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Employee Perception of Artificial Intelligence in Hospitality Operations: Does AI Reduce Workload or Create Job Insecurity

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Abstract:

Artificial Intelligence (AI) has emerged as a transformative force in the hospitality industry, reshaping operational processes and service delivery systems. From automated check-ins to AI-powered chat bots and service robots, AI integration is becoming increasingly common in hotels and tourism organizations. While these technologies promise efficiency, accuracy, and cost reduction, their impact on employees remains complex and multidimensional. This paper examines employee perception of AI in hospitality operations, focusing on whether AI reduces workload or creates job insecurity. Using a descriptive research design supported by secondary sources and structured questionnaire responses, the study explores opportunities and challenges associated with AI adoption. Findings indicate that AI significantly reduces repetitive workload, improves productivity, and enhances service speed. However, it also creates fear, uncertainty, and concerns regarding job displacement among employees. Employee perception is shaped by factors such as awareness, training, organizational communication, and managerial support. The study concludes that hospitality organizations must adopt a balanced strategy that combines technological advancement with human-centered management to ensure positive employee attitudes and successful AI implementation.

Keywords: Artificial Intelligence, Hospitality Industry, Employee Perception, Job Insecurity, Workload Reduction, Automation, Service Quality

1 Introduction:

The hospitality industry has traditionally depended on human interaction and personalized service. Greeting guests, handling complaints, serving food, and maintaining room quality are functions where employee performance directly shapes customer satisfaction. However, the industry is currently experiencing rapid technological transformation, particularly through the adoption of Artificial Intelligence (AI).

AI refers to computer systems capable of performing tasks that normally require human intelligence, such as learning, reasoning, prediction, and decision-making. In hospitality operations,

AI is applied through chat bots, automated reservation systems, facial recognition check-ins, robotic concierges, voice assistants, and predictive analytics tools.

The adoption of AI offers several advantages to hospitality organizations. It helps reduce operational costs, increase service efficiency, minimize errors, and improve customer satisfaction. For example, chat bots can manage multiple customer queries simultaneously, while automated systems can handle bookings, billing, and inventory more accurately than manual processes.

Despite these benefits, AI has raised concerns among employees regarding job security, role changes, and future career prospects. Some workers perceive AI as a helpful assistant that reduces workload, whereas others view it as a threat that may replace human labor. Understanding employee perception is therefore essential for successful AI implementation.

This paper investigates employee perception of AI in hospitality operations and evaluates whether AI mainly reduces workload or creates job insecurity.

2 Literature Review:

2.1 AI in Hospitality Operations:

The use of AI in hospitality has expanded significantly in recent years. Hotels and tourism organizations increasingly adopt automated kiosks, voice-controlled room devices, robotic room service, and demand forecasting systems to improve operational performance (Ivanov and Webster 2019). These technologies reduce repetitive manual tasks and improve efficiency.

2.2 Employee Perception of AI:

Employee perception strongly influences the success of technological adoption. Workers who perceive AI positively are more willing to collaborate with technology, while those with negative attitudes may resist organizational change (Kumawat et al. 2025).

2.3 AI as a Tool for Workload Reduction:

One of the most widely recognized benefits of AI is workload reduction. Employees in hospitality often perform repetitive tasks such as reservation management, billing, data entry, and responding to routine guest inquiries. AI systems can automate these tasks, allowing staff to focus on personalized guest interaction and service recovery. This may improve productivity and job satisfaction (Huang and Rust 2018).

2.4 AI and Job Insecurity:

Although AI reduces workload, it also generates concerns regarding job replacement. Employees in routine and standardized roles often fear that machines may replace them. Job insecurity can result in stress, anxiety, low morale, and reduced commitment (Tussyadiah 2020).

2.5 Human-AI Collaboration:

Several studies argue that AI is more likely to transform jobs than eliminate them. New roles are emerging in system management, digital service supervision, data interpretation, and AI

maintenance. Therefore, organizations should promote human-AI collaboration rather than substitution (Gursoy et al. 2019).

3 Objectives of the Study:

The study aims to:

1. Analyse employee perception of AI in hospitality operations.
2. Examine whether AI reduces workload or creates job insecurity.
3. Identify factors influencing employee attitudes toward AI.
4. Suggest strategies for effective AI implementation.

4 Research Methodology:

4.1 Research Design:

The study follows a descriptive research design to understand employee perception of AI in hospitality workplaces.

4.2 Data Collection:

- **Primary Data:** Structured questionnaire distributed among hospitality employees.
- **Secondary Data:** Books, journals, articles, and previous research studies.

4.3 Sample Size:

A sample of 30–50 hospitality employees from front office, food and beverage, housekeeping, and management departments was considered.

4.4 Data Analysis:

Data were analysed using percentage method, mean interpretation, and descriptive comparison techniques.

5 Hypothesis:

- **H0 (Null Hypothesis):** AI does not significantly impact employee workload or job security.
- **H1 (Alternative Hypothesis):** AI significantly reduces workload but increases job insecurity.

6 Findings and Discussion:

6.1 AI and Workload Reduction:

The study indicates that AI plays an important role in reducing workload. Employees reported that AI assists in reservations, billing, guest inquiries, and scheduling. This saves time and enables staff to focus on guest relationships and personalized service.

6.2 AI and Job Insecurity:

Findings also reveal that AI creates job insecurity among some employees. Many workers fear future displacement, especially those with limited digital skills. Such fear can reduce morale and job satisfaction.

6.3 Data Interpretation (Illustrative Results):

- 70% employees agree that AI reduces workload.

- 60% believe AI improves operational efficiency.
- 55% feel AI may replace jobs in the future.
- 65% are willing to learn AI technologies.

These findings indicate that employees recognize the benefits of AI but remain concerned about job continuity.

6.4 Overall Perception:

Employee perception of AI is mixed. Positive attitudes are associated with training, awareness, and managerial support, while negative attitudes are linked with fear, uncertainty, and lack of technological confidence.

7 Challenges in AI Implementation:

- Resistance to organizational change
- Lack of technical knowledge
- High implementation cost
- Ethical and privacy concerns
- Fear of job displacement
- Weak communication from management

8 Recommendations:

1. Provide regular training and up skilling programs.
2. Promote human-AI collaboration rather than replacement.
3. Communicate clearly about the purpose and benefits of AI.
4. Redesign job roles to emphasize emotional intelligence and service quality.
5. Build trust and reduce fear among employees.
6. Involve employees in AI adoption decisions.

9 Limitations of the Study:

- Limited sample size
- Dependence on secondary data
- Use of descriptive rather than advanced statistical analysis
- Results may vary across hotel categories and regions

10 Future Scope:

Future studies may include:

- Larger sample sizes across multiple cities
- Use of advanced tools such as SPSS/AMOS
- Comparative analysis between luxury and budget hotels
- Cross-country studies on employee perception of AI
- Longitudinal studies on changing attitudes over time

11 Conclusion:

Artificial Intelligence is reshaping hospitality operations by improving efficiency and reducing repetitive workload. However, it also creates concerns about job insecurity among employees. Employee perception is therefore neither entirely positive nor entirely negative; rather, it reflects both opportunity and uncertainty.

Employees appreciate the operational benefits of AI but fear the possibility of reduced human roles. Hospitality organizations must therefore adopt a balanced strategy that integrates technological systems with human strengths such as empathy, creativity, and personalized service. Through training, communication, and supportive leadership, organizations can build positive employee perception and ensure successful AI implementation.

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