


# Chapter 17

## The Impact of AI on the Human Touch: An Analysis in Boutique Hospitality

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### **ABSTRACT**

*The present study examines the impact of artificial intelligence (AI) on human-centered service in the boutique hospitality sector, focusing on the Portuguese Boutique Hotel: Hotel da Oliveira, known for its personalized guest experiences. The chapter investigates how the implementation of AI can alter the essential human contact that defines hotel identity and the guest experience. This research employs a qualitative methodology, utilizing semi-structured interviews to elicit in-depth professional insights and experiences related to maintaining the human touch in daily operations. The empirical findings suggest that although AI can be used to improve operational efficiency, employees emphasized the need to maintain the human touch to preserve the boutique hotel experience. This research discusses the challenges small hotels face when implementing AI, especially the balance between using technology and preserving the core values of human-centered service.*

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## INTRODUCTION

The hospitality industry is fundamentally predicated on human-to-human interaction. Boutique establishments are recognized for their proficiency in delivering tailored and idiosyncratic service experiences.

In a world full of AI, the hospitality sector is no different, and is using intelligence and automation more and more, it is also using systems that are based on data to run hotel operations. This is changing how the hospitality sector delivers services to people. Technologies such as property management systems (PMS), customer relationship management (CRM) platforms, chatbots, dynamic pricing algorithms, and AI-supported decision-making tools have become commonplace, particularly in large hotel chains (Citak et al., 2021).

However, the rising presence of AI in hospitality raises critical questions regarding its compatibility with human-centered service models, especially within boutique hotels. While AI has the potential to augment service delivery by backup employees and optimizing backstage operations, there is also concern that unnecessary reliance on technology may corrode the emotional, relational, and experiential dimensions that guests seek in boutique accommodations (Solnet et al., 2019).

Recent literature suggests that technology and human interaction should not be viewed as mutually exclusive, but rather as complementary elements within service systems. Wang et al. (2026) argue that although technological innovation has evolved from novelty to necessity in hospitality, its successful implementation depends on maintaining an appropriate balance with human interaction. Despite these theoretic insights, empirical evidence indicates that the adoption of AI remains uneven across the hospitality sector. Large hotel chains tend to lead in technological implementation due to greater financial resources, standardized processes, and centralized decision-making structures. In contrast, independent and boutique hotels often face significant barriers, including limited budgets, lack of technological expertise, and concerns about preserving brand identity and service authenticity (Citak et al., 2021). These challenges are predominantly relevant for smaller hotels that rely heavily on human interaction as a competitive advantage. The use of guest data for AI-driven personalization can enhance service relevance and efficiency, but it also raises concerns regarding transparency, consent, and data protection (Etiubon & Etiubon, 2023). Guests may observe excessive data collection or automated decision-making as invasive. Moreover, employees may feel uneasy about the implications of AI for job security, skill requirements, and professional identity (Bisoi et al., 2020).

The current analysis analyzes the impact of artificial intelligence on the human touch in boutique hospitality, concentrating on the case study: Hotel da Oliveira, a Portuguese boutique hotel renowned for its personalized guest experiences. By exploring employees' perceptions and lived experiences, the study seeks to understand

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