



BA International Hotel Management

BMIH6001

Conference Presentation

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Introduction

Introduction

The hospitality industry is rapidly adopting Artificial Intelligence, using it to optimise pricing and create hyper-personalised experiences (Batabyal & Das, 2019). This drive for efficiency challenges the industry's core as a human-focused, empathy-driven service (Ford & Sturman, 2020). This presentation explores the critical balance between technology and the human touch, arguing that the future is not 'human vs. AI', but their successful collaboration in an augmented service model.



(Ozturk & Bilgihan, 2021)

The hospitality business is in the process of a massive transformation that involves the incorporation of technology at an easy pace, and Artificial Intelligence (AI) is driving this transformation (Ivanov & Webster, 2019). AI is also being more actively implemented by hotels, restaurants, and other service providers to optimise dynamic pricing and streamline back-of-house activities and offer a new form of hyper-personalisation to guests (Batabyal & Das, 2019).

Nonetheless, such an impetus of efficiency-based automation directly questions the very definition of the industry, the service model based on human-oriented and empathetic communication (Ford & Sturman, 2020). This gives it a focal point of tension and raises one fundamental dilemma in the sector: Where do we find the middle, or point of convergence, between the human feel and technological robotisation in light of contemporary customer demand? The standpoint of this paper is that the future of hospitality will be neither human vs. AI. Rather, the road to sustainable success is in their successful co-existence and co-operation to form an augmented service model.

Literature Review

Literature Review: AI in Operations

» AI has a strong influence on both Back-of-House (BOH) and Front-of-House (FOH) operational efficiency.

BOH Efficiency

Predictive analytics for dynamic pricing and supply chain.
Reduces food waste, a key sustainability issue (Costa & Costa, 2022).

FOH Efficiency

- Self-service kiosks, mobile check-ins, and AI-based chatbots (Ozturk & Bilgihan, 2021).

Simplifies routine tasks and reduces guest wait times.

Hyper-Personalisation

AI predicts guest needs by analysing massive data sets (Santos & Silva, 2019).



(Pillai, et al, 2023)

A deterministic analysis of the modern literature shows that there are three central themes: the procedural strength of the AI, the dire and indispensable element of the human factor, and the novel synthesis of both powers into a collaborative approach.

AI in Operations

It is evident in the literature that AI has an enormous impact on both Back-of-House (BOH) and Front-of-House (FOH) operational efficiency. Predictive analytics are applied to dynamic pricing as well as supply chain optimisation in BOH operations, and this is also applied to minimise food waste, which is a major sustainability concern (Costa & Costa, 2022).

Self-service kiosks, mobile cheque-ins and chatbots powered by AI help to achieve efficiency in FOH operations (Ozturk & Bilgihan, 2021). These devices make things easier and save much time on the waiting lists of their guests. Moreover, AI allows providing hyper-personalisation by processing large volumes of data and forecasting the needs of visitors (Santos and Silva, 2019) to generate new technologies, such as smart rooms and intelligent concierges (Mell, 2022).

Literature Review: The Human Element

» Literature raises cautions on the boundaries of technology, especially in service quality.

Service Recovery Failure

AI is not successful in emotionally coloured, high-stakes situations (Laws, et al., 2007).
A chatbot cannot feel empathy for a distressed guest.
An automated system can't "read between the lines" of body language.

Guest Expectation Duality:

Guests demand efficiency from technology in transactions.
Guests demand patience, empathy, and solutions from humans in relationships (Tribe, 2009).



(Ozturk & Bilgihan, 2021)

The Human Element

In addition to the advantages of AI, the literature contains serious warnings about the limits of technology, in particular in service quality. One of the main areas of failure is service recovery. Examples of such states that an AI system fails to accomplish include emotionally coloured, high-stakes scenarios where a guest is in distress (Laws, et al., 2007). A chatbot is unable to feel or show sincere empathy, and an automated system is unable to read between the lines of body language of the guest or the tone of their voice.

Here, a major ambiguity in the expectation of guests becomes clear. The current guests require the technology to be efficient in making simple transactions, but they simultaneously require patience, empathy, and resourcefulness on the side of people in relation or complex interactions (Tribe, 2009).

Literature Review: The Collaboration Model

- This guest duality leads to the **Human-AI Collaboration Model** (or 'cobotics').
- The narrative is shifting from "**Replacement**" to "**Augmentation**" (Pillai, et al., 2023).
- In this model, AI empowers staff; it does not replace them.
- **How it works:**
 - AI processes data and handles administrative tasks.
 - This frees human staff to build rapport, manage complex emotions, and provide personal service.



(Pillai, et al., 2023)

The Collaboration Model

This duality of expectations of the guests is what gives rise to the idea of a Human-AI Collaboration Model, also known as cobotics. The story in the industry is changing to a focus on Replacement and shifting to Augmentation (Pillai, et al., 2023).

In this form of augmentation, AI does not eliminate employees. The technology is processing huge volumes of data, conducting administrative overheads, and performing predictive analytics in the background. Such data, in turn, relieves the human staff of monotonous work and enables them to devote their time and efforts to establishing a rapport with the customer, complex emotional circumstances, and imbuing the service with personal character. A real-life example will be an AI-driven CRM that raises a red flag in the case of a guest who had a service issue in the past, and provides a human agent the opportunity to welcome the guest personally and address their issue through a personal approach, and offers more human-focused solutions.

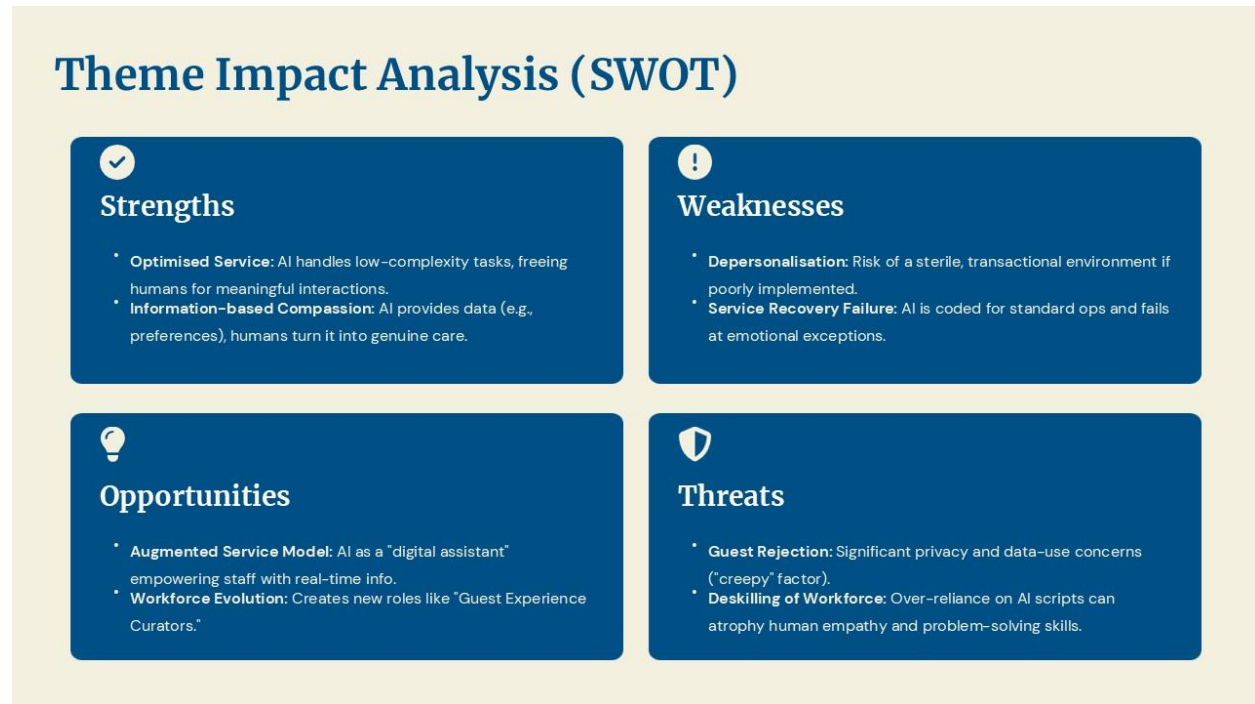
Research Methodology

Research Methodology

- **Methodology:** Qualitative, descriptive research.
- **Approach:** Systematic desktop research (meta-synthesis) (Brotherton, 2015; Robson, 2016).
- **Scope:** Sources primarily from 2019–2024 to ensure a contemporary analysis.
- **Analysis:** Thematic analysis leading to a SWOT framework.

The approach used to write this paper is qualitative and descriptive. The philosophy of interpretivism was taken to learn the particulars of human-technology interaction. The methodology involves systematic research on the desk, which complies with meta-synthesis frameworks by Brotherton (2015) and Robson (2016). The systematic search in academic and industry databases such as Google Scholar, Emerald Insight and EBSCOhost was used to collect the data. Search criteria were also confined to publications published between 2019 and 2024 in order to make the analysis contemporary and relevant to the theme. To analyse the data, a Thematic Analysis was initially employed to code the obtained data and organise the literature review into its main component parts. After this synthesis, the SWOT Analysis framework has been chosen as the main instrument to be used in the impact analysis of the theme.

Theme Impact Analysis (SWOT)



The effects of the introduction of AI and human cooperation in the hospitality sector can be evaluated in a SWOT format.

Strengths

The main strength lies in the establishment of an optimised service model. The tasks that AI manages are low-complexity and volume tasks; therefore, human personnel can provide meaningful and high-value interactions (Cooper & Hall, 2019). This can help bring about a kind of information-based compassion, with AI supplying the information (e.g. guest preferences, past problems), and humans relying on that information to give them actual, caring care.

Weaknesses

Its key flaw is the high threat of depersonalisation. An automation strategy that is not appropriately implemented or is too aggressive may create a sterile, transactional and cold atmosphere that puts a guest off (Sharma, et al., 2024). Moreover, service recovery failure is a critical weakness, as it has been determined in the literature. AI is programmed to perform regular duties and regularly malfunctions when confronted by emotional exceptions or complicated guest requests (Krippendorf, 2011).

Opportunities

The best opportunity exists in the formalisation of the Augmented Service Model. This makes AI an “information assistant digitally, which empowers employees with some real-time information and more insightful predictions (Clegg, et al., 2021). This, in its turn, opens the playfield to workforce evolution, with new jobs, like "Guest Experience Curators" or "Service Empathy Manager" emerging, who will centre their entire work around the human aspect of the experience, with the use of technology (Faulkner, et al., 2001).

Threats

There are two significant threats. First is the rejection of guests due to privacy and data-use issues. Guests will lose confidence in the hotel as long as personalisation feels like espionage (the creepy factor). The second risk is the deskilling of the workforce in the long term (Huo, et al., 2021). Excess use of AI scripts and automated processes may lead to the loss of the essential human competency of an organisation due to the atrophy of human empathy, critical analysis, and innovative problem-solving (Brotherton, 2015).

Recommendations

Recommendations (1/2)

» 1. Adopt an Augmentation Strategy

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Invest in AI to empower staff, not to reduce labour costs.

Focus AI on BOH analytics and routine tasks to free up human staff for high-value guest interactions.

» 2. Define Clear Service Boundaries

Service recovery is a key AI failure point.

AI: Low-emotion, transactional tasks (mobile check-in, basic info).

Human: High-emotion, complex tasks (all complaints, special requests).



(Cooper & Hall, 2019)

According to the analysis, four recommendations on the use of AI by hospitality operators who want to explore the balance between AI and human collaboration are offered:

Adopt an Augmentation Strategy: The main strategic involvement must revolve around investing in AI to empower the staff, and not merely lower labour costs. To release human staff to high-value, in-person guest interaction, AI must be prioritised on BOH analytics along with routine FOH processes (such as administrative cheque-ins) (Gu, et al., 2020).

Define Clear Service Boundaries: Operators need to define clearly which services will be implemented by people and which ones will be implemented by AI. The critical point of failure is service recovery (Dawson, et al., 2012). One of the rules must be: AI is foolproof to do low-emotion, transactional tasks (e.g., mobile cheque-in, simple information requests), whereas Humans are foolproof to do all tasks (e.g., all complaints, personalised welcomes, all special requests) that are high in emotion and complexity (Santos & Silva, 2019).

Recommendations (2/2)

» 3. Invest in Human (Soft) Skills

Deskilling is a major long-term threat.

As AI automates technical tasks, human value shifts entirely to soft skills.

Shift training budgets from procedural tasks to emotional intelligence, active listening, and creative problem-solving.

» 4. Anchor on Data Ethics & Transparency

The privacy paradox is real; guests feel 'watched'.

Be transparent: "We collect this to remember your room preferences."



(Pillai, et al., 2023)

Invest in Human (Soft) Skills: Deskilling is one of the main threats; therefore, the training priorities need to be changed. With technical and procedural work being automated by AI, human resources becomes totally dependent on their soft skills (Robson, 2016). The operators need to move training funds off of repetition of the process and onto emotional intelligence, listening, non-verbal, and creative problem-solving (Buhalis, 2020).

Anchor on Data Ethics & Transparency: Operators are obliged to be transparent in relation to the use of this data, as that can affect guests by guaranteeing transparency. The privacy paradox indeed happens; guests feel spied upon. This is achieved through transparency (e.g. we collect this data to remember your favourite room temperature) and user-convenient opt-out mechanisms. This makes personalisation a respectful service rather than being a surveillance (Darcy, et al., 2012).

Conclusion

Conclusion

This research concludes that AI and human collaboration is not a zero-sum game, but a delicate balance. Guests have dual expectations: they demand the speed of technology for efficiency and the compassion of humans for connection. The optimal path forward is a "high-tech-enabled, high-touch" model where AI empowers staff in the background, freeing human employees to establish rapport, show empathy, and deliver the true essence of hospitality.

In conclusion the implementation of AI and the cooperation between robots and people in the hospitality industry is not a zero-sum game but a thin line. Contemporary guests' needs are two-fold: they require both the speed and effectiveness of technology in the conduct of business, and at the same time, they require the humane and personal rapport of human beings to the association. The best model that arises out of this duality is a high-tech enabled high-touch model. This symbiotic model mainly involves the empowerment of staff and not a guest-facing AI. It acts in the backoffice to process data, conduct transactions and give insights.

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