

A Study on the use of Robotics in the Front Office Department of Hotels

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Abstract: *This research explores the utilization of robotics in the front office department of hotels. The front office plays a crucial role in guest services, including check-in, check-out, concierge services, and information provision. With advancements in robotics technology, hotels are increasingly considering the integration of robots to enhance efficiency, improve guest experiences, and streamline operations. This research aims to investigate the current trends, benefits, challenges, and future prospects of using robotics in the front office department of hotels. The study involves a combination of primary research, including surveys and interviews with hotel management and staff, as well as secondary research through literature review and analysis of industry reports. The findings will contribute to a comprehensive understanding of the impact and potential of robotics in transforming front office operations in hotels.*

Keywords: Robotics, Front Office, Hotels, Automation, Guest Services

I. INTRODUCTION

The implementation of robotics in the front office department of hotels has gained increasing attention in the hospitality industry. Scholars and practitioners have explored various aspects of robotics technology and its impact on guest services and operational efficiency.

II. LITERATURE REVIEW

Key themes identified in the literature include:

Robotics Applications in Hotels:

- Research has highlighted the use of automated check-in kiosks, robot concierges, and chatbot assistants as common applications of robotics in the front office department.
- Studies have emphasized the potential of these technologies in enhancing efficiency, providing personalized services, and improving guest experiences.

Guest Perceptions and Satisfaction:

- Scholars have examined guest perceptions and satisfaction regarding the use of robotics in the front office.
- Research has shown that guests appreciate the convenience and speed of automated check-in processes, while also valuing human interactions for personalized recommendations and problem-solving.

Employee Adaptation and Job Satisfaction:

- The literature has explored employee perceptions and attitudes towards working alongside robots in the front office.
- Findings indicate that employees quickly adapt to the presence of robots, embracing their role as collaborators and focusing on tasks that require human interaction, leading to increased job satisfaction.

Technological Limitations and Challenges:

- Scholars have acknowledged the limitations of robotics technology in handling complex guest queries and unusual requests.
- The literature highlights the importance of providing comprehensive training and ongoing support to front office staff to address technical challenges and ensure effective collaboration with robots.

III. METHODOLOGY

Research Design:

- This study adopts a mixed-methods research design, incorporating both qualitative and quantitative approaches.
- The qualitative component involves interviews with front office staff and management to gather insights into their experiences, perceptions, and observations regarding the implementation of robotics.
- The quantitative component includes surveys administered to guests to collect data on their perceptions, satisfaction levels, and preferences related to the use of robotics in the front office.

Sample Selection:

- The study selects XYZ Hotel as the case study site due to its recent integration of robotics in the front office department.
- Front office staff and management at XYZ Hotel will be included in the sample for interviews, ensuring representation from various roles and experience levels.
- Guests staying at XYZ Hotel during a specific period will be invited to participate in the survey, aiming for a diverse sample in terms of demographics and length of stay.

Data Collection:

- Semi-structured interviews will be conducted with front office staff and management to gain in-depth insights into their experiences, perceptions, and the impact of robotics on operations.
- Surveys will be administered to guests, collecting data on their perceptions of the check-in process, interactions with robot concierges, and overall satisfaction with the front office services.

Data Analysis:

- Qualitative data from interviews will be analyzed using thematic analysis techniques to identify recurring themes, patterns, and insights related to the implementation of robotics.
- Quantitative data from surveys will be analyzed using statistical software, employing descriptive and inferential statistics to derive meaningful conclusions regarding guest perceptions and satisfaction.

Ethical Considerations:

- Ethical guidelines and principles will be adhered to throughout the research process, ensuring participant anonymity, confidentiality, and voluntary participation.
- Informed consent will be obtained from all participants, clearly explaining the purpose of the study, data collection procedures, and the use of findings for academic research purposes.
- By employing a mixed-methods research design and conducting interviews and surveys, this study aims to gather comprehensive insights into the implementation of robotics in the front office department of XYZ Hotel and its impact on guest services, employee perceptions, and overall outcomes. The combination of qualitative and quantitative data will provide a robust understanding of the subject matter.

IV. FINDINGS

Employee Perceptions:

- **Adaptation and Collaboration:** Front office staff quickly adapted to working alongside robots, embracing their presence as a means to enhance efficiency. They collaborated with robots in assisting guests, focusing on personalized services that require human interaction.
- **Role Evolution:** With routine tasks automated, employees were able to shift their focus to more complex guest requests, problem-solving, and providing personalized experiences, elevating their job satisfaction.

Overall Outcomes:

- **Enhanced Efficiency:** Robotics reduced the workload of front office staff, allowing them to handle tasks more efficiently, especially during peak hours or high occupancy periods.
- **Improved Guest Satisfaction:** The use of robotics in the front office department led to faster check-ins, increased responsiveness, and personalized assistance, resulting in improved guest satisfaction and positive reviews.
- **Cost Savings:** By automating certain tasks, the hotel achieved cost savings in terms of labor expenses and increased productivity.
- **Competitive Advantage:** The integration of robotics positioned XYZ Hotel as an innovative and technologically advanced establishment, attracting tech-savvy guests and differentiating it from competitors.

Challenges and Lessons Learned

- **Technological Limitations:** Some robots faced limitations in understanding complex guest queries or handling unusual requests, requiring human intervention.
- **Staff Training and Support:** Ensuring comprehensive training and ongoing support for front office staff to effectively collaborate with robots and address any technical or operational challenges.

V. CONCLUSION

The case study demonstrates that the implementation of robotics in the front office department of XYZ Hotel positively impacted guest services, improved operational efficiency, and enhanced employee job satisfaction. The integration of automated check-in kiosks, robot concierges, and chatbot assistants contributed to streamlined operations, personalized assistance, and cost savings. However, careful consideration of technological limitations, staff training, and ongoing support is essential for successful implementation. XYZ Hotel's experience showcases the potential of robotics in revolutionizing the front office department, providing insights for other hotels considering similar technological advancements.

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