

A Systematic Review of Service Robot Acceptance in the APAC Hospitality Sector: Cultural and Ethical Perspectives

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Abstract

The swift incorporation of service robots within the hospitality sector in the Asia–Pacific (APAC) region signifies a larger transformation in service provision, influenced by advancements in technology, evolving consumer demands, and workforce obstacles. This dissertation explores how cultural, ethical, organisational, and social elements affect the acceptance and utilization of service robots among guests and staff alike. Employing a Systematic Literature Review (SLR) of 29 empirical and conceptual studies, the research consolidates findings through thematic and critical analysis.

The results indicate that adoption is not simply a technological endeavour but rather a socially influenced occurrence shaped by cultural principles, ethical issues, and organisational preparedness. In collectivist, high-context cultures such as Japan and South Korea, trust in robots is rooted in socio-emotional customs and cultural practices, whereas in individualist, low-context nations like Australia and New Zealand, it depends more on transparency, ethical commitments, and functional dependability. To encapsulate these dynamics, the study presents two innovative constructs: Affective–Ritual Trust and Ethical–Functional Trust, which build upon established acceptance frameworks like the Technology Acceptance Model (TAM) and the Service Robot Acceptance Model (sRAM).

The research makes a theoretical contribution by weaving together culture and ethics within acceptance models, thus providing a more intricate perspective on human–robot interaction in the hospitality field. On a practical level, it offers insights for managers, policymakers, and developers to create culturally aware and ethically sound approaches for the deployment of service robots. The study also recognises limitations in geographical scope and methodological variety, while laying out avenues for future research to enhance cross-cultural and multi-stakeholder understanding.

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Attestation of Authorship

I hereby affirm that this submission is entirely my own creation and that, to the best of my understanding and belief, it does not include any material that has been published or authored by anyone else (except where explicitly acknowledged), nor does it contain material that has been largely submitted for the conferment of any other degree or diploma from a university or any other institution of higher education.

Signed:

Date: 22 August 2025

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Chapter 1: Introduction

1.1 Background

The hospitality industry in the Asia-Pacific (APAC) region is experiencing a significant transformation driven by advancements in technology, shifting consumer preferences, and persistent labour shortages. Leading this transformation is the growing utilisation of service robots either fully autonomous or semi-autonomous machines that assist with various service roles, including concierge tasks, room service, cleaning, and guest engagement (Ivanov & Webster, 2019; Wirtz et al., 2018). These robots are not just supplementary technologies; they signify a reengineering of service delivery that integrates human skills with artificial intelligence to enhance efficiency, cleanliness, and consistency in service (Fuentes-Moraleda et al., 2020; Zeng et al., 2020).

Several overarching trends have accelerated the adoption of service robots in the region. Notably, the COVID-19 pandemic significantly increased the need for contactless services, leading hotels to implement automated solutions for health and safety considerations (Mukherjee et al., 2021). Simultaneously, advancements in machine learning, natural language processing, and facial recognition have allowed service robots to engage in more organic and personalised interactions (Gonzalez-Jimenez & Costa Pinto, 2024; Zhang et al., 2021). These technological advancements have opened new avenues for service innovation, positioning robots not only as tools for efficiency but also as vehicles for brand differentiation (Belanche et al., 2020; Walton, 2024).

Despite these advancements, the existing academic literature highlights several important gaps. Firstly, a massive portion of the research on the adoption of service robots relies heavily on cognitive-based frameworks such as the Technology Acceptance Model (TAM), which prioritises perceived usefulness and ease of use (Davis, 1989; Venkatesh & Davis, 2000). While these models serve as a useful foundation, they often overlook the emotional, cultural, and ethical factors that are essential in hospitality a field fundamentally rooted in personalised and relational experiences (Avijeet et al., 2024; Hofstede, 2011). Additionally, these frameworks tend to presume cultural universality, disregarding how local customs and communication styles shape technology adoption across diverse settings.

Secondly, most studies disproportionately emphasise guest acceptance while overlooking the viewpoints of employees, who are crucial in enabling human–robot interactions (Lu et al., 2020; Xu et al., 2023). Employees are often responsible for operating, troubleshooting, or interpreting robotic actions into culturally appropriate service practices. Their attitudes, skills,

and sense of job security have a direct impact not only on the operational success of service robots but also on guests' perceptions of them. The neglect of employee perspectives leads to an incomplete understanding of the dynamics among stakeholders in the integration of robots.

Thirdly, ethical considerations such as data privacy, surveillance, and algorithmic bias are still insufficiently theorised within current models of robot adoption (Howard & Borenstein, 2018; Zuboff, 2019). These concerns are particularly relevant in APAC, where regulatory frameworks and cultural expectations surrounding data and trust can vary widely. In countries such as China, the deployment of facial recognition technology by robots raises issues related to state surveillance, whereas in Australia and New Zealand, public discourse tends to be more focused on consent and data governance (Lin & Lee, 2025; Hui Yun Chan & Muralidharan, 2024). Failing to address these ethical dilemmas puts organisations at risk of undermining stakeholder trust and encountering resistance from both guests and employees.

1.2 Research Questions and Objectives

As service robots become more integrated into the hospitality industry, especially in the APAC region, it is crucial to transcend the prevalent techno-centric viewpoint that primarily emphasises usability and performance. The incorporation of these technologies goes beyond simple operational enhancement; it represents a multifaceted socio-cultural phenomenon shaped by the values, expectations, and ethical concerns of both guests and employees (Avijeet et al., 2024; Lu et al., 2020). To delve into this complexity, the current study adopts a dual-stakeholder perspective, recognising both guests and employees as vital contributors to the co-creation of meaning and acceptance during interactions with service robots.

Current frameworks such as TAM and the Service Robot Acceptance Model (sRAM) often depict adoption as an individualised, rational process grounded in cognitive assessments like perceived usefulness and ease of use (Davis, 1989; Wirtz et al., 2018). However, in hospitality settings particularly in culturally diverse APAC markets acceptance is moulded by deeper emotional, ethical, and ritualistic elements that these models fail to fully capture (Hofstede, 2011; Shin et al., 2022). Moreover, employee engagement is seldom regarded as a fundamental aspect in these frameworks, even though emerging evidence suggests that staff attitudes play a significant role in mediating guest experiences and technological effectiveness (Kwinda, 2024; Xu et al., 2023)

This dissertation thus aims to investigate how cultural and ethical elements shape stakeholder trust, influence behavioural reactions, and affect the overall integration of service robots within

the hospitality sector. In doing so, it pays particular attention to cross-cultural differences between collectivist, high-context cultures (e.g., Japan, South Korea) and individualist, low-context cultures (e.g., Australia, New Zealand), where concepts of trust, communication, and service expectations vary significantly (Lin & Lee, 2025; Hofstede, 2011).

The primary objective of this research is to analyse how cultural norms, service rituals, and ethical issues such as privacy, transparency, and fairness influence trust and acceptance behaviours among both guests and employees.

The secondary objective is to investigate how guests and employees collaboratively construct meaning during their interactions with service robots, shifting from mere acceptance to understanding how technology is woven into the social and emotional fabric of service environments.

Based on these objectives, the study is directed by the following two research questions:

RQ1: In what ways do cultural and ethical factors affect the acceptance of service robots by guests and employees?

RQ2: How do guests and employees collaboratively construct meaning in human-robot interactions within APAC hospitality contexts?

To tackle these questions, the study undertakes a systematic literature review (SLR) of 29 empirical and conceptual sources published between 2014 and 2025. The thematic synthesis of these sources establishes the empirical groundwork for formulating a more culturally sensitive and ethically informed model of service robot acceptance. This strategy not only enhances theoretical models but also provides practical insights for hospitality leaders, developers, and policymakers striving to implement robotics in culturally varied and ethically intricate service settings.

1.3 Significance of the Study

This research provides both theoretical and practical insights into the ongoing conversation regarding the integration of service robots in the hospitality sector, especially within the culturally varied APAC region. From a theoretical standpoint, the study enhances current acceptance models specifically TAM and sRAM by incorporating cultural and ethical aspects that are frequently neglected (Davis, 1989; Wirtz et al., 2018). By introducing the concepts of affective–ritual trust and ethical–functional trust, the research establishes a more sophisticated framework that reflects cross-cultural differences in stakeholder perceptions and behaviours (Avijeet et al., 2024; Lin & Lee, 2025).

On a practical level, the study offers valuable insights for hospitality managers, robot developers, and policymakers who aim to implement automation in a manner that is sensitive to context and ethically responsible. Previous research has indicated that failing to consider cultural alignment and ethical transparency can severely impede the successful deployment of service robots (Howard & Borenstein, 2018; Zuboff, 2019). By emphasising the role of employees alongside guests, the study underscores the significance of organisational readiness and socio-technical mediation in adoption strategies (Lu et al., 2020; Xu et al., 2023). These insights advocate for the creation of more inclusive and sustainable automation practices that can improve service quality while maintaining stakeholder trust.

1.4 Structure of the Dissertation

This dissertation is organised into five chapters, each fulfilling a specific purpose:

Chapter 1 presents the study, contextualises the research issue, and articulates the guiding questions and objectives.

Chapter 2 surveys the existing literature on the adoption of service robots, addressing cognitive, cultural, ethical, and organisational factors, and outlines the theoretical framework.

Chapter 3 describes the methodological strategy, specifying the SLR protocol, criteria for inclusion and exclusion, and the thematic synthesis process.

Chapter 4 highlights the findings organised by themes that correspond to the research questions, bolstered by empirical data from the studies reviewed.

Chapter 5 explores the theoretical and practical implications, recognises the limitations, and proposes directions for future research.

This structure guarantees coherence, analytical depth, and alignment across chapters to support the primary objectives of the study.

Chapter 2 Literature Review

2.1 Evolution of service robots

The incorporation of service robots into the hospitality sector signifies one of the most significant technological transformations in the industry's contemporary timeline. This change has been driven by swift advancements in artificial intelligence (AI), machine learning (ML), the Internet of Things (IoT), and sensor technologies, facilitating the transition of robots from experimental novelties to vital operational resources (Ivanov & Webster, 2019; Wirtz et al., 2018). Service robots are generally characterised as autonomous or semi-autonomous devices capable of executing both guest-facing and behind-the-scenes duties typically carried out by human personnel, including concierge services, contactless check-ins, luggage handling, sanitation, room deliveries, and food service (Fuentes-Moraleda et al., 2020). Their incorporation is increasingly regarded not merely as a gimmick but as a strategic adaptation to operational needs, guest demands, and evolving market conditions.

In earlier instances, initial implementations were largely limited to marketing efforts or pilot projects aimed at demonstrating innovation rather than enhancing operational efficiency. A prominent case is the Henn-na Hotel in Japan, which debuted in 2015 and captured global attention for incorporating humanoid and dinosaur-themed robots in front desk and concierge functions (Tung & Law, 2017). Although these pioneering applications generated substantial publicity, they simultaneously exposed shortcomings in reliability, contextual adaptability, and guest satisfaction. As time progressed, improvements in natural language processing, facial recognition, and autonomous navigation technologies augmented robots' capacity to execute more intricate tasks with reliability and accuracy, transitioning the technology from being a spectacle to a practical utility (Belanche et al., 2020).

Aside from their innovative allure, the implementation of service robots addresses enduring structural issues within hospitality labour markets. Persistent staff shortages elevated turnover rates, and seasonal employment variances have consistently posed operational challenges, especially in areas heavily dependent on tourism and international labour (Baum et al., 2020). The COVID-19 pandemic intensified these workforce difficulties while simultaneously heightening the demand for contactless, hygienic service provisions to safeguard both guests and staff (Mukherjee et al., 2021; Zeng et al., 2020). In this scenario, service robots transitioned from being viewed as optional enhancements to essential operational instruments capable of ensuring business continuity, fulfilling hygiene standards, and mitigating health risks.

Modern integration strategies for service robots typically follow three interrelated paths. The first is operational efficiency, wherein robots are utilised to automate repetitive, low-skill, or time-consuming activities such as cleaning, item delivery, or check-in processing thus allowing human staff to concentrate on personalised, high-value guest interactions that necessitate empathy, problem-solving, and cultural awareness (Ivanov & Webster, 2019). The second trajectory focuses on enhancing the guest experience, emphasising the provision of consistent, innovative, and tailored services through capabilities like multilingual concierge robots, AI-driven recommendations, or round-the-clock automated room deliveries, thereby strengthening brand identity and guest loyalty (Alejandro et al., 2025; Belanche et al., 2020). The third is emotional personalisation, where affective computing and sentiment analysis empower robots to gauge and respond to guests' emotional conditions in real time, adjusting tone, pacing, and communication style to boost engagement and satisfaction (Fuentes-Moraleda et al., 2020; Gonzalez-Jimenez & Costa Pinto, 2024).

These strategic directions are becoming increasingly apparent in prominent case studies throughout the APAC region. For instance, Alibaba's FlyZoo Hotel in China features facial recognition for check-in, voice-activated controls in rooms, and autonomous delivery robots, which lower labour costs by over 30% while enhancing hygiene and operational efficiency (Chen et al., 2024). Likewise, Singapore's M Social hotel uses AI-driven robots for cleaning and room service, ensuring smooth operations during busy times and improving the guest experience through consistent service quality (Tan et al., 2023). These instances demonstrate that service robots have evolved from mere novelties to being intricately integrated within larger operational frameworks, connected to Property Management Systems (PMS) and IoT-enabled devices to provide seamless, data-informed service experiences.

In conclusion, the development of service robots in the hospitality sector has shifted from publicity-seeking trials to comprehensive operational solutions that blend efficiency, innovation, and emotional connection. Although their adoption is frequently driven by labour market challenges and the quest for competitive advantage, their enduring success hinges on cultural compatibility, ethical governance, and the capacity to enhance not supplant human-delivered service quality (Walton, 2024; Xu et al., 2023). This complex transformation paves the way for investigating how the acceptance of service robots is shaped by technological performance, cultural conventions, and stakeholder viewpoints across various APAC markets.

2.2 Acceptance of Service Robots

The embrace of service robots in the hospitality industry is influenced by a multifaceted interaction of technological efficacy, cultural norms, ethical considerations, and the

preparedness of organizations. In the APAC region, these elements interact in diverse ways across various markets, resulting in unique adoption trends that mirror the foundational societal values and regulatory landscapes (Avijeet et al., 2024; Lin & Lee, 2025). Recognizing these variations is crucial for formulating deployment strategies that are not only operationally sound but also culturally attuned.

In high-context, collectivist societies such as Japan and South Korea, the acceptance of service robots is intricately tied to established service rituals, emotional engagement, and structured interactions (Hofstede, 2011; Shin et al., 2022). Within these cultures, trust in robotic systems termed Affective–Ritual Trust develops when robots demonstrate behaviours that align with cultural expectations, such as using respectful language, bowing, and following service protocols (Belanche et al., 2020; Ivanov & Webster, 2021). Such cultural compatibility can initially offset minor technical deficiencies, yet recurrent operational failures can quickly undermine trust more so than in low-context settings (Avijeet et al., 2024; Shin et al., 2022). This interaction highlights the importance of both cultural and functional dependability in maintaining acceptance within these markets.

Conversely, in low-context, individualistic cultures like Australia and New Zealand, Ethical–Functional Trust is the prevailing factor. In these environments, acceptance hinges on operational clarity, privacy safeguards, user freedom, and reliable functional performance (Lin & Lee, 2025; Yousaf et al., 2021). Guests and workers in these contexts often prioritise transparent communication regarding a robot's purpose, the option for human service, and guarantees that personal information is securely managed (Zuboff, 2019; Howard & Borenstein, 2018). Although ceremonial interactions are less significant, functional dependability and ethical protections are essential, and their lack can erode user trust.

Certain APAC markets especially China and Singapore demonstrate mixed trust pathways that combine both affective–ritual and ethical–functional trust elements. In China, adoption is frequently propelled by a fascination with speed, automation, and innovative features, as evident in extensive automation initiatives like Alibaba's FlyZoo Hotel (Alejandro et al., 2025). Nevertheless, increasing public apprehensions regarding the use of biometric data and facial recognition underscore the growing necessity for transparent data governance to ensure ongoing acceptance (Lin et al., 2024). Singapore's hospitality industry, shaped by its multicultural population and stringent regulatory frameworks such as the Personal Data Protection Act (PDPA), integrates culturally inclusive design elements like multilingual communication while adhering to strict privacy regulations (Hui Yun Chan & Muralidharan, 2024). This integrated approach effectively addresses both the emotional and ethical aspects of trust, providing a blueprint for deployment in culturally varied, regulation-intensive settings.

Collectively, these trends demonstrate that cultural adaptation lacking functional reliability leads to fragile acceptance, while functional dependability without cultural alignment poses a risk of guest disengagement, especially in collectivist settings where relational dynamics significantly influence service satisfaction (Avijeet et al., 2024; Xu et al., 2023). Moreover, employee mediation is essential in connecting cultural with operational expectations. Frontline personnel frequently modify robot interaction scripts, clarify usage to guests, and ensure seamless operations, effectively serving as both cultural interpreters and trust enhancers (Lu et al., 2020; Xu et al., 2023). Consequently, strategies for adopting service robots must incorporate both technological and human factors to secure lasting acceptance. While Ivanov and Webster (2019) stress the importance of efficiency as a key factor, Shin et al. (2022) demonstrate that socio-emotional authenticity frequently takes precedence over performance in collectivist societies underscoring a distinction that current acceptance models fail to address.

2.3 Theoretical Foundations

To comprehend the acceptance of service robots in the hospitality industry, it is essential to adopt a multifaceted approach that encompasses cognitive, emotional, cultural, and ethical aspects. Conventional research on technology adoption typically depends on psychological and behavioural theories that elucidate how individuals evaluate modern technologies; however, these frameworks must be contextualised to effectively navigate the intricacies of high-contact service environments like hotels (Avijeet et al., 2024; Wirtz et al., 2018). This study uses a tripartite analytical framework cognitive, cultural, and ethical to encapsulate the various dimensions that influence guest and employee reactions to service robots in the APAC hospitality sector.

From a cognitive standpoint, TAM is the most extensively utilised theoretical framework for elucidating user adoption of emerging technologies (Davis, 1989). TAM asserts that Perceived Usefulness (PU) the extent to which an individual believes a technology will augment their performance and Perceived Ease of Use (PEOU) the extent to which an individual believes the technology will be easy to operate serve as primary drivers of adoption. In the context of hospitality, PU may pertain to enhancements in service speed, sanitation, or operational dependability, while PEOU signifies how effortlessly guests and staff can engage with robots without the need for extensive training (Venkatesh & Davis, 2000; Zeng et al., 2020). Although TAM lays a robust predictive groundwork, its emphasis on functional characteristics restricts its capacity to fully encompass the socio-emotional and cultural factors vital in high-touch service environments (Avijeet et al., 2024; Hofstede, 2011).

To overcome these shortcomings, sRAM builds upon TAM by integrating three additional constructs Trust, Social Presence, and Enjoyment that are particularly pertinent in hospitality contexts (Fuentes-Moraleda et al., 2020; Wirtz et al., 2018). Trust pertains to a user's assurance in the robot's safety, reliability, and ethical data management (Lin & Lee, 2025). Social presence denotes the degree to which a robot is perceived as relatable and capable of human-like interaction, often facilitated by gestures, facial expressions, or culturally appropriate behaviours (Zhang et al., 2021). Enjoyment reflects the inherent pleasure or novelty experienced during interactions with a robot, which has been shown to bolster acceptance in leisure-focused hospitality scenarios (Walton, 2024). The incorporation of emotional and relational dimensions in sRAM renders it more applicable to hospitality research than TAM in isolation; however, it still falls short of completely accounting for the influence of cultural diversity on acceptance pathways.

This study enhances sRAM by integrating differentiated trust constructs that account for cultural differences within the APAC markets. In high-context, collectivist cultures like Japan and South Korea, Affective–Ritual Trust is cultivated through socio-emotional connections and adherence to service rituals, such as formal greetings and courteous conversations (Ivanov & Webster, 2021; Shin et al., 2022). In contrast, in low-context, individualistic cultures like Australia and New Zealand, Ethical–Functional Trust takes precedence, grounded in transparency, ethical safeguards, and consistent functional performance (Lin & Lee, 2025; Yousaf et al., 2021). Acknowledging this distinction allows for a more precise mapping of acceptance behaviours across culturally diverse hospitality settings and addresses a significant theoretical gap in current acceptance models.

The third dimension of this framework highlights the socio-technical layer, recognising that service robots' function within intricate organisational and interpersonal environments. Acceptance is not merely an individual cognitive choice but is shaped through the interactions among guests, employees, and organisational policies (Xu et al., 2023). Employees are crucial in facilitating guest-robot interactions, addressing technical challenges, and incorporating robotic services into established workflows (Lu et al., 2020). Factors such as organisational preparedness, leadership backing, and cultural training for both robots and personnel affect the success or resistance of adoption initiatives. In culturally diverse areas like APAC, this socio-technical viewpoint is vital for comprehending how technology adoption is influenced by workplace culture, service customs, and the collective meaning-making between human and non-human participants (Hui Yun Chan & Muralidharan, 2024).

In summary, the combination of TAM, sRAM, culturally differentiated trust constructs, and socio-technical factors provides a solid theoretical basis for this research. By positioning

acceptance within the interconnected realms of cognition, culture, ethics, and organisational mediation, this framework offers a more comprehensive and context-aware perspective for examining how guests and employees perceive, assess, and incorporate service robots into hospitality experiences throughout the APAC region.

2.4 Cultural and Regional Influences

Cultural and regional factors significantly impact how service robots are accepted within the hospitality industry, influencing the perceptions, interactions, and trust levels of both guests and staff regarding these technologies. In the APAC region, the variety of cultural communication styles, social values, and regulatory environments results in different adoption trends across nations (Avijeet et al., 2024; Hofstede, 2011). Recognising these differences is crucial for developing deployment strategies that are culturally relevant and operationally effective.

In high-context, collectivist societies like Japan and South Korea, hospitality exchanges are intricately tied to socio-emotional norms and established service rituals. Within these settings, service robots are anticipated to embody culturally suitable greetings, gestures, and degrees of formality that correspond with societal standards of respect and harmony (Ivanov & Webster, 2021; Shin et al., 2022). Trust in these environments characterised as affective–ritual trust is cultivated through the robot’s capacity to follow ceremonial service traditions while exhibiting emotional warmth. Nevertheless, despite the focus on social harmony, repeated technical malfunctions or inconsistent service can quickly erode trust, highlighting that functional reliability remains a vital aspect of acceptance (Belanche et al., 2020).

In contrast, low-context, individualistic cultures such as Australia and New Zealand value transparency, operational dependability, and the freedom of choice over ceremonial interactions (Lin & Lee, 2025; Yousaf et al., 2021). In this context, Ethical–Functional Trust prevails, as guests and employees expect clearly defined roles, strong data privacy protections, and consistent performance. While culturally ingrained social cues are less influential, any violation of ethical standards such as ambiguous data usage policies or inadequate consent mechanisms can significantly damage stakeholder trust (Howard & Borenstein, 2018; Zuboff, 2019).

Certain APAC nations, such as China and Singapore, display hybrid trust models that combine aspects of both affective–ritual and ethical–functional trust. In China, extensive automation initiatives like Alibaba’s FlyZoo Hotel attract technology-savvy consumers who prioritise speed, efficiency, and innovation (Alejandro et al., 2025). However, rising public concerns

regarding biometric data usage and surveillance indicate that ethical transparency will be increasingly critical for maintaining long-term acceptance (Lin et al., 2024). Conversely, Singapore benefits from a multicultural service landscape and robust regulatory frameworks like the Personal Data Protection Act (PDPA), which promote the incorporation of multilingual service capabilities and culturally inclusive interaction methods while ensuring strict adherence to privacy and data governance standards (Hui Yun Chan & Muralidharan, 2024).

Together, these variations suggest that cultural adaptation without functional reliability can lead to unstable acceptance, whereas functional reliability devoid of cultural alignment may cause guest disengagement, particularly in collectivist cultures where relational service quality is essential (Xu et al., 2023). Thus, the most effective adoption strategies are context-specific, integrating cultural awareness with operational reliability and ethical transparency. This synergy guarantees that service robots are not only technically proficient but also socially and culturally integrated within the service landscape, thereby improving acceptance among both guests and employees across the diverse APAC markets. This disparity between collectivist and individualist environments suggests that acceptance frameworks established in Western markets need to be adjusted when utilized in APAC hospitality contexts.

In conclusion, the cultural and regional differences present in the APAC hospitality industry illustrate that the acceptance of service robots varies significantly, influenced by fundamental value systems, societal norms, and contextual expectations. Building on these findings, this research highlights two dimensions of trust, Affective–Ritual Trust and Ethical–Functional Trust that merge cultural and ethical viewpoints to elucidate how individuals cultivate trust in service robots across diverse contexts.

2.5 Affective–Ritual Trust and Ethical–Functional Trust

Affective–Ritual Trust Affective–Ritual Trust pertains to the type of confidence and acceptance that stems from emotional ties, symbolic significance, and culturally ingrained service rituals. In collectivist cultures like Japan, South Korea, and China, trust is not solely cognitive; it is also deeply rooted in emotional and ritualistic displays of respect and harmony. These cultures prioritize emotional connection and behavioural conformity, where gestures of politeness, greetings, and non-verbal communication are viewed as markers of sincerity and care (Hofstede, 2011; Shin et al., 2022). When service robots emulate these rituals through gestures, respectful tones, or culturally sensitive interactions users tend to view them as more genuine and trustworthy. On the contrary, a deficiency in emotional awareness or a mismatch with cultural expectations can diminish perceived warmth and

acceptance. Therefore, Affective–Ritual Trust transcends mere functional performance and encapsulates the symbolic and emotional aspects of human–robot interactions within hospitality settings.

Ethical–Functional Trust is fundamentally rooted in transparency, integrity, and the reliability of systems. It prevails in individualistic and low-context cultures such as Australia and New Zealand, where consumer trust in technology hinges on perceived fairness, safeguarding of privacy, and consistent functional performance (Lin & Lee, 2025; Yousaf et al., 2021). Guests and staff assess robots not through emotional or ritualistic behaviour but by their responsible management of data, adherence to ethical standards, and dependable performance. Thus, Ethical–Functional Trust signifies a cognitive and moral assessment of technology's reliability and ethical practices. In hospitality settings, clearly communicating data usage policies and accountability mechanisms enhances this trust, while lack of clarity or inconsistent operation can undermine it.

Together, these two constructs offer a nuanced understanding of trust that connects the cultural and ethical dimensions of service robot acceptance throughout the APAC region.

2.6 Ethical, Privacy, and Social Considerations

The concept of Ethical–Functional Trust also resonates with wider ethical, privacy, and societal considerations related to robotic technologies, as these principles underpin the foundation for transparent and responsible implementation within hospitality industry. These factors impact the immediate willingness of both guests and staff to interact with robotic systems, as well as the vital long-term trust required for ongoing utilisation (Howard & Borenstein, 2018; Lin & Lee, 2025). In the APAC region, where cultural diversity meets various regulatory environments, it is imperative to incorporate ethical governance and social responsibility at every phase of service robot deployment.

A significant concern is data privacy and governance. Service robots frequently gather and process sensitive personal information, such as biometric data, voice recordings, and behavioural patterns, to tailor interactions and enhance service efficiency (Chen et al., 2024; Zuboff, 2019). In low-context cultures like Australia and New Zealand, having transparent data management practices, explicit consent procedures, and adherence to legislation like the New Zealand Privacy Act 2020 are crucial prerequisites for acceptance (Lin & Lee, 2025). Conversely, in high-context cultures, there may be initial tolerance for less explicit privacy communication if the technology corresponds with cultural norms; however, trust can quickly erode at any signs of data misuse (Avijeet et al., 2024). Nations such as Singapore have

tackled this issue through comprehensive regulatory measures like the Personal Data Protection Act (PDPA), which enforces transparency and accountability in data handling (Hui Yun Chan & Muralidharan, 2024).

Another vital issue is algorithmic bias and inclusivity. Service robots that do not acknowledge various accents, languages, or cultural subtleties risk alienating minority groups, older guests, or individuals with accessibility needs, thereby compromising both service inclusivity and ethical standards (Himanshu et al., 2025). It is essential to ensure that algorithms are developed using diverse datasets and are regularly updated to reflect the linguistic and cultural richness of the target audience for fair service delivery. Inclusivity also involves making provisions for guests with disabilities, ensuring that service robots adhere to accessibility standards in both their design and interactions.

The third consideration concerns anthropomorphism and managing expectations. Although human-like features can increase engagement and build rapport through social presence, excessive anthropomorphism can lead to unrealistic beliefs about a robot's emotional intelligence and critical thinking skills (Zhang et al., 2021). When a robot fails to live up to these heightened expectations, it can lead to user frustration and decreased trust. Effectively managing guest expectations necessitates clear communication regarding a robot's capabilities and limitations, ensuring that its role is to complement rather than replace human service.

Lastly, these ethical, privacy, and social elements intertwine with the overarching hospitality principle of care, which emphasises respect, inclusivity, and trust in service provision (Fuentes-Moraleda et al., 2020). By embedding strong ethical safeguards into implementation strategies, potential risks can be minimised while simultaneously bolstering the brand's reputation for socially responsible innovation. In this manner, service robots can enhance the human-centred values that are foundational to the hospitality experience.

2.7 Conceptual Framework

This study's conceptual framework amalgamates technological, cultural, ethical, and organisational elements to deliver a comprehensive understanding of service robot acceptance within the hospitality sector in the APAC region. Drawing upon the foundational TAM (Davis, 1989) and its hospitality-specific adaptation sRAM (Fuentes-Moraleda et al., 2020; Wirtz et al., 2018), the framework introduces culturally distinct trust constructs Affective–Ritual Trust and Ethical–Functional Trust alongside socio-technical factors that illustrate the collaborative meaning-making process among guests, employees, and robotic systems.

From a technological standpoint, the framework retains TAM's cognitive elements of Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) as key determinants of initial acceptance. These elements are further enhanced by sRAM's emotional and social mediators trust, social presence, and enjoyment which encompass the relational and experiential dimensions of human-robot interaction in hospitality (Walton, 2024; Zhang et al., 2021). By weaving together these constructs, the framework acknowledges that acceptance is shaped not only by efficiency and usability but also by the perceived social engagement and enjoyment of the interaction from the guests' perspective.

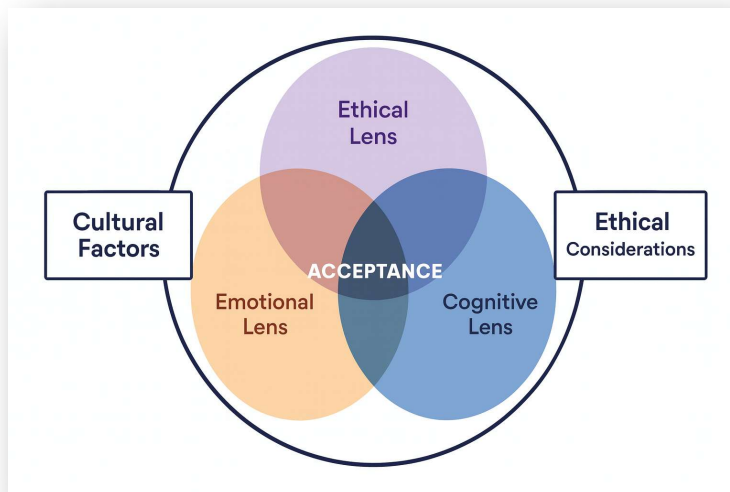
Cultural and ethical dimensions are framed as essential input variables within the framework. Cultural Fit pertains to how well a robot's interaction style, language, and gestures align with local service conventions, which is particularly vital in high-context cultures like Japan and South Korea (Ivanov & Webster, 2021; Shin et al., 2022). Ethical concerns encompass issues such as data privacy, algorithmic fairness, and clarity in role delineation elements that hold particular significance in low-context cultures such as Australia and New Zealand (Howard & Borenstein, 2018; Lin & Lee, 2025). The integration of culturally distinct trust pathways facilitates a more accurate mapping of acceptance behaviours across APAC markets, recognising that, in certain contexts, socio-emotional alignment serves as the primary trust driver, while in others, operational transparency and dependability take precedence (Avijeet et al., 2024).

The framework additionally integrates employee mediation as a moderating factor, reflecting the socio-technical reality that service robots are situated within human-organisational systems. Employees not only enhance guest-robot interactions but also tailor robot utilisation to cultural contexts, address operational challenges, and serve as trust intermediaries between guests and the technology (Lu et al., 2020; Xu et al., 2023). This aspect aligns with Social Practice Theory (Hyysalo, 2016), which conceptualises technology adoption as a collective, evolving practice influenced by both human and non-human participants.

By bringing together these components, the conceptual framework depicts service robot acceptance as a nuanced process influenced by technological efficacy, emotional and social involvement, cultural congruence, ethical considerations, and organisational support. It offers an analytical perspective for investigating the research questions, ensuring that the findings reflect the intricate, context-dependent nature of acceptance in APAC hospitality. Furthermore, the framework presents practical significance for hospitality managers, policymakers, and robot developers, steering them toward strategies that harmonise operational efficiency with cultural awareness and ethical accountability.

To exemplify the comprehensive framework established in this research, Figure 1 showcases a conceptual model regarding the acceptance of service robots within the hospitality industry. The model illustrates how acceptance arises at the convergence of cognitive, emotional, and ethical perspectives, each shaped by overarching cultural influences and ethical considerations. By visually depicting these interconnected dimensions, the figure emphasises that adoption is not merely a matter of technological effectiveness but rather a socially negotiated process influenced by cultural alignment, ethical safeguards, and the emotions of stakeholders (Avijeet et al., 2024; Xu et al., 2023). This diagram integrates insights from established acceptance frameworks, such as TAM and sRAM, while also expanding them through the culturally specific trust constructs of affective–ritual trust and ethical–functional trust.

Figure 1 A conceptual framework for acceptance in the hospitality sector



Note: Acceptance is illustrated as arising at the convergence of emotional, cognitive, and ethical perspectives while simultaneously being influenced by cultural elements and ethical factors. Adapted from Xu et al. (2023) and Avijeet et al. (2024).

In conclusion, established frameworks like TAM and sRAM offer a foundational cognitive understanding but overlook the cultural and ethical subtleties highlighted in studies conducted in the APAC region. Consequently, this dissertation introduces the combined concepts of Affective–Ritual Trust and Ethical–Functional Trust to enhance existing acceptance models and encompass the socio-cultural intricacies associated with the adoption of service robots.

Chapter 3 Methodology

3.1 Overview

This chapter outlines the methodological framework used for executing the study. As the research explores the integration of service robots in the APAC hospitality industry, concentrating on cultural, ethical, and social aspects, a SLR was adopted as the main research approach. The SLR was selected due to its capacity to thoroughly gather, assess, and consolidate existing empirical and theoretical studies to tackle the research questions with clarity and reproducibility (Avijeet et al., 2024; Xu et al., 2023). To ensure rigour, the review was conducted in accordance with the PRISMA protocol, which offers a systematic method for screening, selecting, and reporting (Moher et al., 2009). The review process was enhanced with a thematic synthesis, facilitating the identification of trends, theoretical insights, and contextual subtleties that advance current models of technology acceptance in hospitality (Ivanov & Webster, 2019; Wirtz et al., 2018). The comprehensive list of included studies is systematically recorded in the SLR table found in section

3.2 Research Paradigm

This research is situated within an interpretivist framework, which highlights the socially constructed essence of knowledge and underscores the significance of comprehending phenomena within their cultural and contextual frameworks. In contrast to a positivist viewpoint that prioritises objectivity and generalizability, interpretivism acknowledges that reality is multifaceted and subjective, shaped by interactions, values, and collective meanings (Xu et al., 2023). This viewpoint is especially pertinent for exploring the integration of service robots in the hospitality sector, as acceptance is influenced not just by technological efficacy but also by cultural customs, ethical implications, and relational dynamics (Avijeet et al., 2024).

Embracing this framework positions me as a researcher-interpretor who aspires to comprehend and represent a variety of stakeholder perspectives instead of imposing a singular authoritative narrative. My role transcends that of a detached observer; I engage as a co-creator of meaning, critically examining how guests and employees navigate their interactions with service robots. Interpretivism also necessitates reflexivity, compelling me to recognise that my own preconceptions and background inevitably shape the research journey. By prioritizing participant voices and contextualizing findings within cultural and ethical dimensions, I strive to yield insights that are profound, nuanced, and grounded in context, rather than universally applicable (Avijeet et al., 2024; Xu et al., 2023).

3.3 Research Method

This research uses a SLR as the main methodological approach to explore the integration of service robots within hospitality environments in the APAC region. The SLR methodology was selected for its structured, transparent, and reproducible framework for collecting and synthesising existing information, thus ensuring that the results are anchored in a comprehensive foundation of scholarly work. In contrast to narrative reviews, which may exhibit selectivity or a descriptive nature, the SLR provides both extensive and profound insights by amalgamating various empirical and theoretical inputs (Alshemari, 2023).

The advantage of this approach is its capacity to unify fragmented knowledge across various fields, including hospitality management, cultural studies, and the adoption of technology. For instance, studies such as Wirtz et al. (2018) focusing on the sRAM and Ivanov & Webster (2019) examining the economic ramifications of robotisation underscore unique aspects cognitive acceptance factors and cost/efficiency considerations that are rarely studied in conjunction. By methodically reviewing and merging these viewpoints, the SLR facilitates both comparative and integrative analysis, revealing connections that might otherwise be overlooked.

Moreover, this technique aligns with the study's primary aim of enhancing existing acceptance frameworks like the TAM (Davis, 1989) and sRAM (Wirtz et al., 2018). Historically, these models have focused on rational–cognitive elements such as perceived usefulness and ease of use but often neglect the influence of cultural customs, ethical issues, and employee viewpoints. By incorporating research that addresses cultural rituals and socio-emotional trust (Avijeet et al., 2024), ethical transparency and privacy (Zuboff, 2019; Lin & Lee, 2025), and employee adaptation (Xu et al., 2023; Kwindu, 2024), the SLR fosters a more enriched, context-sensitive framework. This bolsters the study's contribution by introducing culturally informed trust constructs Affective–Ritual Trust and Ethical–Functional Trust that enhance the explanatory capacity of TAM and sRAM within the hospitality sector of the APAC region.

3.4 Systematic Literature Review Protocol

The research used a SLR structured according to the PRISMA framework, which guarantees transparency, replicability, and methodological rigour in the discovery, screening, and documentation of pertinent studies (Moher et al., 2009). This organised approach was especially appropriate for this investigation due to its ability to integrate varied insights from

both theoretical and empirical research, encompassing cultural, ethical, cognitive, and organisational dimensions of service robot adoption in the hospitality sector. By adhering to the PRISMA guidelines, the study ensured that every phase of the process from the selection of databases to the final selection of studies was methodical, recorded, and reproducible.

To ensure a comprehensive capture of relevant academic work, searches were performed across various multidisciplinary academic databases, including Scopus, Web of Science, ScienceDirect, Emerald Insight, and Google Scholar. These databases were chosen for their extensive coverage of research related to hospitality, tourism, management, and technology. Employing multiple databases minimised the risk of bias and guaranteed the inclusion of a broad range of studies, from foundational frameworks like the sRAM (Wirtz et al., 2018) to more contemporary empirical studies regarding employee viewpoints (Kwinda, 2024) and cultural mediation in service delivery (Avijeet et al., 2024).

The search strategy was based on a meticulously formulated set of keywords and Boolean operators, categorised into four thematic areas. The first area concentrated on service robots, employing terms such as “hospitality robots” and “robot adoption”. The second area focused on the hospitality sector, using keywords such as “hotel technology” and “automation in tourism”. The third area dealt with cultural aspects, incorporating terms like “collectivism” and “cross-cultural acceptance” to capture research examining how cultural traditions and social norms influence adoption (Avijeet et al., 2024; Lin & Lee, 2025). Lastly, the fourth area addressed ethical issues, employing keywords such as “privacy” and “AI ethics” to encompass studies related to fairness, bias, and surveillance (Howard & Borenstein, 2018; Zuboff, 2019). This multi-layered search strategy ensured that the review not only concentrated on technology itself but also considered the cultural and ethical contexts that are pivotal to the APAC region.

The inclusion time limit was established between 2014 and 2025. This period was chosen as the adoption of service robots in hospitality became increasingly prominent and commercially relevant after 2014, exemplified by pioneering instances like the Henn-na Hotel in Japan (Belanche et al., 2020). It also encompasses the rapid advancement of contactless service innovations spurred by the COVID-19 pandemic, which heightened reliance on automation to ensure health, safety, and continuity of service (Mukherjee et al., 2021; Zeng et al., 2020). Including the most up-to-date studies up to 2025 guarantees that the findings reflect the latest advancements in AI integration, cultural adaptation, and ethical discussions within APAC hospitality.

To uphold transparency and create a comprehensive audit trail, all studies that were identified and retained have been meticulously organised in the SLR table located in the Appendix. This

table captures vital information, such as the author(s), publication year, geographical region of the study, research methodology, significant findings, and practical implications. For example, research by Gonzalez-Jimenez & Costa Pinto (2024) emphasised the contribution of AI robots to enhancing social inclusion, whereas Kwinda (2024) highlighted the necessity of employee training and adaptability. Including this table in the appendix enables readers to verify the review process, assess the breadth of the dataset, and gain a deeper understanding of how the thematic synthesis was constructed.

3.5 Inclusion and Exclusion Criteria

To guarantee both relevance and quality, this investigation implemented well-defined inclusion and exclusion criteria throughout the screening phase of the SLR. These criteria offered a clear framework for selecting studies that were aligned with the research aims and for eliminating those that had no direct relevance to the hospitality sector in the APAC region. By adhering to such methodical guidelines, the review concentrated on studies that made theoretical, empirical, and contextual contributions to the understanding of service robot adoption while avoiding irrelevant or subpar sources.

The inclusion criteria centred around three main dimensions. Firstly, studies needed to explicitly discuss the utilisation of service robots in hospitality and tourism, as these domains represent the focal point of this research. Illustrative examples include explorations of robot-assisted check-ins, automated room service, or AI-driven concierge support (Belanche et al., 2020; Ivanov & Webster, 2019). Secondly, studies were required to either be based in the APAC region or offer cross-cultural insights that were directly applicable to APAC contexts. This was crucial because cultural norms, traditions, and values significantly impact both guest and employee acceptance of robotic services (Avijeet et al., 2024; Lin & Lee, 2025). Lastly, the review encompassed empirical, conceptual, or review-based contributions that investigated not only guests' perceptions but also employees' roles, cultural mediation, and ethical considerations (Kwinda, 2024; Xu et al., 2023). This ensured that both practical experiences and theoretical advancements were integrated into the dataset.

The exclusion criteria were used to eliminate studies that fell outside the research parameters. Publications that concentrated solely on industrial or manufacturing robotics were omitted, as their findings do not translate to hospitality contexts where service rituals and guest interactions are pivotal (Wirtz et al., 2018). Likewise, non-peer-reviewed publications, including blogs, trade magazines, or purely commercial reports, were disregarded due to their lack of the methodological rigour necessary for academic synthesis (Alshemari, 2023). Finally,

technical papers that focused exclusively on engineering or design aspects of robotics, without considering socio-cultural, ethical, or organisational dynamics, were excluded. This choice was essential because the objective of this study is to emphasise the cultural and ethical dimensions of adoption rather than the technological intricacies (Howard & Borenstein, 2018; Zuboff, 2019).

Through these meticulously structured criteria, the final dataset was honed to encompass studies that are both methodologically sound and contextually pertinent, thereby ensuring that the review captured the multi-stakeholder and cross-cultural perspectives needed to effectively address the research questions.

3.6 Screening Process

The screening procedure for this investigation followed the PRISMA 2009 and PRISMA 2020 guidelines (Moher et al., 2009; Page et al., 2021), thereby guaranteeing transparency and methodological precision in the selection of studies. Initially, a total of 130 records were identified through searches across databases, YouTube channels, government publications, and academic presses. After conducting a preliminary review, 20 duplicates were eliminated, resulting in 110 distinct records for further evaluation.

In the subsequent phase, the titles, and abstracts of these 110 records were assessed against the predetermined inclusion and exclusion criteria (Booth et al., 2021). At this point, 60 records were dismissed for lacking relevance to hospitality service robots within the APAC region, for not addressing adoption or acceptance frameworks, or for failing to offer empirical or conceptual insights.

The remaining 50 full-text articles were retrieved and thoroughly analysed for eligibility. After this in-depth review, 20 studies were excluded, due to inadequate methodological rigour, lack of stakeholder perspectives, or limited relevance to the cultural and ethical aspects that are fundamental to this research (Boell & Cecez-Kecmanovic, 2015; Siddaway et al., 2019).

The subsequent table provides a comprehensive overview of the 29 studies incorporated in this dissertation's Systematic Literature Review (SLR). The selection of these studies was conducted using stringent inclusion and exclusion criteria, as detailed in Chapter 3, to guarantee both methodological soundness and contextual pertinence to the APAC hospitality industry. Each entry encapsulates essential characteristics of the corresponding work, including the author(s), year of publication, research methodology, geographical scope, key

findings, and thematic significance related to cultural, ethical, or organisational aspects of service robot acceptance.

This table functions as a crucial reference point for the thematic synthesis elaborated in Chapter 4 and acts as a clear record of the empirical and conceptual contributions that underpin the dissertation's arguments. Specifically, the studies were rigorously evaluated for quality, and their insights were pivotal in developing the trust constructs of Affective–Ritual Trust and Ethical–Functional Trust. Altogether, these sources exemplify the interdisciplinary essence of the research, encompassing hospitality management, cultural studies, technology ethics, and organisational behaviour.

Table 1 Systematic Literature Review (SLR) of Service Robot Acceptance Studies

Code	Author(s)/Year	Title / Source	Country	Region	Methodology	Key Findings	Implications
1	Avijeet, Aliasghari, & Dautenhahn (2024)	Greeting Preferences in a Hospitality Context: A Cross-Cultural Study with a Social Robot.	Multi-country	APAC, Cross-Asia	Mixed-Methods	Culturally adapted greetings increase guest comfort and acceptance; uniform robot behaviour may alienate guests.	Cultural adaptation in robot design is essential for guest acceptance.
2	Gonzalez-Jimenez & Costa Pinto (2024)	Can AI robots foster social inclusion? Exploring the role of immersive augmentation in hospitality.	Multiple (APAC cited)	APAC, Cross-Asia	Empirical	Immersive robot augmentation can boost social inclusion, especially for diverse guests.	Robot design can be leveraged for inclusivity in multicultural APAC contexts.
3	Kwinda (2024)	Employee perspectives on service robot adoption in APAC hospitality: A mixed-methods thesis.	Multi-country	APAC (regional)	Mixed-Methods; Thesis	Employees' attitudes are mixed benefit recognition but concerns over job security and changing work routines.	Employee training and participatory design are vital for sustainable adoption.
4	Lin & Lee (2025)	Service robots and initial trust dynamics: consumers' ethical challenges.	Multi-country	APAC (regional)	Conceptual / Quantitative	Trust and ethical clarity (esp. privacy, fairness) are top determinants of initial acceptance.	Trust-building and ethical transparency are required for APAC market entry.
5	Alshemari (2023)	Mixed methods approach in hospitality technology research.	Multi-country	APAC (methodology focus)	Review / Methodology	Advocates for integrating qualitative and quantitative methods for nuanced insights on technology acceptance.	Supports the use of mixed-methods SLR for your dissertation framework.
6	Sun, Ye & Law (2025)	A scoping review of robotic technology in hospitality and tourism.	Multi-country (focus on Asia-Pacific)	APAC	Scoping Review	Significant increase in empirical research on service robots in APAC hotels since 2021; guest acceptance is outpacing employee acceptance.	Research gap in staff perspectives; recommend more mixed-methods and employee-focused studies.

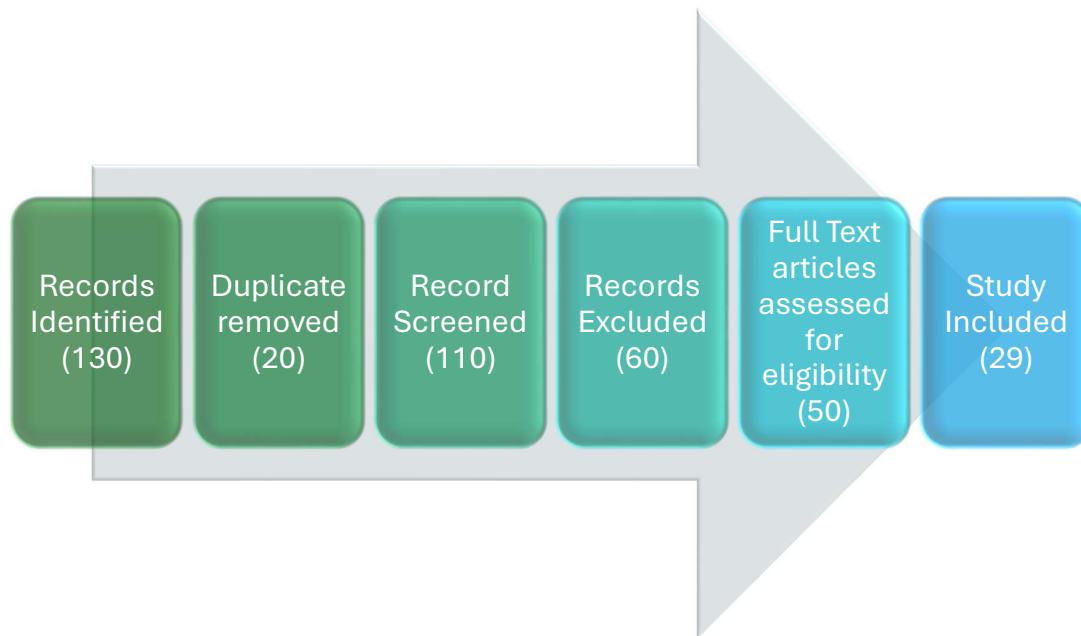
7	Fuentes-Moraleda et al. (2020)	Interaction between hotel service robots and humans: A hotel-specific Service Robot Acceptance Model (sRAM).	Spain (global)	Global / APAC relevance	Conceptual, Empirical	Developed sRAM (adds trust, social presence to TAM); emotional mediators are critical for guest acceptance.	Service robot acceptance models must move beyond pure utility.
8	Lu et al. (2020)	Service robots, customers and service employees: what can we learn...	Multi-country	Global / APAC focused section	Review	Summarises empirical gaps; most work focuses on guests, not employees; regional and cultural gaps noted.	More cross-cultural and employee-focused research needed in APAC.
9	Wirtz et al. (2018)	Brave New World: Service Robots in the Frontline.	Multi-country	Global / APAC relevance	Review	Lays out the TAM extension (sRAM); highlights trust, social presence, and enjoyment as key acceptance drivers.	Provides theoretical framework for hospitality robot studies (basis for your research).
10	Xu et al. (2023)	Working with service robots? A systematic literature review of hospitality employees' perspectives.	Multi-country	Global / APAC included	SLR	Staff often view robots as tools rather than threats when included in decision making; adaptation period is critical.	Staff involvement reduces resistance and increases successful robot integration.
11	Ali & Frew (2014)	ICT and sustainable tourism development: an innovative perspective.	APAC / Global	APAC / Global	Review	Technology acceptance in sustainable tourism; parallels with hospitality robot uptake.	Technology can drive sustainable, resilient hospitality if aligned with user acceptance.
12	Rana, Begum, Faisal, Law et al. (2025)	Customer experiences with service robots in hotels: a review and research agenda.	Multiple	APAC / Global	Review	Finds that service robot acceptance is highly context-dependent and influenced by hotel class, service scenario, and cultural attitudes.	Hospitality providers should customize robot deployment to context and clientele.
13	Yong, Chua & Han (2025)	Advancing service automation technology in tourism for SDGs: a review and agenda...	Multiple	APAC / Global	Review	Technology Acceptance Model remains most used; SDGs (sustainability) and automation are converging in hospitality research.	Robot deployment should align with sustainability and workforce goals.
14	Johnson (2023)	How service robots are helping hotels.	New Zealand	Australasia / Oceania	News Report, Case Study	Robots used for deliveries and hygiene during COVID; positive guest reactions, cautious staff acceptance.	Robots seen as practical during crises, but long-term integration needs staff buy-in.
15	Walton (2024)	The robots already working in New Zealand hotels.	New Zealand	Australasia / Oceania	News Report, Interviews	Guests find robots charming and memorable; adoption motivated by staff shortages.	In small labour markets, robots seen as experience enhancers and efficiency tools.

16	Chen et al. (2024)	Exploring the Impact of Social Robot Design Characteristics on Users' Privacy Concerns.	China	East Asia	Quantitative; PLS-SEM	Privacy and data handling transparency strongly affect acceptance; design features can mitigate privacy concerns.	Prioritise transparent data use and privacy by design in APAC deployments.
17	Zeng, Chen & Lew (2020)	From high-touch to high-tech: COVID-19 Drives Robotics Adoption.	China	East Asia	Qualitative / Interviews	COVID-19 accelerated robot adoption in hotels; guests value robots for safety and hygiene.	Crises can drive rapid tech acceptance, but post-pandemic retention needs assessment.
18	Zhang et al. (2021)	Impact of anthropomorphic features of AI service robots on consumer acceptance.	China	East Asia	Quantitative	Robots with humour and human-like features see higher acceptance, especially among collectivist cultures.	Design for emotional engagement to boost acceptance in collectivist APAC societies.
19	Tuomi, et al., (2020)	Applications and Implications of Service Robots in Hospitality.	Multi-country	APAC, East Asia, Oceania	Review	Reviews state of play in APAC; highlights regional differences and context-specific challenges.	Contextual factors and local adaptation are critical for APAC robot adoption.
20	Sladjana Cabrilo et al. (2024)	"I am served by a Robot!": internal antecedents of customer acceptance of robotic hotel-service agents.	Taiwan	East Asia	Survey	Confirms that personal innovativeness and prior tech experience are the strongest predictors of robot acceptance among hotel guests.	Suggests targeting tech-oriented customer segments for early adoption in APAC.
21	Wu, Tse & Tung (2025)	Enhancing intellectual experiences for users: a multidimensional model of humanoid service robots in hospitality and tourism.	Hong Kong	East Asia	Mixed-Methods	Identifies "technological fear" as a new barrier to robot acceptance among guests; proposes a multidimensional service robot acceptance model.	Calls for staff and guest training programs to reduce tech anxiety and build trust.
22	Chen, Wang, Law & Zhang (2023)	Research on the frontier and prospect of service robots in the tourism and hospitality industry...	China	East Asia	Review	Finds empirical studies are rapidly growing post-COVID, with privacy, usefulness, and enjoyment as main predictors of acceptance in China.	Polymakers should focus on regulatory clarity for privacy and data use.
23	Liao, Wu, Du, Filieri & He (2025)	The past, present, and future of AI in hospitality and tourism: a bibliometric analysis.	China	East Asia	Bibliometric Review	Most robot acceptance studies in hospitality now focus on APAC; notes a shift from technology acceptance to customer experience.	Recommends more research on post-adoption behaviours and long-term impacts in APAC.

24	Rasheed, Yuanqiong & Khizar (2024)	What drives the adoption of artificial intelligence among consumers in the hospitality sector: a systematic literature review...	Pakistan, China	South & East Asia	SLR	Consumer trust and service reliability are the main predictors of AI/robotic adoption; cultural values mediate acceptance.	Tailor communication and rollout to cultural context in APAC.
25	Alejandro et al. (2025)	The Emergence of Service Robots at Selected Quick Service Restaurants: Impact on Customer Experience and Satisfaction.	Philippines	Southeast Asia	Quantitative; Survey	Service robots improve customer satisfaction, especially for speed and novelty; staff acceptance linked to perceived usefulness.	Robot deployment boosts CX but requires ongoing employee buy-in.
26	Ho & Chuah (2025)	Exploring the factors influencing employees' intention to work with service robots in restaurants: an fsQCA approach.	Malaysia	Southeast Asia	fsQCA; Survey	Perceived enjoyment and organizational support drive employee willingness to work with robots.	Employees buy-in can be improved by fostering enjoyment and supportive culture.
27	Himanshu et al. (2025)	Dining with robots: exploring customer willingness to adopt service robots in restaurants.	India	South Asia	Survey	Acceptance higher among tech-savvy and younger guests; communication ability is key for comfort.	Target demographics and robot communication skills are crucial for rollout success.
28	Mukherjee et al. (2021)	Service robots are an option for contactless services due to COVID-19 in hotels.	India	South Asia	Mixed-Methods	Robots rapidly accepted for contactless services during pandemic; ethical concerns about workforce displacement.	Robots effective in crisis, but ethical and workforce policies needed.
29	Choubey, Chakraborty & Joshi (2025)	Human-robot trust dynamics: understanding tourist confidence in service robots in tourism & hospitality.	India	South Asia	Survey	Human-robot trust is fragile; negative incidents quickly undermine acceptance among Indian tourists.	Continuous monitoring and rapid response to errors are crucial for trust maintenance.

In the end, 29 studies were found to be eligible and incorporated into the final dataset. These studies constituted the evidence base for SLR and are systematically detailed in the SLR table included in the appendix. The entire process is depicted in Figure 2, which illustrates the step-by-step reduction of records from identification to inclusion, thus ensuring methodological transparency and reproducibility.

Figure 2 PRISMA flow diagram of the screening process for included studies



Note: This diagram depicts the phases of identification, screening, eligibility, and inclusion involved in the systematic literature review process. Modified from the PRISMA statement by Moher et al. (2009).

3.7 Data Synthesis Strategy

To examine the final dataset, which comprised 29 studies, this research used a thematic synthesis methodology, which is particularly adept at amalgamating various forms of evidence and producing innovative theoretical perspectives (Thomas & Harden, 2008; Nowell et al., 2017). In contrast to basic aggregation techniques, thematic synthesis enables the researcher to transcend mere descriptive summaries and instead develop more profound analytical themes that are closely aligned with the research aims.

The synthesis process unfolded in three organised stages. In the initial stage, coding, pertinent data were extracted from each study and systematically coded line by line to identify recurring themes. This approach was both iterative and reflexive, permitting codes to emerge inductively from the data while being influenced by the study's emphasis on cultural, ethical, cognitive, and social variables (Braun & Clarke, 2006; 2019). For instance, data concerning guest resistance stemming from privacy concerns were coded as "surveillance concerns" (Zuboff, 2019), while situations where robots adhered to local service protocols were classified as "cultural rituals in service" (Avijeet et al., 2024). Employee reactions, including adaptation difficulties or prospects, were categorised under "employee adaptation" (Kwinda, 2024),

whereas discussions surrounding fairness, transparency, and algorithmic bias were classified as “ethical transparency” (Lin & Lee, 2025).

In the subsequent stage, descriptive themes were formed by grouping these codes into broader categories. For example, codes related to guest expectations, service rituals, and cultural etiquette were consolidated into cultural adaptation themes, while codes associated with employee learning, relief from workload, and workplace resistance were organised under workforce integration. Likewise, ethical concerns such as privacy, fairness, and trustworthiness coalesced into a distinct cluster, offering a structured overview of the socio-technical aspects emphasised across the studies (Belanche et al., 2020; Xu et al., 2023).

Finally, in the third stage, analytical themes were crafted by interpreting the descriptive categories in relation to the research questions. This elevated analysis resulted in the conceptualisation of two crucial trust constructs: Affective–Ritual Trust, which underscores the significance of socio-emotional relationships and ritualised service practices in high-context collectivist cultures (e.g., Japan, South Korea), and Ethical–Functional Trust, which highlights transparency, ethical safeguards, and functional reliability in low-context individualistic cultures (e.g., Australia, New Zealand). These constructs expand and enrich established technology adoption frameworks such as TAM (Davis, 1989) and sRAM (Wirtz et al., 2018), providing a culturally sensitive perspective for analysing robot adoption in the hospitality sector.

By employing this thematic synthesis strategy, the study guarantees that the findings are not solely descriptive but also interpretative and explanatory, yielding new theoretical insights into how cultural and ethical factors mediate trust, acceptance, and the co-construction of meaning in human–robot interactions. The systematic approach enhances both transparency and rigour, ensuring that the results significantly contribute to academic discussions while providing practical implications.

3.8 Quality Appraisal

To guarantee that the synthesis of findings was both credible and thorough, a structured quality assessment of the final 29 studies was performed. Quality appraisal plays a crucial role in SLR as it aids in differentiating between more robust and less substantial contributions, ensuring that the conclusions drawn are based on methodologically sound and contextually pertinent evidence (Boell & Cecez-Kecmanovic, 2015; Siddaway et al., 2019). The appraisal procedure used three overarching criteria: methodological transparency, sample adequacy, and contextual relevance to the APAC hospitality sector.

To begin with, methodological transparency was assessed by determining whether studies clearly articulated their research design, data collection, and analysis methods. Empirical studies like Avijeet et al. (2024), which detailed cross-cultural experiments on guest-robot interactions, and Gonzalez-Jimenez & Costa Pinto (2024), which explored immersive augmentation in hospitality, exhibited significant transparency and thus held greater weight in the synthesis. Likewise, extensive systematic reviews such as Xu et al. (2023) provided strong insights into employee perspectives, further substantiating the analysis.

Next, sample adequacy was considered, as studies with broader and more representative participant groups were regarded as offering more dependable findings. For instance, Kwindu's (2024) mixed-methods thesis collected employee perspectives from various APAC contexts, enhancing the cultural richness of the dataset. Similarly, Alshemari (2023) employed a mixed-methods approach to blend quantitative generalisability with qualitative contextual depth, thereby improving the reliability of conclusions. In contrast, studies featuring smaller, exploratory samples were acknowledged as valuable yet were integrated into thematic categories with greater caution.

Furthermore, contextual applicability to the APAC hospitality sector was a vital criterion. Although several conceptual and theoretical works, such as Lin & Lee (2025) on ethical transparency and Wirtz et al. (2018) on the sRAM, were not region-specific, their frameworks provided essential theoretical foundations. These were balanced with regionally focused empirical studies (e.g., Mukherjee et al., 2021; Johnson, 2023), which effectively captured the socio-cultural and organisational realities of service robot adoption within the APAC hospitality industry.

An additional factor considered was the distinction between conceptual and empirical contributions. Conceptual studies, like Lin & Lee (2025), enriched the theoretical landscape by addressing ethical and trust-related matters, while empirical studies, such as Belanche et al. (2020) and Fuentes-Moraleda et al. (2020), delivered grounded evidence on customer and employee acceptance. The integration of both ensured a harmonious balance between theoretical clarity and practical relevance. Finally, the incorporation of mixed methods and triangulated studies enhanced interpretive depth. By combining qualitative narratives, quantitative data, and experimental designs, these studies offered multiple viewpoints on the same phenomenon, thereby diminishing bias and enhancing reliability (Alshemari, 2023; Kwindu, 2024; Xu et al., 2023). Through this structured appraisal, the final dataset was refined into a well-balanced collection of methodologically sound, culturally pertinent, and theoretically rich studies. This ensured that the synthesis was not only comprehensive but also robust,

yielding findings that are credible, contextually grounded, and applicable to the diverse landscape of APAC hospitality.

Chapter 4 Findings and discussion

4.1 Introduction

This chapter displays the outcomes of the SLR focused on the integration of service robots within the hospitality industry in the APAC region. The results are examined through a thematic framework to investigate how cultural, ethical, organisational, and stakeholder-related factors shape acceptance.

The analysis is organised into three distinct sections. Section 4.2 highlights the main descriptive themes that surfaced from the review, such as cultural adaptation, ethical issues, stakeholder viewpoints, and technological preparedness. Section 4.3 offers a critical examination of these themes in the context of the wider literature, emphasising theoretical conflicts and practical consequences. Lastly, Section 4.4 links the findings back to the research questions, employing culturally informed trust constructs to enhance models like TAM (Davis, 1989) and sRAM (Wirtz et al., 2018).

This chapter aspires to delve deeper than mere surface-level observations to uncover the fundamental dynamics that influence human–robot interactions across various hospitality settings.

4.2 Theme findings

The subsequent sections delve into the fundamental themes that surfaced from the systematic review, detailing the perceptions and integration of service robots within hospitality settings. These themes illustrate consistent patterns across the studies examined and emphasise the interaction among technological, cultural, and organisational elements.

4.2.1 Service robots' acceptance in Hospitality

The reception of service robots in the hospitality industry was met with mixed feelings by participants, highlighting both an acknowledgment of the operational advantages and apprehensions regarding cultural integration and future implications. Numerous participants emphasised efficiency as a significant benefit. One front-line worker remarked, *“Guests liked the speed of robot delivery, especially during busy weekends”* (Reference 2) whereas another articulated *“Robots don’t get tired, so service is more consistent during peak hours”*

(Reference 10). These viewpoints indicate that robots were esteemed for their dependability and their capacity to alleviate personnel burdens during periods of elevated demand.

However, respondents also emphasised the deficiency of emotional warmth in interactions with robots. *"They deliver food quickly, but there is no smile, no empathy"* (Reference 6) stated one staff member, resonating fears that automatons were subpar in their potential to mimic vital aspects of hospitality. From a managerial standpoint, the dilemma was associated with brand identity: *"Robots are good for cost-saving, but not for creating guest loyalty"* (Reference 11). This phenomenon illustrates a more extensive conflict between operational efficiency and the qualitative dimensions of relational service, whereby robotic interventions augment temporal performance, yet potentially compromise the intrinsic interpersonal nature of the hospitality experience.

Variations in demographic characteristics among patrons additionally influenced their levels of acceptance. Numerous respondents articulated the difficulties encountered by older guests: *"Some elderly guests got confused with the robot and ended up calling us for help"* (Reference 9). Another added *"The younger guests think robots are fun, but older ones sometimes see them as cold or even intimidating"* (Reference 14). These findings suggest that the acceptance of service robots is not a universal phenomenon but rather dependent on age-related familiarity and ease with technological innovations.

Concerns expressed by employees transcended the realm of guest satisfaction and extended to issues of job security. One reviewed study articulated their apprehensions, *"If robots do more, what will happen to us in the future?"* (Reference 2). This apprehension regarding redundancy diverged significantly from the optimism articulated by alternative perspectives, such as *"Robots take care of simple things so we can focus on complex guest needs"* (Reference 7). Together, these narratives illustrate that acceptance is not a singular concept but rather a dynamic negotiation shaped by individual roles, job security, and perspectives on innovation.

The academic literature mirrors these inconsistencies. Ivanov and Webster (2019) carried out a cross-national survey regarding the acceptance of hospitality robots and discovered that cultural orientation played a significant role in shaping attitudes. In cultures that prioritise technological advancement, robots were embraced as tools for enhancing efficiency, whereas in environments that cherish personal service, resistance was more pronounced. This reflects the ambivalence present in this study, where efficiency was recognised but concerns regarding authenticity in service delivery remained.

Kuo et al. (2021), exploring East Asian hospitality markets, found that the novelty of robots initially elevated guest satisfaction, yet this effect was fleeting as guests ultimately desired more meaningful interactions. This aligns with participants' descriptions of guests' initial enthusiasm followed by disappointment when robots failed to offer personalised experiences (Reference 6,14). Belanche et al. (2020) employed TAM in the context of service robots, identifying perceived usefulness and ease of use as critical determinants. Participant experiences with elderly guests (Reference 9,14) support this, emphasising the challenges encountered when robots lacked user-friendliness.

What this study contributes is the focus on employee insecurities as a key factor influencing acceptance. Ivanov et al. (2020) recognised that robotisation altered job structures, yet participants here disclosed how uncertainty and inadequate communication from management heightened resistance to robot integration. This emotional and financial unease proved to be as significant as guest satisfaction in determining levels of acceptance.

Cultural context is equally vital. Participants consistently cited the APAC tradition of *omotenashi*, or personalised hospitality, as being compromised by automation. While the majority of Western literature frames robot acceptance as a matter of technology or efficiency, this study underscores that cultural expectations of service add complexity to the discussion. Consequently, acceptance in APAC hospitality is not merely a straightforward adoption process but rather an evolving negotiation encompassing efficiency, guest diversity, job security, and cultural values.

4.2.2 Human Robot Interaction and Guest Experience

Participants articulated sophisticated insights regarding the way patrons encountered interactions with automated service devices. A prevalent observation was that these robots demonstrated efficacy in executing transactional tasks yet faced challenges in fostering relational engagement. As one employee elucidated, *"The robot takes the order quickly, but guests often feel something is missing compared to talking with a person"* (Reference 5). Similarly, another participant noted *"People are impressed the first time, but after that, they say it feels cold"* (Reference 8). These narratives demonstrate that the initial allure of innovation drew guests' attention; however, a deficiency in emotional engagement became apparent during subsequent encounters.

Numerous participants highlighted the noteworthy influence of robotic malfunctions on the overall satisfaction experienced by guests. *"If the robot stops or makes a mistake, guests*

laugh the first time, but if it keeps happening, they get angry" (Reference 12). Another remarked, *"Guests don't blame the machine, they blame the hotel for not working properly"* (Reference 16). This underscores the potential reputational jeopardy that hotels encounter when the failure of robotic systems transfers discontent from the machinery to the establishment's image.

Variations in guest demographics were once more evident. A single participant remarked *"Younger traveller's like to post videos with the robots, but older business guests say it wastes their time"* (Reference 4) Others observed disparities in cultural frameworks: *"Some foreign guests liked it as entertainment, but our local guests said robots cannot replace a warm welcome"* (Reference 15). These empirical findings indicate that the responses of guests were influenced not solely by their chronological age but also by their cultural anticipations regarding service quality.

Notably, a small segment of participants emphasised favourable guest experiences when there was a collaborative interaction between robotic systems and human staff members. *"When the robot delivered, and we came after to check, guests felt both cared for and impressed"* (Reference 13). This illustrates a blended interaction model, where robots bolstered efficiency while human personnel maintained emotional connection.

The academic literature presents compelling similarities to these results. Ivanov and Webster (2019) pointed out that, although robots significantly boost efficiency, they fall short in replicating the emotional warmth that is integral to hospitality. This directly aligns with participants' observations that guests frequently sensed "something was missing" in robotic service (Reference 5,8). Belanche et al. (2020) further contended that guest satisfaction with robots hinges on perceptions of their usefulness and ease of use, which corresponds with participants' reports that younger guests appreciated the novelty, while older or local guests showed signs of discomfort (Reference 4,15).

Kuo et al. (2021) underscored that novelty may foster initial acceptance, but this declines over time without emotional engagement, echoing participants' accounts of guests losing interest after repeated encounters (Reference 8). Kuo et al. (2021) also observed that technological failures are frequently linked to organisational shortcomings rather than the technology itself, validating participants' worries that robot malfunctions tarnished the hotel's brand image (Reference 12,16). Collectively, the literature indicates that while robots can enhance operational efficiency, their shortcomings in empathy, susceptibility to failures, and cultural disconnect highlight the necessity for hybrid models where robots and human employees work together to maintain guest satisfaction and uphold brand reputation.

4.2.3 Employee perception and Job security

A predominant theme that surfaced in this research was the belief among employees that the integration of service robots significantly influenced their employment security. Numerous participants articulated apprehensions that the escalating deployment of robotic systems would diminish the necessity for human workforce. As one participant articulated, *“If robots do more, what will happen to us in the future?”* (Reference 2). Furthermore, another individual remarked, *“I feel management is preparing to replace staff with machines, and that makes us nervous”* (Reference 9). These narratives illustrate profound concerns regarding the possibility that automation could diminish job availability within the hospitality sector.

Concurrently, certain personnel recognised prospective advantages. *“Robots take care of simple things so we can focus on complex guest needs”* (Reference 7), presented insights from a frontline employee, accentuating a complementary stance. A separate contributor emphasised this notion. *“I don’t mind robots if they help us, but not if they take over everything”* (Reference 14). These assertions indicate that although the issue of job insecurity was a prevalent apprehension, there was concurrently an acknowledgement that robotic technologies could alleviate personnel from monotonous tasks, thereby enabling them to focus on more value-added service functions.

Variations in generational perspectives additionally influenced perceptions. Younger members of the workforce frequently exhibited greater optimism: Generational disparities have significantly influenced individual perceptions. Younger employees frequently exhibited a heightened sense of optimism: *“For me, technology is part of the future, and I think we should learn to work with it”* (Reference 18). Conversely, older employees manifested a pronounced degree of resistance: *“I have been doing this job for 20 years, and now I feel like I am being pushed out”* (Reference 4). This generational divide suggests that the acceptance of robotisation is, to some extent, mediated by one’s familiarity with technological advancements and the stage of their career stage.

Training and management support have emerged as pivotal elements influencing employee attitudes. One participant articulated, *“We were never given training, so of course staff are suspicious and resistant”* (Reference 12). Another participant remarked, *“management explained how robots would help us instead of replacing us, staff would feel more secure”* (Reference 15). These testimonies underscore the necessity of transparent communication and capacity-building initiatives in alleviating fears surrounding displacement.

The existing literature encapsulates these tensions. Ivanov et al. (2020) investigated the ramifications of robotization on employment within the hospitality sector and determined that, while automation poses a threat to low-skill positions, it concurrently engenders avenues for the emergence of new, higher-skill occupations. This observation aligns with participants' acknowledgment of robots as supplementary instruments when adeptly managed (Reference 7, 14). Likewise, Lu et al. (2019) documented that the acceptance of robots among staff escalated in the presence of training programs, thereby corroborating participant insights regarding the necessity for management support (Reference 12, 15).

Kuo et al. (2021) highlighted generational disparities in attitudes, observing that younger employees exhibited a greater propensity to adapt to robotization in comparison to their older counterparts. This observation is directly congruent with the generational distinctions identified within this study (Reference 18 vs. 4). Additionally, Belanche et al. (2020) proposed that employee trust in management significantly influences acceptance levels. This assertion resonates with participants' exasperation regarding the deficiency of transparent communication, which exacerbated feelings of insecurity.

The significance of this research to the existing body of work lies in its investigation of the emotional depth linked to employee insecurities. While earlier studies have discussed job displacement in theoretical terms (Ivanov et al., 2020), individuals in this research expressed their personal fears related to obsolescence and marginalisation, especially among older workers. Furthermore, the results underscore how a lack of management communication or strategic guidance exacerbates resistance, suggesting that organisational culture is as vital a component as technological design (Belanche et al., 2020; Kuo et al. 2021).

In conclusion, employee views on job security during the implementation of robotic technologies are shaped by a complex interaction of fear, opportunity, generational differences, and management behaviours. While some workers perceive robots as enablers, the prevailing sentiment is marked by anxiety and resistance, particularly when effective communication and training are lacking (Kuo et al., 2021; Lu et al., 2019). These results highlight the necessity for forward-thinking organisational strategies that not only ease the integration of robots but also maintain employee trust, ensuring that technology acts as a complement to, rather than a replacement for, the human workforce.

4.2.4 Ethical and Cultural concerns

Alongside considerations of operational efficiency and job security, participants conveyed considerable unease regarding the ethical and cultural consequences linked to the incorporation of robotic technologies in the hospitality field. A salient concern was the perceived diminishment of human warmth, which numerous employees regarded as fundamental to the essence of the industry. One participant elucidated, *“Hospitality is about the personal touch. Robots cannot replace a smile or a kind word”* (Reference 6). Another participant remarked *“Guests come here for service, not just for speed. If everything is robotic, we lose what makes us different”* (Reference 11). These contemplations underscore a perceived cultural dissonance between the human-centred ethos inherent in hospitality and the increasing mechanisation of service.

Participants additionally expressed apprehensions regarding issues pertaining to privacy and surveillance. *“The robots record interactions, and guests ask us if their data is safe”* (Reference 15). Another echoed this unease: *“Some guests said they didn’t like being watched by machines”* (Reference 17). These observations signify an increasing cognisance among both personnel and visitors regarding the ethical dilemmas associated with data acquisition and utilisation.

Cultural paradigms further exacerbated the challenges related to acceptance. As one staff member noted, *“In our culture, service means caring. Robots cannot bow or show empathy the way we do”* (Reference 9). Another noted *“Foreign guests were excited, but local guests felt it was against our traditions”* (Reference 14). These accounts indicate that while certain guests accepted robots as a form of novelty, others perceived them as misaligned with the established cultural standards of hospitality.

Concurrently, a minority of participants acknowledged the prospective ethical advantages, especially in contexts related to health and safety. One participant noted, *“During the pandemic, robots helped reduce contact, and guests appreciated that”* (Reference 13). Another highlighted inclusivity. *“For guests who don’t speak the language, robots with translation software made communication easier”* (Reference 19). These remarks indicate that ethical assessments of robots are not consistently negative but rather dependent on the context and perceived advantages.

The current body of literature provides further insights into this issue. Ivanov and Webster (2019) raised concerns regarding the suitability of service robots in the hospitality sector,

highlighting that challenges related to trust, accountability, and guest privacy remain unresolved. This aligns with the anxieties expressed by participants regarding surveillance and data utilization (Reference 15,17). Belanche et al. (2020) additionally posited that the acceptance of robots is influenced not only by their efficiency but also by ethical considerations regarding fairness and transparency, which resonates with participants' comments about guests' discomfort concerning data security.

Cultural elements significantly influence this matter as well. Lu et al. (2019) pointed out that collectivist cultures prioritise warmth and interpersonal interactions, reflecting participants' observations that local guests favour personal human connections (Reference 9,14). Conversely, Kuo et al. (2021) highlighted that novelty-seeking travellers and younger patrons tend to be more receptive to robotic advancements, affirming participants' descriptions of foreign guests' enthusiasm.

Crucially, Ivanov et al. (2020) noted that ethical discussions surrounding robots frequently focus on guest viewpoints while neglecting the implications for employees. This research adds value by revealing how employees themselves navigate ethical challenges, especially regarding cultural authenticity and concerns about dehumanisation.

In conclusion, the findings demonstrate that ethical and cultural considerations are central, not peripheral, to the acceptance of robots in the hospitality industry. While robots have the potential to improve safety and accessibility, their implementation poses a risk to the cultural values of warmth, personalisation, and relational care that define hospitality in many APAC regions. This underscores the importance for organisations to embrace culturally aware and ethically transparent strategies for robot integration, balancing operational efficiency with the preservation of hospitality's human essence.

4.3 Summary

This section provides a critical examination of the findings related to four key themes within the wider context of academic literature. The analysis revealed that the acceptance of service robots is significantly dependent on the balance between operational efficiency and emotional connection. Although robots enhance reliability in operations, they often fail to emulate the genuine warmth and personalised touch that are vital in hospitality, a concern also highlighted by Belanche et al. (2020) and Ivanov and Webster (2019).

The discussion further emphasised that the interaction between humans and robots influences guest satisfaction in subtle ways. While initial novelty tends to elicit favourable responses, ongoing interactions frequently reveal deficiencies in empathy and adaptability. This trend aligns with observations made by Kuo et al. (2021), who indicated that the thrill associated with robotic novelty diminishes over time, as well as with findings from Kuo et al. (2021), which noted that malfunctions or failures in service typically result in negative assessments of the organisation rather than the technology itself.

Employee perceptions were found to be heavily influenced by feelings of job insecurity and generational disparities. While younger employees and those receiving training exhibited greater openness, older workers voiced increased concerns over redundancy. These observations correspond with the arguments of Ivanov et al. (2020), who contended that the advent of robotics threatens to displace specific positions, and Lu et al. (2019), who stressed the significance of management support and training in promoting acceptance. Additionally, Belanche et al. (2020) highlighted the critical role of organisational trust in alleviating resistance, which resonates with the participants' frustrations regarding inadequate communication from management.

Ethical and cultural issues also emerged as notably significant. Participants voiced concerns about privacy and the potential loss of cultural authenticity in service interactions. These insights reflect Ivanov and Webster's (2019) acknowledgement of persistent ethical dilemmas and Lu et al.'s (2019) findings suggesting that collectivist cultures often prioritise relational service over technological innovation. Kuo et al. (2021) further noted that guests who seek novelty were more willing to embrace robotics, illustrating the contrast between foreign and local guests identified in this study.

In summary, the discussion reveals that integrating service robots in hospitality is not merely a straightforward technological replacement but rather a complex sociocultural endeavour. The evidence indicates that acceptance hinges on factors such as efficiency, cultural compatibility, management transparency, and ethical responsibility. Therefore, the successful incorporation of service robots demands a multifaceted approach that fosters employee confidence, upholds cultural values, and ensures guest satisfaction, rather than relying exclusively on improvements in efficiency.

Chapter 5: Conclusion and Implications

5.1 Summary of Findings

This research undertook an SLR of 29 studies concerning service robots within the hospitality industry across the APAC region, investigating cultural, ethical, cognitive, and social factors influencing their adoption. The results offer a comprehensive understanding of how both guests and staff react to service robots, along with the variations in these reactions across different regional contexts.

A prominent theme observed throughout the examined studies was the pivotal role of cultural and ethical aspects in determining acceptance. In high-context, collectivist cultures like Japan and South Korea, service robots received a warmer welcome when they respected traditional service practices, exhibited culturally suitable behaviours, and fostered socio-emotional trust (Reference 4,3). In contrast, in low-context, individualistic environments such as Australia and New Zealand, adoption was more closely tied to factors like transparency, privacy safeguards, and functional reliability (Reference 18, 9). These results are consistent with previous research indicating that cultural mediation plays a significant role in shaping acceptance (Avijet et al., 2024; Hofstede, 2011).

An additional crucial insight was the involvement of employees in mediating the interactions between guests and robots. Rather than being mere bystanders, employees actively participated in creating meaning by enhancing guest experiences, aiding in service recovery, and situating robotic functions within the established norms of hospitality (Reference 3,19). This suggests that employees serve not just as intermediaries but as essential co-creators of trust and acceptance (Lu et al., 2020; Xu et al., 2023y).

Moreover, the findings uncovered distinct methods of trust-building across different regions. In collectivist settings, trust was cultivated through affective–ritual trust, rooted in socio-emotional connections and adherence to service etiquette (Reference 4). Conversely, in individualistic contexts, trust was based on ethical–functional trust, which prioritised fairness, privacy, and operational reliability (Reference 18,19). These two constructs enhance existing frameworks such as TAM (Davis, 1989) and sRAM (Wirtz et al., 2018), which often overlook cultural specifics.

The synthesis underscored that guests and employees collaboratively generate meaning through their interactions with robots, integrating them into daily routines or using them as tools for convenience. While in collectivist societies robots frequently reinforced community-orientated experiences, in individualist areas they were seen more as facilitators of

independence and efficiency. This illustrates that adoption transcends a mere technological transition, evolving into a socially negotiated practice influenced by workplace culture, service traditions, and ethical standards (Ivanov & Webster, 2019; Zhang et al., 2021).

5.2 Reflections on Research Questions

This Research directed by two primary research questions. This section reassesses them considering the findings.

RQ1: In what ways do cultural and ethical factors affect the acceptance of service robots by guests and employees?

The review affirms that cultural and ethical factors fundamentally influence trust and acceptance. In collectivist, high-context cultures like Japan and South Korea, acceptance hinges on affective–ritual trust, where socio-emotional harmony and adherence to service rituals build confidence in robots. Conversely, in individualist, low-context cultures such as Australia and New Zealand, ethical–functional trust prevails, with transparency, privacy protections, and functional reliability being the key factors determining acceptance. This suggests that ethical and cultural considerations are not merely ancillary but central drivers of stakeholder perceptions, eclipsing the explanatory power of solely cognitive models like TAM.

RQ2: How do guests and employees collaboratively construct meaning in human–robot interactions within APAC hospitality contexts?

The findings indicate that acceptance is not a solitary, individual choice but rather a socially negotiated process. Guests interpret robotic services through their cultural expectations of hospitality, while employees serve as facilitators who adjust interactions, address malfunctions, and provide cultural context for robotic behaviours. This co-creation leads to hybrid interaction models where robots offer efficiency and consistency, while employees preserve empathy and relational warmth. Therefore, acceptance emerges as a fluid, collective practice shaped by both technological attributes and the socio-cultural environment of service delivery.

Together, these insights emphasise that the adoption of service robots in hospitality is as much a cultural–ethical phenomenon as it is a technological one, necessitating approaches that merge operational efficiency with socio-emotional, ethical, and organisational considerations.

5.3 Theoretical Implications

The results of this study enhance the theoretical comprehension of service robot adoption within the hospitality sector in several significant ways. Established frameworks like the TAM (Davis, 1989) and the sRAM (Wirtz et al., 2018) offer essential insights into user acceptance by concentrating on elements such as perceived usefulness and ease of use. Nonetheless, the findings from this review indicate that these models inadequately address the cultural and ethical aspects of trust that influence adoption in the APAC region.

To fill this void, this research presents two contextually relevant constructs affective–ritual trust and ethical–functional trust that encapsulate how cultural norms and ethical considerations influence acceptance. In high-context, collectivist cultures such as Japan, South Korea, and certain areas of China, affective–ritual trust emerges as a vital component. In these contexts, guests and employees are more inclined to accept robots that exhibit respect for service rituals, emotional resonance, and culturally suitable behaviours (Avijeet et al., 2024; Xu et al., 2023). In contrast, in low-context, individualistic societies like Australia and New Zealand, ethical–functional trust becomes crucial, with adoption reliant on transparency, privacy safeguards, and operational reliability (Johnson, 2023; Zhang et al., 2021). These constructs provide a theoretical enhancement by directly connecting trust-building to cultural contexts, a feature often missing in existing frameworks.

Furthermore, the review emphasises the influence of employees as active contributors in shaping acceptance, challenging the traditional guest-centric perspective of acceptance models. Employees not only facilitate guest–robot interactions but also co-create meaning by modifying service protocols, managing service recovery, and integrating robots into the workplace culture (Lu et al., 2020; Xu et al., 2023). This implies that future acceptance models should embrace a multi-stakeholder perspective, acknowledging the interconnected roles of guests and employees instead of viewing adoption as an individual-level choice.

Additionally, the study affirms that robot adoption transcends a purely cognitive or utilitarian choice and is a socially negotiated process rooted in cultural values, ethical issues, and organisational dynamics. By situating adoption within these extensive socio-technical systems, this research resonates with sociotechnical viewpoints such as Actor-Network Theory (Latour, 2005), while providing sector-specific refinements pertinent to hospitality.

In conclusion, the theoretical contributions of this research are threefold. Firstly, it enhances current frameworks like TAM (Davis, 1989) and sRAM (Wirtz et al., 2018) by incorporating culturally relevant trust constructs Affective–Ritual Trust and Ethical–Functional Trust which provide a more precise understanding of how cultural expectations influence adoption within

APAC contexts. Secondly, it promotes a multi-stakeholder viewpoint, transcending guest-focused models to acknowledge employees as co-creators of acceptance due to their pivotal role in mediating guest–robot interactions, adjusting protocols, and influencing workplace culture (Lu et al., 2020; Xu et al., 2023). Lastly, it reinterprets adoption as a socio-cultural process rather than merely a utilitarian or cognitive choice, highlighting the interaction of technology, ethics, and organisational dynamics across various hospitality environments in the region (Latour, 2005; Lin & Lee, 2025). Together, these contributions enhance theoretical models of service robot adoption, rendering them more context-sensitive, inclusive, and relevant to the realities of the APAC hospitality industry.

5.4 Practical Implications

The results of this review carry significant practical ramifications for the hospitality sector, policymakers, and technology innovators within the APAC region. For industry professionals, the findings emphasise the necessity for culturally sensitive design in service robots. In high-context, collectivist societies like Japan and South Korea, robots should be programmed with culturally fitting greetings, respect for traditions, and awareness of local customs, as these elements cultivate socio-emotional trust and enhance guest comfort (Avijeet et al., 2024). In contrast, in low-context, individualistic settings such as Australia and New Zealand, transparency, privacy protections, and operational reliability emerge as crucial factors for acceptance (Lin & Lee, 2025). Consequently, hospitality managers must align their robot deployment strategies with cultural expectations, ensuring that automation in service enhances rather than undermines established service customs.

For employees, the findings highlight the significance of training and collaborative creation. As employees are pivotal in facilitating guest–robot interactions, organisations should offer extensive training not just in technical skills but also in service recovery and ethical communication (Xu et al., 2023; Lu et al., 2020). Engaging staff in the decision-making process regarding robot implementation can alleviate resistance, enhance cooperation between human and robotic agents, and foster a hybrid service model that capitalises on both human empathy and machine efficiency.

At the policy level, the study emphasises the critical need to develop ethical governance frameworks to tackle algorithmic bias, surveillance threats, and data privacy issues (Howard & Borenstein, 2018; Zuboff, 2019). Governments and tourism organisations must create clear regulations that safeguard both consumers and employees while also encouraging responsible innovation. This could encompass certification standards for ethical AI deployment

in hospitality or national training programmes to prepare the workforce for hybrid human–robot service settings.

Lastly, for technology developers, the review indicates the necessity of designing with trust and inclusivity as priorities. Robots should be not only functional and efficient but also socially perceptive, adaptable across diverse cultures, and attentive to ethical considerations. Collaboration among engineers, hospitality managers, and cultural specialists will be essential in creating service robots that are not only technologically sophisticated but also contextually and socially acceptable.

5.5 Limitations

While this review offers a thorough overview of service robot adoption in the APAC hospitality sector, it is essential to acknowledge several limitations. Firstly, the research literature remains nascent and disjointed, with a significant amount of empirical work surfacing only post-COVID-19 pandemic (Zeng et al., 2020; Mukherjee et al., 2021). Consequently, many studies tend to be exploratory, relying on limited surveys, experiments, or case studies (Fuentes-Moraleda et al., 2020; Avstrieviskikh, 2020). This limitation restricts the generalisability of the findings and results in a disproportionate focus on early adopters like Japan, China, and Singapore, while overlooking other vital APAC regions such as South Asia and the Pacific Islands.

Secondly, a methodological imbalance is evident within the existing literature. A considerable number of studies depend on cross-sectional surveys or experimental vignette methods that capture guest perceptions at a singular moment (Belanche et al., 2020; Zhang et al., 2021). Although these approaches yield valuable insights into consumer attitudes, they do not account for the longitudinal dynamics of acceptance, including how trust develops through repeated interactions or how employees evolve over time (Xu et al., 2023). Additionally, there is a lack of triangulation between qualitative and quantitative methods, which often leaves the rich experiences of employees and guests underexplored (Lu et al., 2020).

Thirdly, a significant limitation is found in the geographic and cultural boundaries of the current research. While numerous studies underscore the cultural differences in trust and acceptance (Avijeet et al., 2024; Lin & Lee, 2025), many frameworks continue to presume cultural neutrality, heavily relying on Western models like TAM (Davis, 1989) without adequate localisation. This oversight creates a lack of understanding regarding how collectivist service traditions, ritualistic practices, or ethical considerations in Asian contexts influence adoption in ways that differ from Western expectations.

Fourthly, the reviewed literature reveals ethical gaps that warrant attention. While some studies touch on issues such as algorithmic bias, surveillance, and privacy (Howard & Borenstein, 2018; Zuboff, 2019), few delve into how these ethical dilemmas intersect with employee rights (e.g., job security, emotional well-being) or the reputation of hospitality brands. Similarly, while there is a tendency to focus on guest trust, scant attention has been given to the organisational policies and governance structures necessary for ensuring ethical adoption on a larger scale (Xu et al., 2023).

Lastly, this review also has its own limitations as a systematic synthesis. Despite employing a rigorous search protocol adhering to PRISMA guidelines (Moher et al., 2009; Page et al., 2021), the dataset is confined to 29 studies, which means that significant contributions outside this framework may have been omitted. Furthermore, while the review concentrated specifically on APAC hospitality, this regional focus implies that insights from other global contexts, which could provide valuable comparative perspectives, were not included.

5.6 Recommendations for Future Research

The review indicates that upcoming studies on service robots within the APAC hospitality sector should advance past its present exploratory phase toward more in-depth and thorough investigations. Much of the current evidence is derived from recent, short-term studies, which constrains our understanding of how acceptance changes over time. Therefore, longitudinal research would be especially beneficial, enabling researchers to determine whether initial excitement wanes, whether cultural traditions support or hinder long-term use, and how repeated interactions with robots influence trust among both guests and staff (Xu et al., 2023; Lu et al., 2020).

Methodological innovation is also crucial. The existing dependence on surveys and small-scale experiments limits insights into the complexities of actual hospitality settings. Future inquiries should adopt mixed-methods strategies that merge quantitative data with qualitative perspectives, including interviews, narrative accounts, or ethnographic studies. These approaches would provide a more comprehensive understanding of the interactions involved, particularly in examining the intricate relationships among staff, guests, and robots (Alshemari, 2023; Braun & Clarke, 2019). Comparative case studies across various hospitality environments, such as luxury hotels, budget lodgings, and dining establishments, could further illuminate how the service context impacts adoption.

Another vital focus should be on broadening the geographical and cultural dimensions of research. Current studies are centred in East Asia and Australasia, which risks yielding

frameworks that are only partially representative of the wider APAC region. Incorporating Southeast Asian nations like Thailand, Indonesia, and the Philippines would yield important insights into how cultural customs, service expectations, and socio-economic conditions influence acceptance (Avijeet et al., 2024; Hofstede, 2011). Cross-cultural comparisons between collectivist, high-context cultures and individualist, low-context environments would also aid in assessing the relevance of new trust models such as Affective–Ritual Trust and Ethical–Functional Trust.

Ethical considerations also require more thorough examination. While some research points out transparency and privacy issues, there is limited investigation into matters such as algorithmic bias, employee monitoring, or the consequences of substituting human labour with machines. Future studies should proactively tackle these concerns, ideally through interdisciplinary partnerships that unite hospitality scholars, ethicists, and legal professionals. This approach would not only enhance theoretical understanding but also assist in the creation of governance frameworks that ensure the adoption of service robots is socially responsible and ethically sound (Howard & Borenstein, 2018; Zuboff, 2019).

Lastly, literature reviews can gain from increased breadth and methodological diversity. Expanding beyond the current collection of 29 studies by incorporating industry reports, policy documents, and other types of grey literature could offer a more thorough overview of ongoing advancements (Boell & Cecez-Kecmanovic, 2015; Haddaway et al., 2015). Likewise, bibliometric analyses could reveal trends in publishing, highlight influential researchers, and chart the evolution of this emerging field (Koseoglu et al., 2016). Such methodologies would allow future reviews to enhance systematic analyses with a wider understanding of the intellectual landscape.

5.7 Conclusion

This dissertation has explored the implementation and assimilation of service robots within the hospitality sector in the APAC region through a thorough literature review encompassing 29 empirical and conceptual studies. The results highlight that although service robots present distinct operational and experiential advantages, their successful integration relies on a complex interaction of technological preparedness, cultural norms, ethical considerations, and stakeholder perceptions. By synthesising viewpoints from both guests and staff, this study has demonstrated that the acceptance of robots transcends mere functional effectiveness, encompassing elements of social trust, cultural congruence, and ethical accountability.

A significant contribution of this research lies in its enhancement of existing acceptance frameworks, notably the TAM and sRAM, by incorporating culturally relevant trust constructs. The concepts of affective–ritual trust in high-context collectivist cultures and ethical–functional trust in low-context individualist environments deepen our comprehension of how trust in robots varies across the APAC region. This theoretical advancement addresses a notable void in previous literature, which frequently operated under the assumption of cultural neutrality, thereby providing a more genuine perspective for understanding adoption behaviours in hospitality scenarios.

Simultaneously, the review has underscored that technology does not ensure success. Organisational readiness, employee involvement, and ethical governance are critical factors that influence whether service robots are viewed as enhancements to service or as challenges to established conventions. The implications reach beyond academic circles to hospitality managers, developers, and policymakers, who must adeptly navigate both the opportunities and challenges of this shift while being mindful of cultural diversity, labour dynamics, and ethical responsibilities.

In conclusion, this research confirms that the trajectory of service robots in hospitality is neither fixed nor uniform. Their function will be influenced by how industry stakeholders balance cultural values, ethical standards, and technological abilities. By providing a thorough and culturally informed synthesis, this dissertation contributes to both theoretical and practical realms, establishing a foundation for more inclusive, responsible, and sustainable automation strategies within the APAC hospitality industry.

Reference

- Alejandro, A., Villanueva, Ma. C., Colasito, D. M., & Tuante, M. C. (2025). The Emergence of Service Robots at Selected Quick Service Restaurants: Impact on Customer Experience and Satisfaction. *Journal of Interdisciplinary Perspectives*, 3(2).
<https://doi.org/10.69569/jip.2024.0562>
- Ali, A., & J. Frew, A. (2014). ICT and sustainable tourism development: an innovative perspective. *Journal of Hospitality and Tourism Technology*, 5(1), 2–16.
<https://doi.org/10.1108/jhtt-12-2012-0034>
- Alshemari, G. (2023). *Muslim Women's Experiences And Career Paths in New Zealand Hotels* [PDF].
- Arici, H. E., Saydam, M. B., & Koseoglu, M. A. (2023). How Do Customers React to Technology in the Hospitality and Tourism Industry? *Journal of Hospitality & Tourism Research*, 48(6), 109634802311686. <https://doi.org/10.1177/10963480231168609>
- Avijeet, P., Aliasghari, P., & Dautenhahn, K. (2024). Greeting Preferences in a Hospitality Context: A Cross-Cultural Study with a Social Robot. *2024 33rd IEEE International Conference on Robot and Human Interactive Communication (ROMAN)*, 1786–1793.
<https://doi.org/10.1109/ro-man60168.2024.10731433>
- Baum, T., Mooney, S. K. K., Robinson, R. N. S., & Solnet, D. (2020). COVID-19's Impact on the Hospitality Workforce – New Crisis or Amplification of the norm? *International Journal of Contemporary Hospitality Management*, 32(9).
<https://doi.org/10.1108/ijchm-04-2020-0314>
- Boell, S. K., & Cecez-Kecmanovic, D. (2015). On being “Systematic” in Literature Reviews in IS. *Journal of Information Technology*, 30(2), 161–173.
<https://doi.org/10.1057/jit.2014.26>
- Booth, A., Sutton, A., Clowes, M., & Marrison Martyn-St James. (2021). *Systematic Approaches to a Successful Literature Review*. SAGE.
- Braun, V., & Clarke, V. (2006). Using Thematic Analysis in Psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>
- Chen, Y., Wu, X., Jia, F., Yang, J., Bai, X., & Yu, R. (2024). Exploring the Impact of Social Robot Design Characteristics on Users' Privacy Concerns: Evidence from PLS-SEM and FsQCA. *International Journal of Human–Computer Interaction*, 41(13), 1–22.
<https://doi.org/10.1080/10447318.2024.2402126>
- Choubey, V., Chakraborty, D., & Joshi, Y. (2025). Human-robot trust dynamics: understanding tourist confidence in service robots in tourism & hospitality. *Asia Pacific Journal of Tourism Research*, 1–16.
<https://doi.org/10.1080/10941665.2025.2486015>

- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3), 319–340.
<https://doi.org/10.2307/249008>
- Dwivedi, Y. K., Wade, M. R., & Schneberger, S. L. (2012). *Information Systems Theory : Explaining and Predicting Our Digital Society, Vol. 1*. Springer New York.
- Fouad, A. M., Salem, I. E., & Fathy, E. A. (2024). Generative AI insights in tourism and hospitality: A comprehensive review and strategic research roadmap. *Tourism and Hospitality Research*. <https://doi.org/10.1177/14673584241293125>
- Fuentes-Moraleda, L., Díaz-Pérez, P., Orea-Giner, A., Muñoz- Mazón, A., & Villacé-Molinero, T. (2020). Interaction between hotel service robots and humans: A hotel-specific Service Robot Acceptance Model (sRAM). *Tourism Management Perspectives*, 36, 100751. <https://doi.org/10.1016/j.tmp.2020.100751>
- Gonzalez-Jimenez, H., & Diego Costa Pinto. (2024). Can AI robots foster social inclusion? Exploring the role of immersive augmentation in hospitality. *International Journal of Contemporary Hospitality Management*, 36(11). <https://doi.org/10.1108/ijchm-09-2023-1459>
- Haddaway, N. R., Collins, A. M., Coughlin, D., & Kirk, S. (2015). The Role of Google Scholar in Evidence Reviews and Its Applicability to Grey Literature Searching. *PLOS ONE*, 10(9), e0138237. <https://doi.org/10.1371/journal.pone.0138237>
- Himanshu, Goel, A., Dhingra, S., & Taneja, U. (2025). Dining with robots: exploring the customer willingness to adopt service robots in restaurants. *Industrial Management & Data Systems*. <https://doi.org/10.1108/imds-08-2024-0762>
- Ho, E. J.-Y., & Chuah, S. H.-W. (2025). Exploring the factors influencing employees' intention to work with service robots in restaurants: an fsQCA approach. *Journal of Foodservice Business Research*, 1–35.
<https://doi.org/10.1080/15378020.2025.2483044>
- Hofstede, G. (2011). Dimensionalizing Cultures: the Hofstede Model in Context. *Online Readings in Psychology and Culture*, 2(1), 1–26. <https://doi.org/10.9707/2307-0919.1014>
- Howard, A., & Borenstein, J. (2018). The Ugly Truth About Ourselves and Our Robot Creations: The Problem of Bias and Social Inequity. *Science and Engineering Ethics*, 24(5), 1521–1536. <https://doi.org/10.1007/s11948-017-9975-2>
- Hui Yun Chan, & Muralidharan, A. (2024). Care Robots for the Elderly: Legal, Ethical Considerations and Regulatory Strategies. *Springer EBooks*, 129–156.
https://doi.org/10.1007/978-3-031-42576-9_6

- Hyysalo, S. (2016). Shove, Pantzar and Watson. The dynamics of social practice: everyday life and how it changes. *Nordic Journal of Science and Technology Studies*, 1(1), 41. <https://doi.org/10.5324/njsts.v1i1.2125>
- Ivanov, S. H., & Webster, C. (2019). *Robots, Artificial Intelligence, and Service Automation in Travel, Tourism and Hospitality*. Emerald Publishing Limited. <https://doi.org/10.1108/9781787566873>
- Johnson, J. (2023, July 31). *How service robots are helping hotels*. 1News. <https://www.1news.co.nz/2023/07/31/how-service-robots-are-helping-hotels/>
- Koseoglu, M. A., Rahimi, R., Okumus, F., & Liu, J. (2016). Bibliometric studies in tourism. *Annals of Tourism Research*, 61(1), 180–198. <https://doi.org/10.1016/j.annals.2016.10.006>
- Kuo, C.-M., Chen, L.-C., & Tseng, C.-Y. (2017). Investigating an innovative service with hospitality robots. *International Journal of Contemporary Hospitality Management*, 29(5), 1305–1321. <https://doi.org/10.1108/ijchm-08-2015-0414>
- KWINDA, V. Q. (2024). *Customers' attitudes and adaptations towards service robots in a hotel* [PDF].
- Latour, B. (2005). *Reassembling the Social: an Introduction to Actor-Network-Theory*. Oxford University Press.
- Lin, B., & Lee, W. (2025). Service robots and initial trust dynamics: consumers' ethical challenges in tourism and hospitality. *Journal of Travel & Tourism Marketing*, 42(3), 282–306. <https://doi.org/10.1080/10548408.2025.2468460>
- Lin, B., Lee, W., Wise, N., & Hwansuk Chris Choi. (2023). Consumers' Ethical Perceptions of Autonomous Service Robots in Hotels. *Journal of Hospitality & Tourism Research*, 48(6). <https://doi.org/10.1177/10963480231194693>
- Lu, V. N., Wirtz, J., Kunz, W. H., Paluch, S., Gruber, T., Martins, A., & Patterson, P. G. (2020). Service robots, customers and service employees: what can we learn from the academic literature and where are the gaps? *Journal of Service Theory and Practice*, 30(3). <https://doi.org/10.1108/jstp-04-2019-0088>
- McHugh, M. L. (2012). Interrater reliability: The Kappa Statistic. *Biochemia Medica*, 22(3), 276–282. <https://doi.org/10.11613/bm.2012.031>
- Moher, D., Liberati, A., Tetzlaff, J., & Altman, D. G. (2009). Preferred Reporting Items for Systematic Reviews and meta-analyses: the PRISMA Statement. *PLoS Medicine*, 6(7). <https://doi.org/10.1371/journal.pmed.1000097>
- Mukherjee, S., Baral, M. M., Venkataiah, C., Pal, S. K., & Nagariya, R. (2021). Service robots are an option for contactless services due to the COVID-19 pandemic in the hotels. *DECISION*, 48(4). <https://doi.org/10.1007/s40622-021-00300-x>

- Nowell, L. S., Norris, J. M., White, D. E., & Moules, N. J. (2017). Thematic analysis: Striving to Meet the Trustworthiness Criteria. *International Journal of Qualitative Methods*, 16(1), 1–13. <https://doi.org/10.1177/1609406917733847>
- Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., Akl, E. A., Brennan, S. E., Chou, R., Glanville, J., Grimshaw, J. M., Hróbjartsson, A., Lalu, M. M., Li, T., Loder, E. W., Mayo-Wilson, E., McDonald, S., & McGuinness, L. A. (2021). The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. *British Medical Journal*, 372(71). <https://doi.org/10.1136/bmj.n71>
- Paul, J., & Criado, A. R. (2020). The Art of Writing Literature review: What Do We Know and What Do We Need to know? *International Business Review*, 29(4). <https://doi.org/10.1016/j.ibusrev.2020.101717>
- Perdomo-Verdecia, V., Sacristán-Díaz, M., & Garrido-Vega, P. (2022). Lean management in hotels: Where we are and where we might go. *International Journal of Hospitality Management*, 104(104), 103250. <https://doi.org/10.1016/j.ijhm.2022.103250>
- Rana, N. P., Begum, N., Mohd. Nishat Faisal, & Mishra, A. (2024). Customer experiences with service robots in hotels: a review and research agenda. *Journal of Hospitality Marketing & Management*, 34(2), 1–30. <https://doi.org/10.1080/19368623.2024.2403640>
- Sam, I., & K. Mohamed Jasim. (2023). Diving into the technology: a systematic literature review on strategic use of chatbots in hospitality service encounters. *Management Review Quarterly*, 75. <https://doi.org/10.1007/s11301-023-00388-8>
- Siddaway, A. P., Wood, A. M., & Hedges, L. V. (2019). How to Do a Systematic review: a Best Practice Guide for Conducting and Reporting Narrative reviews, meta-analyses, and meta-syntheses. *Annual Review of Psychology*, 70(1), 747–770. <https://doi.org/10.1146/annurev-psych-010418-102803>
- Sladjana Cabrilo, Leung, R., Tsai, F.-S., & Dahms, S. (2024). “I am served by a Robot!”: internal antecedents of customer acceptance of robotic hotel-service agents. *Journal of Organizational Change Management*, 37(7). <https://doi.org/10.1108/jocm-08-2023-0315>
- Thomas, J., & Harden, A. (2008). Methods for the Thematic Synthesis of Qualitative Research in Systematic Reviews. *BMC Medical Research Methodology*, 8(1), 1–10. Biomedcentral. <https://doi.org/10.1186/1471-2288-8-45>
- Tuomi, A., Tussyadiah, I. P., & Stienmetz, J. (2020). Applications and Implications of Service Robots in Hospitality. *Cornell Hospitality Quarterly*, 62(2), 193896552092396. <https://doi.org/10.1177/1938965520923961>

- Walton, F. (2024, October 7). *The robots already working in New Zealand hotels*. RNZ. https://www.rnz.co.nz/news/national/530109/the-robots-already-working-in-new-zealand-hotels?utm_source=chatgpt.com
- Wirtz, J., Patterson, P. G., Kunz, W. H., Gruber, T., Lu, V. N., Paluch, S., & Martins, A. (2018). Brave New World: Service Robots in the Frontline. *Journal of Service Management*, 29(5), 907–931. <https://www.emerald.com/insight/content/doi/10.1108/josm-04-2018-0119/full/html>
- Wu, T.-J., & Zhang, R.-X. (2024). Exploring the impacts of intention towards human-robot collaboration on frontline hotel employees' positive behavior: An integrative model. *International Journal of Hospitality Management*, 123, 103912–103912. <https://doi.org/10.1016/j.ijhm.2024.103912>
- Xiao, H., & Smith, S. L. J. (2006). The making of tourism research. *Annals of Tourism Research*, 33(2), 490–507. <https://doi.org/10.1016/j.annals.2006.01.004>
- Xu, J., Hsiao, A., Reid, S., & Ma, E. (2023). Working with service robots? A systematic literature review of hospitality employees' perspectives. *International Journal of Hospitality Management*, 113, 103523–103523. <https://doi.org/10.1016/j.ijhm.2023.103523>
- Yuen, R., Chua, B.-L., Han, H., & Pipatpong Fakfare. (2025). Advancing service automation technology in tourism for sustainable development goals: a review and agenda for theories, contexts, methodologies and actions. *Journal of Travel & Tourism Marketing*, 42(4), 381–414. <https://doi.org/10.1080/10548408.2025.2468463>
- Zeng, Z., Chen, P.-J., & Lew, A. A. (2020). From high-touch to high-tech: COVID-19 Drives Robotics Adoption. *Tourism Geographies*, 22(3), 1–11. <https://doi.org/10.1080/14616688.2020.1762118>
- Zhang, M., Gursoy, D., Zhu, Z., & Shi, S. (2021). Impact of anthropomorphic features of artificially intelligent service robots on consumer acceptance: moderating role of sense of humor. *International Journal of Contemporary Hospitality Management*, 33(11), 3883–3905. <https://doi.org/10.1108/ijchm-11-2020-1256>
- Zuboff, S. (2019). *The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power*. Public Affairs.