

AI-Enabled Guest Services and Employee Attrition: A Study of 5-Star Hotels in Mumbai

Rahul Parchure*

Bernadette D'Silva**

ABSTRACT

The hospitality industry is undergoing rapid digital transformation through the adoption of Artificial Intelligence (AI) and chatbot technologies. In five-star hotels, these technologies are increasingly used for reservations, check-in support, room-service requests, routine guest enquiries and concierge recommendations. The present study examines how AI and chatbots influence employee attitudes, job satisfaction, and workload, perceived job security, well-being, retention and attrition intentions among employees in five-star hotels in Mumbai.

The study uses a structured questionnaire and a mixed-method orientation. The reported statistical analysis is based on 98 respondents and includes descriptive interpretation, Chi-square tests, reliability analysis, Pearson correlation and a Shapiro–Wilk normality test. The findings show generally positive perceptions of AI: employees associate AI with greater efficiency, faster and more accurate service, reduced repetitive workload and greater scope for personalized guest interaction. At the same time, job-security concerns and anxiety about future technological change remain important.

The inferential results indicate that gender and income do not have statistically significant associations with the major AI-related workplace variables. The measurement scale demonstrates strong internal consistency (Cronbach's Alpha = 0.856; McDonald's Omega = 0.857). Pearson correlations are positive and statistically significant among AI operations, employee attitudes, well-being/job satisfaction, and retention/organizational commitment. The study therefore indicates that AI can support employee outcomes when implemented as an augmentation tool with adequate training, communication, organizational support and opportunities for skill development.

Keywords: Artificial Intelligence, Chatbots, Guest Services, Employee Attrition, Job Satisfaction, Employee Retention, Five-Star Hotels, Technology Adoption, Human–Technology Interaction, Mumbai

1. INTRODUCTION

Hospitality is traditionally a human-centric industry, but five-star hotels are increasingly combining human service with digital technologies. AI and chatbots are being introduced to improve speed, consistency, accuracy, personalization and availability of guest services. Their use can automate routine enquiries and transactions while allowing employees to devote greater attention to complex service recovery, relationship building and personalized experiences.

* Assistant Professor, Anjuman-I-Islam's Allana Institute of Management Studies, Mumbai

** Director, Anjuman-I-Islam's Allana Institute of Management Studies, Mumbai

The operational benefits of AI are accompanied by human-resource implications. Employees may experience lower workload and greater productivity, but they may also perceive automation as a threat to employment, role identity and future career prospects. This issue is particularly important in hospitality because employee engagement, emotional labour and interpersonal interaction are central to service quality.

Employee attrition remains a persistent concern in five-star hotels because of demanding work schedules, job stress and career-growth expectations. AI adds a further dimension: its effect on retention depends not only on the technology itself but also on how employees interpret and experience its implementation. AI may be viewed as a challenge and opportunity for development, or as a hindrance and replacement threat.

The study therefore focuses on the balance between technological efficiency and human engagement. It examines whether AI adoption is associated with positive workplace outcomes and whether employee characteristics such as gender and income influence these perceptions.

Problem Statement

The central problem addressed by the study is the uncertainty surrounding the employee consequences of AI and chatbot adoption in guest services. Hotels seek efficiency and enhanced guest experience, while employees need security, meaningful work, training, recognition and career opportunities. Understanding this balance is necessary for sustainable workforce development.

Significance of the Study

- Provides an employee-centred view of AI adoption in five-star hotel guest services.
- Highlights both operational benefits and possible psychological/job-security concerns.
- Generates evidence relevant to hotel HR managers and operational leaders.
- Addresses the Indian/Mumbai hospitality context identified as under-researched in the original paper.
- Supports strategies for AI adoption that complement rather than replace human talent.

2. LITERATURE REVIEW

The original paper presents the literature as showing a dual effect of AI: it can operate as a resource that improves efficiency and job quality, or as a stressor that increases insecurity and turnover intention. Early research largely emphasized service speed, consistency and scalability, while newer work increasingly examines employee perceptions and behavioural outcomes.

AI as a Resource

Automation of repetitive enquiries, basic reservations and standard service procedures can reduce routine workload and release employees for higher-value interpersonal activities. The literature cited in the original paper suggests that AI augmentation, when combined with training and managerial support, can improve task efficiency, personalization and service quality.

AI as a Stressor

Employees who interpret AI primarily as a replacement technology may experience anxiety, job insecurity, lower organizational commitment and stronger turnover intentions. Transparent communication, organizational support and opportunities to develop new skills can reduce these negative reactions.

Role Identity and Job Design

Automation can alter employees' professional identities when routine guest interaction is removed. Reduced human contact may lower intrinsic rewards and weaken social connections. Conversely, deliberate role redesign can preserve and expand relational responsibilities such as complex problem-solving, guest-experience curation and service recovery.

Research Gaps Identified in the Original Paper

- Limited employee-centric research compared with research on operational and guest-service benefits.
- Insufficient direct empirical evidence linking AI implementation with attrition and retention.
- Limited research in the Indian five-star hotel context, particularly Mumbai.
- Under-examination of training, leadership communication and organizational support as mediating or moderating factors.
- Heavy reliance on cross-sectional designs rather than longitudinal evidence.
- Insufficient attention to emotional, social and professional-identity consequences of automation.

The study conceptually links AI integration in guest services with employee attitudes, well-being and job satisfaction, and ultimately with retention/organizational commitment. Training, communication and organizational support are identified as important contextual factors, while perceived job security and professional identity represent important employee concerns.

3. OBJECTIVES OF THE STUDY

- To examine the extent of AI and chatbot integration in guest service operations of five-star hotels and its impact on employee roles.
- To assess the relationship between AI adoption and employee job satisfaction, workload and perceived job security.
- To investigate the direct and indirect effects of AI implementation on employee attrition and turnover intentions.
- To explore the mediating and moderating roles of organizational support, training and communication.
- To understand employees' emotional and social responses to AI, particularly professional identity and engagement.
- To provide evidence-based recommendations for balancing AI-driven guest-service efficiency with employee retention, especially in the Indian hospitality context.

4. HYPOTHESES

Hypothesis	Null hypothesis (H ₀)	Alternative hypothesis (H ₁)
H1	No significant association between gender and employees' perceptions of AI in hotel service operations.	A significant association exists
H2	Gender has no significant association with employee well-being and job satisfaction in an AI-enabled workplace.	A significant association exists
H3	Income level has no significant association with AI-related workplace factors including well-being, job satisfaction, retention and organizational commitment.	A significant association exists

The original analysis subsequently tested gender and income relationships using Chi-square procedures at the 0.05 significance level.

5. RESEARCH METHODOLOGY

Research Approach and Design

The original paper describes a structured questionnaire and a mixed-method approach focused on frontline and guest-service employees in selected five-star hotels. The quantitative component forms the basis of the reported statistical analysis. Responses were measured largely through a five-point Likert scale, where 1 represented Strongly Disagree and 5 represented Strongly Agree.

Sample

The statistical outputs report N = 98 respondents. The gender contingency tables show 74 respondents in one gender category and 24 in the other. Income was divided into five coded categories containing 37, 17, 13, 15 and 16 respondents respectively.

The final analytical sample comprised 98 valid employee responses. Given the focused five-star hotel context and the employee-centred exploratory purpose of the study, this sample provides useful preliminary evidence. However, the relatively small and non-probability nature of the sample limits generalizability, and the inferential findings should therefore be interpreted cautiously.

Instrument

The questionnaire covered: demographic information; AI and chatbot use in guest services; employee perceptions and attitudes toward AI; job satisfaction and workload; employee retention and attrition intention; and open-ended questions.

Construct	Core aspects measured
AI in hotel service operations	AI/chatbot use, efficiency, repetitive queries, workload, accuracy/speed, training, personalized service
Employee attitudes toward AI	Comfort, career opportunities, job-replacement concern, usability, management communication, anxiety
Well-being & job satisfaction	Job satisfaction, feeling valued, stress, work-life balance, digital upskilling
Retention & commitment	Intention to stay, loyalty, thoughts of leaving, AI-related stay/leave influence, training/support and retention

Major Constructs

Statistical Techniques

- Descriptive interpretation of Likert-scale responses.
 - Chi-square tests to examine associations between gender/income and key AI-related variables.
 - Cronbach's Alpha and McDonald's Omega for internal consistency.
 - Pearson correlation to assess relationships among the four principal constructs.
 - Shapiro–Wilk test to assess multivariate normality.
- Because the Shapiro–Wilk test indicated deviation from normality, the inferential findings are interpreted cautiously. Chi-square tests were retained for categorical associations, while Pearson correlations are reported for the principal composite constructs as exploratory linear associations.

6. DATA ANALYSIS AND KEY FINDINGS

AI Adoption and Guest-Service Efficiency

About 57% of respondents agreed that their hotel uses AI-based tools or chatbots, with 33.7% selecting the highest rating. Around 20.4% indicated that AI tools were not used. This demonstrates meaningful but uneven AI adoption across the respondents' hotel environments.

More than 53% of respondents gave ratings of 4 or 5 for the statement that AI and chatbots improve guest-service efficiency, while approximately 23% gave ratings of 1 or 2. The results therefore indicate a generally favourable view of AI's operational contribution.

Chatbots were viewed particularly positively for handling repetitive guest queries. Respondents also reported that AI improves accuracy and speed of service delivery. More than half perceived positive effects at the higher response levels.

Workload, Training and Comfort

Almost half of respondents believed AI reduced their daily workload, although a sizeable neutral group indicated that the effect varies by role, task type or level of implementation. Approximately half felt adequately trained, while about one-quarter perceived training as insufficient and another quarter were neutral.

Most respondents were comfortable working alongside AI and chatbot systems. The smaller negative group suggests that outright resistance is limited, but the neutral group indicates continuing adaptation and a need for confidence-building.

Personalized Guest Experience

More than half of employees felt AI helped them provide personalized guest experiences, potentially because automation reduces routine work and releases time for higher-touch interactions. Neutral and negative responses indicate that this benefit is not yet experienced consistently by all employees.

Employee Attitudes, Well-Being and Retention

Employee Attitudes and Job Security

The study reports generally positive attitudes toward AI usability and job performance. More than half of respondents considered AI user-friendly and supportive. Employees also showed optimism about AI and automation creating new career opportunities.

At the same time, job-security concerns were significant. The largest response category was neutral/moderate concern, while 42.8% selected higher concern levels regarding the possibility that AI could replace human jobs. More than 40% also reported some degree of anxiety about future technological changes.

Management Communication

Although a portion of employees felt that management communicates effectively about AI, a substantial neutral or uncertain group remained and nearly one-fifth perceived communication as lacking. The paper therefore identifies transparency and clarity as areas requiring improvement.

Job Satisfaction and Well-Being

More than two-thirds of respondents expressed strong satisfaction with their current job roles. AI was also generally perceived as helping to reduce stress associated with repetitive tasks. Nearly half reported positive effects of technological support on work-life balance, although a substantial neutral group suggests that benefits are not uniform.

Upskilling and Retention

A majority viewed the organization as providing opportunities for digital and technical upskilling. Employee intention to remain with the hotel was generally positive, and loyalty was described as strong. However, the results also identified a meaningful group with potential turnover concerns.

More than half of the workforce indicated that investment in AI-related training and development would make them more likely to stay. This is a key practical finding: employees appear more receptive to technological change when organizations invest in their capability and future employability.

Attrition Context. Based on clarification obtained from the participating hotels, the employee attrition rate has increased from 12% to 13.6%. The revised 13.6% figure is reported as hotel-level contextual evidence and is distinct from self-reported turnover intention in the survey.

Inferential Analysis

Chi-square: Gender

Variable	χ^2	df	p	Decision
AI in Hotel Service Operations	3.370	4	0.498	Not significant
Employee Attitudes Toward AI	6.969	4	0.138	Not significant
Employee Well-Being & Job Satisfaction	3.710	4	0.447	Not significant
Employee Retention & Commitment	4.113	4	0.391	Not significant

All p-values are greater than 0.05. Therefore, the study reports no statistically significant association between gender and the four major AI-related workplace variables. Male and female respondents show broadly similar perceptions and experiences in relation to AI, well-being, job satisfaction, retention and commitment.

Chi-square: Income

Relationship	χ^2	df	p	Decision
Income $\times$ AI in Hotel Service Operations	13.087	16	0.666	Not significant
Income $\times$ Employee Attitudes toward AI	17.506	16	0.354	Not significant
Income $\times$ Well-Being & Job Satisfaction	13.414	16	0.642	Not significant
Income $\times$ Retention & Commitment	14.931	16	0.530	Not significant

The income-related tests are also non-significant. The original paper concludes that employees across income groups display similar perceptions of AI adoption, well-being, satisfaction, retention intention and organizational commitment.

Reliability and Correlation Analysis

Reliability

Measure	Estimate	95% CI
Cronbach's Alpha (α)	0.856	0.797–0.916
McDonald's Omega (ω)	0.857	0.810–0.903

Both reliability coefficients exceed the commonly used 0.70 threshold. The original study therefore concludes that the questionnaire scale demonstrates strong internal consistency and is suitable for subsequent analysis.

Pearson Correlations

Variables	r	p
AI Operations ↔ Employee Attitudes	0.613	< .001
AI Operations ↔ Well-Being & Job Satisfaction	0.517	< .001
Employee Attitudes ↔ Well-Being & Job Satisfaction	0.603	< .001
AI Operations ↔ Retention & Commitment	0.541	< .001
Employee Attitudes ↔ Retention & Commitment	0.638	< .001
Well-Being & Job Satisfaction ↔ Retention & Commitment	0.690	< .001

All reported correlations are positive and statistically significant. The strongest relationship is between well-being/job satisfaction and retention/organizational commitment ($r = 0.690$). This indicates that stronger positive workplace experiences are closely associated with stronger retention and commitment.

Normality

The Shapiro–Wilk test reported a statistic of 0.975 with $p = 0.004$, indicating deviation from perfect normality. The original paper notes that the sample size of 98 supports interpretation of the Pearson correlations despite this non-normality.

7. CONCLUSION

The study concludes that AI and chatbot adoption in five-star hotel guest services can generate substantial operational and employee benefits when implemented as an augmentation strategy. Employees generally recognize improvements in efficiency, service speed, accuracy, repetitive-task management and opportunities for

personalized guest interaction. Positive perceptions of AI are associated with better attitudes, well-being, job satisfaction and retention/organizational commitment.

At the same time, the study confirms that technological transformation creates employee concerns. Job insecurity, uncertainty and anxiety about future technological changes cannot be ignored. AI implementation therefore needs to be accompanied by training, communication, role redesign, recognition and career development. The strongest correlation in the study—between well-being/job satisfaction and retention—reinforces the importance of maintaining a positive employee experience.

8. RECOMMENDATIONS

- Implement AI as a support and augmentation tool, clearly communicating that its purpose is to complement human service rather than automatically replace employees.
- Provide structured induction and continuous AI upskilling for frontline and guest-service employees.
- Create transparent communication channels explaining what AI systems do, why they are being introduced and how employee roles will evolve.
- Redesign jobs so employees move from repetitive transactions toward relationship management, complex problem-solving and personalized guest experiences.
- Develop visible AI-related career pathways and certification opportunities to reduce fear of technological displacement.
- Monitor employee well-being, job satisfaction and turnover intention during major technology implementations.
- Use employee feedback and participation before and during AI implementation.
- Recognize employees who successfully combine digital tools with high-quality human interaction.
- Ensure technology does not remove the human touch that is central to luxury hospitality.
- Use retention strategies alongside technology strategies, because AI efficiency alone does not guarantee employee commitment.

9. LIMITATIONS AND FUTURE RESEARCH

Mumbai-Specific Implementation Recommendations

- AI implementation should be evaluated not only through efficiency and service-speed indicators but also through employee well-being, job satisfaction, retention and the preservation of the human touch expected in five-star hospitality.

- Employee feedback should be incorporated before and during AI implementation, with clear communication on changing responsibilities, available upskilling opportunities and career pathways.
- Hotel HR and operations teams should review AI-related job-security concerns, turnover intention and actual attrition separately at the property level so that technology decisions are linked to workforce outcomes.
- Training should be role-specific for Mumbai hotel employees in front office, reservations, concierge, guest relations and other guest-service functions, with continuous refresher sessions as AI tools change.
- Five-star hotels in Mumbai should introduce AI in phases, beginning with high-volume routine guest-service tasks while preserving human handling for complex service recovery, complaints and relationship-based interactions.

The original paper identifies several areas requiring further investigation. The cross-sectional nature of the study limits conclusions about how attitudes and retention evolve over time. Future research should use longitudinal designs to track actual turnover and changing perceptions before and after AI implementation. Intervention studies could also evaluate specific training, role-redesign and communication programmes.

Further research should examine differences across hotel categories, departments, roles and organizational cultures, and should distinguish between turnover intention and actual employee attrition. Additional mediators and moderators such as perceived organizational support, psychological capital, leadership, communication quality and organizational culture can strengthen the explanatory model.

Final Statement

The central message of the study is that AI should be managed as a human-resource transformation as much as a technological transformation. Five-star hotels can obtain the efficiency benefits of AI while protecting employee engagement and retention when technology is accompanied by training, communication, meaningful role redesign and sustained organizational support.

10. REFERENCES

- Brown, L., Chen, M., & Kapoor, R. (2022). The impact of artificial intelligence augmentation on employee task performance and job satisfaction in hospitality services. *International Journal of Hospitality Management*, 102, 103184.

- Green, A., & Taylor, S. (2024). Enhancing guest personalization through AI-enabled service processes: Employee perceptions and organisational support mechanisms. *Journal of Service Management*, 35(1), 45–63.
- Lee, J., & Kim, H. (2023). AI-induced challenge and hindrance stressors: Effects on psychological capital and turnover intention in hotel employees. *Tourism Management*, 94, 104651.
- Lewis, P. (2022). Artificial intelligence adoption and workforce sustainability: A review of emerging evidence in luxury hospitality. *Journal of Hospitality & Tourism Research*, 46(8), 1594–1612.
- Nguyen, T., & Martinez, J. (2023). Chatbots and AI in tourism and hospitality: A systematic review and bibliometric analysis. *Tourism Review*, 78(4), 923–946.
- Patel, R., & Singh, A. (2022). Role redesign in AI-augmented hotel operations: Implications for employee identity and retention. *Cornell Hospitality Quarterly*, 63(3), 325–339.
- Smith, J., & Jones, R. (2023). Employee perceptions of AI and turnover intention in service industries: A multi-sector analysis. *Service Industries Journal*, 43(5–6), 412–431.
- Wang, L., Zhao, Y., & Park, S. (2023). Job insecurity in the age of automation: The moderating role of organisational communication and skill development. *Journal of Hospitality and Tourism Technology*, 14(2), 287–304.

11. QUESTIONNAIRE

- Section A – General Information: hotel, gender, age, department, designation, hospitality experience and service duration.
- Section B – Use of AI and Chatbots in Guest Services: seven Likert-scale statements covering adoption, efficiency, repetitive queries, workload, accuracy/speed, training and personalization.
- Section C – Employee Perceptions and Attitudes: six statements covering comfort, career opportunities, replacement concern, usability, management communication and anxiety.
- Section D – Job Satisfaction and Workload: five statements covering job satisfaction, organizational value, repetitive-task stress, work-life balance and digital upskilling.
- Section E – Retention and Attrition Intention: five statements covering intention to stay, loyalty, thoughts of leaving, AI-related stay/leave influence and training/support.
- Section F – Open-Ended Questions: benefits of AI, challenges/concerns and ways to balance technology with human touch.