).
- Putri, R.N.P., Situmorang, R. and Mehrotra, A. (2023), "Human vs. Robots: the application of smart technology in the hotel industry", *Journal of Management and Entrepreneurship*, Vol. 25 No. 2, pp. 142-151, doi: [10.9744/jmk.25.2.142-151](https://doi.org/10.9744/jmk.25.2.142-151).
- Rather, R.A. (2024), "AI-powered ChatGPT in the hospitality and tourism industry: benefits, challenges, theoretical framework, propositions and future research directions", *Tourism Recreation Research*, Vol. 0 No. 0, pp. 1-11, doi: [10.1080/02508281.2023.2287799](https://doi.org/10.1080/02508281.2023.2287799).
- Reis, J., Melão, N., Salvadorinho, J., Soares, B. and Rosete, A. (2020), "Service robots in the hospitality industry: the case of Henn-na hotel, Japan", *Technology in Society*, Vol. 63, 101423, doi: [10.1016/j.techsoc.2020.101423](https://doi.org/10.1016/j.techsoc.2020.101423).
- Roy, P., Ramaprasad, B.S., Chakraborty, M., Prabhu, N. and Rao, S. (2020), "Customer acceptance of Use of artificial intelligence in hospitality services: an Indian hospitality sector perspective", *Global Business Review*.
- Saini, A. and Bhalla, R. (2022), "Artificial intelligence and automation", *Handbook of Research on Innovative Management Using AI in Industry 5.0*, pp. 88-97, doi: [10.4018/978-1-7998-8497-2.ch006](https://doi.org/10.4018/978-1-7998-8497-2.ch006).
- Sharma (2020), "Guest attitude towards introducing automation using service robots in hotels of Delhi", *International Journal of Advanced Science and Technology*, Vol. 29 No. 5, pp. 2930-2937.
- Tabachnick, B. and Fidell, L. (1996), *Using Multivariate Statistics*, 2nd ed., Harper Collins, New York.

- 
- Takyar, A. (2023), *AI Use Cases in Hospitality*, LeewayHertz - AI Development Company, 13 May 2023, available at: [www.leewayhertz.com/ai-use-cases-in-hospitality/](http://www.leewayhertz.com/ai-use-cases-in-hospitality/)
- Webster, C. and Ivanov, S. (2020), "Robotics, artificial intelligence, and the evolving nature of work", in George, B. and Paul, J. (Eds), *Digital Transformation in Business and Society. Theory and Cases*, Palgrave-MacMillan, pp. 127-144.
- Yoo, W.S., Back, K.-J. and Park, J. (2019), "Editorial: analysing emotional labor in the service industries: consumer and business perspectives", *Frontiers in Psychology*, Vol. 10, p. 2290, doi: [10.3389/fpsyg.2019.02290](https://doi.org/10.3389/fpsyg.2019.02290).
- Younis, Z., Ibrahim, M. and Azzam, H. (2024), "The impact of artificial intelligence on organisational behavior: a risky tale between myth and reality for sustaining workforce", *European Journal of Sustainable Development*, Vol. 13 No. 1, p. 109, doi: [10.14207/ejsd.2024.v13n1p109](https://doi.org/10.14207/ejsd.2024.v13n1p109).
- Yu, X., Xu, S. and Ashton, M. (2023), "Antecedents and outcomes of artificial intelligence adoption and application in the workplace: the socio-technical system theory perspective", *Information Technology and People*, Vol. 36 No. 1, pp. 454-474, doi: [10.1108/itp-04-2021-0254](https://doi.org/10.1108/itp-04-2021-0254).

### Further reading

- Brougham, D. and Haar, J. (2018), "Smart technology, artificial intelligence, robotics, and algorithms (STARA): employees' perceptions of our future workplace", *Journal of Management and Organization*, Vol. 24 No. 2, pp. 239-257, doi: [10.1017/jmo.2016.55](https://doi.org/10.1017/jmo.2016.55).
- Pérez-López, R. and others (2019), "Technology anxiety in hotel employees: a conceptual framework", *International Journal of Hospitality Management*, Vol. 76, pp. 80-93.

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