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Research Paper

Augmented Reality as an Interactive Marketing Communication Touchpoint: Effects on Brand Love and Brand Loyalty in Hospitality

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ABSTRACT

This study examines the impact of Augmented Reality (AR) on the development of Brand Love and Brand Loyalty in the hospitality sector, positioning AR not merely as a technological tool but as an interactive marketing communication interface and a digital customer experience touchpoint capable of strengthening consumer–brand relationships. The research analyses how perceived usefulness, ease of use, satisfaction and perceived risk influence consumer responses towards hotel brands that implement AR. A quantitative research design was employed using an online questionnaire administered to 115 participants, with data analysed through descriptive statistics, Mann–Whitney U tests, linear and multiple regression analyses, and K-means cluster analysis to explore the relationships between AR experience factors and branding outcomes and to identify distinct user profiles. The results indicate that perceived usefulness and satisfaction with AR have a significant positive effect on both Brand Love and Brand Loyalty, while ease of use emerges as a key driver of favourable responses and revisit intentions. Perceived risk, in contrast, shows a limited influence in this context. The cluster analysis reveals four distinct user segments, reflecting differences in emotional engagement and attitudes towards AR-based hotel experiences. The study is limited by its sample size and demographic concentration, which may constrain the generalisability of the findings, suggesting that future research should test the proposed model across broader hospitality settings and further explore privacy-related concerns as AR becomes increasingly embedded in customer journeys. The originality of this research lies in linking AR-enabled customer experiences with relational branding outcomes, framing AR as a strategic communication and experience design tool for brand management and offering practical insights for marketing decision-making related to digital investment, interactive communication and customer segmentation.

Keywords: Augmented Reality, Brand Love, Brand Loyalty, Hospitality Marketing, Customer Satisfaction, Digital Experience, Interactive Marketing.

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1. INTRODUCTION

Technological innovation and the continuous quest for superior customer experiences are reshaping the hospitality industry, where competitive advantage increasingly depends on designing compelling digital touchpoints across the customer journey. Among immersive technologies, augmented reality (AR) has attracted growing attention because it overlays digital information onto the physical environment and can transform hotel services into interactive experiences (Azuma, 1997). In practice, AR can support real-time information, wayfinding, gamified experiences, and immersive previews of rooms or facilities, enhancing both functional value and experiential appeal. As hotels invest in digital interfaces to differentiate their brands, AR becomes relevant not only as a novel technology but also as a strategic means of communicating brand meaning through customer experience design.

AR represents a branded interface that enables interactive communication between firms and customers across pre-stay, on-site and post-stay interactions. As customers navigate omnichannel journeys, brand perceptions are shaped by multiple touchpoints, including technological interfaces and brand-initiated communications (Kim & So, 2024; Weippert, 2024). The use of AR applications within the hotel industry provides various opportunities to enhance customer experience, mainly due to their potential for delivering highly personalized experiences (Lodhi et al., 2024a).

These developments are particularly relevant for branding outcomes. Brand Love reflects deep affective attachment and emotional closeness to a brand, while Brand Loyalty captures both attitudinal commitment and repeat behavior. Experience-based interactions that feel vivid, personally relevant and emotionally engaging can strengthen consumer–brand relationships and contribute to relational bonds over time (Rauschnabel, 2023; Rauschnabel et al., 2024). Accordingly, understanding whether AR experiences can foster Brand Love and translate it into Brand Loyalty is essential for hotel brands seeking to transform digital experiences into durable relationship assets.

In service settings, AR effectiveness depends on the quality of the experience delivered through the interface. Usability and experiential enablers such as perceived ease of use and perceived utility can determine whether customers perceive AR as valuable, intuitive and supportive of their goals, thereby increasing satisfaction with the brand encounter. Emerging AR marketing research suggests that consumers rely on AR cues for evaluation, but these effects may evolve over repeated usage as novelty wears off (Söderström et al., 2024). In hospitality, where repeat visits and cumulative experiences matter, it is therefore important to examine how usability-driven perceptions and satisfaction mechanisms shape relational outcomes rather than focusing exclusively on initial adoption.

Existing literature highlights several key factors influencing customers' emotional connections with brands through AR. One major enabler is Ease of Use, as emphasized by Bernardos et al. (2011) and Lim et al. (2024), who note the importance of intuitive interfaces for technology adoption in hospitality. The more user-friendly the AR application, the more likely it is to be adopted by customers, enhancing their experience and deepening brand connection. AR's interactive and personalized nature further enables the creation of tailored experiences that can foster Brand Love and loyalty (Rauschnabel, 2023).

Another relevant aspect is Perceived Utility. According to Voicu et al. (2023), when customers view AR as adding value—by offering easy access to hotel information and services—their satisfaction and purchase intention increase. Babar et al. (2022) underscore AR's relevance in tourism, such as digitalized menus with 3D food models, helping tourists better understand unfamiliar dishes. AR can also offer 3D visualizations of hotel rooms and amenities, simplifying the booking process. These technological capabilities present significant strategic opportunities for marketers and hotel managers seeking to align with evolving customer expectations (Lim et al., 2024a). Moreover, studies such as Özkul & Kumlu (2019) show that AR can even streamline operational processes, for example, allowing mobile check-in without needing to go to the reception desk.

Despite its potential, AR adoption poses specific challenges. Literature points to Perceived Risk as a barrier, particularly concerning data privacy and technical usability issues (Liu et al., 2015). Negative experiences due to technical failures or poor design may impact customer trust and loyalty. To reduce these risks and foster AR acceptance, brands must deliver high-quality experiences and promote transparency in technology use.

Customer Satisfaction with AR experiences is also a crucial element in developing emotional bonds with a brand. Hilken et al. (2017) and Rocha-Vallejos et al. (2022) suggest that satisfaction from AR interactions strengthens emotional connections, encourages customer return, and generates positive word-of-mouth. The emotional engagement created by immersive and innovative experiences fosters long-term brand affection and loyalty.

Although AR is increasingly discussed in tourism and hospitality research, a significant share of existing work remains focused on technology acceptance and usage intentions, rather than on AR as a customer experience communication medium that shapes brand relationship outcomes (Kumar et al., 2024; Calisto & Sarkar, 2024). At the same time, recent hospitality evidence indicates that immersive technologies can influence satisfaction and revisit intentions (Lim et al., 2024), yet fewer studies integrate AR experience mechanisms with relational constructs such as Brand Love and Brand Loyalty in a unified model. Moreover, limited attention has been paid to the heterogeneity of AR users and to the marketing implications of customer segmentation based on AR experience profiles.

To address these gaps, this study positions AR as an interactive marketing communication interface embedded in the hotel customer journey and examines its role in strengthening Brand Love and Brand Loyalty through experience enablers. Specifically, we investigate how perceived ease of use, perceived utility, customer satisfaction and perceived risk contribute to Brand Love and, subsequently, to Brand Loyalty in the hospitality context. In addition, we apply cluster analysis to identify user segments based on AR usage and experiential perceptions, supporting a more actionable interpretation of how hotels can design and communicate AR experiences for different customer profiles.

Therefore, the core research question guiding this work is: “What is the influence of augmented reality on Brand Love and Brand Loyalty in the hospitality industry, and through which experience mechanisms does this influence occur?” By answering this question, the study contributes to interactive marketing and digital customer experience research by clarifying how AR can operate as a relational brand touchpoint. It also provides managerial insights for brand management and investment decisions in immersive customer experience design.

The paper is structured into six sections. Section 2 reviews the literature on AR, customer experience and brand relationship outcomes, establishing the conceptual framework. Section 3 presents the methodology and measurement approach. Section 4 reports the results of the empirical

analysis and segmentation. Section 5 discusses theoretical and managerial implications in light of marketing communication and branding research. Finally, Section 6 concludes with limitations and directions for future research.

2. LITERATURE REVIEW

2.1 Augmented Reality in hotel industry

Augmented Reality (AR) is a technology that overlays virtual content onto real-world environments in real time, blending digital elements with the physical world (Song et al., 2020; Jin & Yazdanifard, 2015). Originally developed in the 1990s, AR began to be applied at conventions and events with the goal of enhancing user satisfaction through interactive applications (Lau et al., 2019).

AR evolved alongside industrial revolutions. With the advent of IoT, Industry 4.0 facilitated the emergence of AR, while Industry 5.0 further drove its growth through personalization and human-machine interaction (Aslam et al., 2020). AR functions through sensors such as cameras that recognize objects and overlay responsive digital elements, making user experiences more interactive (Tan et al., 2022).

AR has become a strategic marketing tool for many brands. For example, Mercedes-Benz uses AR in its "cAR" application to allow consumers to virtually experience vehicles, fostering a sense of closeness to the product (Rauschnabel et al., 2024). As consumer engagement with virtual environments increases, AR contributes to stronger levels of brand love and loyalty (Huang, 2019).

AR does not replace reality but enhances it by adding digital information and media to users' physical surroundings. In hospitality, AR applications offer several advantages that enhance the tourist experience (Kaliappen & Hassan, 2022; Natarajan et al., 2023).

Hotels can implement personalized and dynamic AR experiences, such as 360° virtual tours and interactive 3D room models. This builds customer trust by offering a realistic preview of the property. AR can also integrate with beacon technologies and geolocation to deliver personalized service notifications—already in use by chains like Starwood Hotels.

Hotels like Best Western have used AR to enrich guest experiences, allowing children to interact with Disney characters or letting adults customize their rooms. AR also addresses language barriers by offering real-time translations via smartphones and enables users to explore both the history and future plans of tourist sites.

AR adds significant value to brands and is increasingly integrated into marketing strategies (Rauschnabel, 2023). Orús et al. (2021) emphasize the power of AR in creating immersive, emotionally engaging hospitality experiences, especially when combined with hardware like VR headsets.

This technology is seen as revolutionary in tourism, reshaping what "travel" means by allowing previously unimaginable experiences (Boschetto Doorly, 2020). AR also supports internal hotel operations, such as employee training and promotional efforts. Simulated scenarios can be used for skills development, while virtual tours support marketing and customer decision-making (Dağ et al., 2024).

2.1.1 Augmented Reality as an Interactive Marketing Communication and Experience Touchpoint

From a marketing communication perspective, AR is not merely a technological add-on but a branded interface that enables interactive, situated, and contextually embedded exchanges between the consumer and the firm. By placing virtual brand-related information into the user's real environment, AR creates an experience-based form of messaging that combines content, interaction, and sensory cues, thereby strengthening attention, engagement, and meaning-making (Tian & Wang, 2025). Importantly, AR can operate as a touchpoint across the customer journey—before, during, and after the service encounter—supporting both information delivery (e.g., navigation, service guidance) and emotional relationship building.

Recent studies in interactive advertising show that AR formats (e.g., social media story filters) can intensify narrative immersion and shape consumer responses through experiential mechanisms such as playfulness, self-expression, and perceived relevance of the branded content (Tsou & Rodgers, 2024). In service settings, AR can also enhance perceived closeness and relationship strength by making the brand feel more present in the consumer's physical space, which has been shown to increase Brand Love (Rauschnabel et al., 2024).

Despite these advances, AR research in hospitality still frequently frames value creation in terms of adoption drivers, overlooking how AR design choices (e.g., ease of use, usefulness, interactivity) function as communication and experience design variables that can shape brand relationships and loyalty outcomes. As omnichannel strategies increasingly rely on orchestrating coherent and personalized touchpoints (Weippert & Kraus, 2024; Weidig et al., 2024), there is a

need for empirical studies that connect AR-enabled customer experience quality with relational constructs such as Brand Love and Brand Loyalty in hospitality contexts.

2.2 Enabling Factors and Risks of the Use of Augmented Reality

Augmented Reality (AR) offers numerous advantages in the hospitality industry, both for employees and customers. For staff, AR serves as an effective training tool, enabling the simulation of real-world scenarios such as customer service or operational procedures in a controlled environment (Molnár et al., 2018). Customers benefit by being able to explore hotel facilities interactively before booking, enhancing decision-making and satisfaction. Virtual tours and real-time information about services, events, or promotions further enrich their stay.

Ease of use is critical for AR adoption. According to Bernardos et al. (2011), key factors include intuitive interfaces, smooth navigation, personalized content, and contextual relevance. Sukmandhani et al. (2023) also found that AR apps improve service efficiency when designed with user-friendliness in mind. Additional enablers of AR adoption include innovation perception, interactive quality of experience, and device compatibility (Lim et al., 2024; Bernardos et al., 2011). These features help transform the essence of tourism by offering experiences that were once unimaginable (Boschetto Doorly, 2020).

Recent research by Lodhi et al. (2024) emphasizes the growing role of immersive technologies like AR and VR in hospitality. Their biometric study outlines key research trends, such as the impact of these technologies on customer satisfaction, operational performance, and user acceptance. Calisto and Sarkar (2024) highlight various VR applications across planning, marketing, education, and sustainability. Meanwhile, Buhalis et al. (2023) address an important ethical concern: although AR may automate tasks, its current use tends to support—rather than replace—human labor in hospitality.

While VR has received more academic attention than AR in recent years (Chen et al., 2023), AR is quickly gaining ground. According to Ampountolas et al. (2024), integrating metaverse-like experiences into hospitality could enhance immersive offerings. The COVID-19 pandemic further accelerated the need for technological integration, especially in low-contact service scenarios (Nannelli et al., 2023).

However, the adoption of AR is not without challenges. Risks include concerns over privacy and data security, technology dependency, and access inequality—since not all users have compatible devices. A poorly designed AR experience can also negatively impact customer perceptions.

According to Liu et al. (2022), the main implementation barriers include high development costs, limited device compatibility, privacy issues, technical glitches, and low acceptance in certain markets.

In summary, while AR has strong potential to enhance customer experience and operational efficiency in the hotel sector, successful implementation depends on user-centered design, market readiness, and careful management of technological risks.

2.3 Perception of Usefulness of Augmented Reality in the Hotel Industry

The perception of usefulness is a key determinant in the adoption of Augmented Reality (AR) within the hotel industry. Based on cognitive theory, which emphasizes how individuals process information in interaction with their environment, Hilken et al. (2017) argue that AR enhances customer experience by making interactions more engaging and realistic. This helps customers form more positive attitudes toward products and services, leading to greater satisfaction and loyalty. AR allows consumers to simulate physical experiences virtually, reducing uncertainty and increasing confidence in decision-making—especially in online contexts where physical interaction is absent.

Özkul & Kumlu (2019) illustrate that AR applications in hotels can provide real-time, immersive services such as interactive check-ins, digital menus with 3D dishes, and room customization. These features enhance satisfaction and create more memorable and personalized experiences. Moreover, AR can offer location-based recommendations and information about local attractions, adding value and convenience for guests and increasing the likelihood of return visits and brand advocacy.

Recent studies, such as Lodhi et al. (2024b), confirm the academic growth in AR research within hospitality, showing a 90% increase in publications. Their biometric analysis of 214 articles underlines AR's potential to elevate customer experience and shape consumer behavior. Similarly, Lidianti et al. (2023) identify three main consumer benefits: interactive engagement, ease of learning, and accessibility—factors that all contribute to a more favorable user experience.

The technology also plays a role in cultivating customers' intention to return, as suggested by Do et al. (2020). Through entertaining, informative, and emotionally engaging experiences, AR helps build stronger customer-brand relationships. Widita et al. (2021) further emphasize that hedonic values, like pleasure and fun, significantly influence consumers' intent to explore or revisit a hotel.

In terms of satisfaction, Voicu et al. (2023) highlight how AR contributes to both practical and emotional experiences, strengthening trust, perceived innovation, and social value. AR allows users to share experiences with others, further reinforcing loyalty and repeat purchasing behaviors. Satisfaction is closely tied to immersion, perceived value, and reduced uncertainty thanks to the visualization capabilities of AR.

Syeda Bushra Qadri et al. (2023) show that hotel websites incorporating AR outperform traditional static sites by offering users immersive experiences such as 360º room previews, realistic service simulations, and interactive navigation. These websites help users develop emotional connections and make more confident booking decisions, which enhances satisfaction and strengthens brand loyalty. Furthermore, AR can improve accessibility, offering inclusive features for users with disabilities—unlike standard hotel websites which often lack dynamic interaction.

Overall, AR is perceived as a valuable asset in the hotel industry, with the power to improve decision-making, foster emotional engagement, and drive both customer satisfaction and loyalty.

2.4 Brand Love and Augmented Reality in the Hotel Industry: The role of Purchase Intent, Satisfaction and Loyalty

Brand love is defined as a strong emotional and passionate connection a consumer feels toward a brand, which often leads to heightened loyalty and repeat purchase behavior (Watanuki & Akama, 2020). This emotional relationship can be cultivated through marketing strategies and is especially potent in the luxury brand sector, where emotional ties tend to be deeper (Iqbal et al., 2022). According to Martiyanti (2021), brand love encompasses long-term relationships, identity alignment, cognitive evaluation, and behavioral influence, reinforcing its link to brand loyalty.

Though brand love is not necessarily permanent, it may be sustained by habitual behavior, practical constraints, and commitment (Ceyhan & Yozgat, 2018). Consumers might continue purchasing from a brand even after emotional attachment weakens, due to switching costs or lack of better alternatives.

Research increasingly connects augmented reality (AR) with the development of brand love. For instance, AR helps reduce psychological distance between brands and consumers (Rauschnabel, 2023), increases engagement (Khan & Fatma, 2024), and enhances emotional connection through immersive and personalized experiences (Afonso & Hipólito, 2022; Huang, 2019; Voicu et al., 2023). During the pandemic, AR also helped brands maintain closeness with customers (Huang &

Liu, 2021). These findings are supported across various methodologies, including questionnaires, interviews, and biometric analysis (e.g., Natarajan et al., 2023; Dağ et al., 2024; Lodhi et al., 2024).

Table 1. Articles that correlate Augmented Reality and Brand Love

Author	Article Theme	Main results and Relevance	Methodology
Rauschnabel (2023)	Impact of AR on brand proximity	AR reduces the perceived distance between customer and brand, reinforcing emotional connection and consumer loyalty	Questionnaire
Khan & Fatma (2024)	Engagement with brand and AR applications	AR applications significantly increase consumer engagement, creating a dynamic interaction that contributes to brand success and loyalty.	Questionnaire
Huang (2019)	Psychological mechanisms of *Brand Love* in e-commerce	AR strengthens consumers' emotional bond in virtual environments	Questionnaire
Afonso & Hipólito (2022)	Augmented Reality and *Brand Love*	AR provides unique and personalized experiences, strengthening the emotional bond with the brand and encouraging loyalty	Questionnaire
Huang & Liu (2021)	Humanizing experience with AR during the pandemic	During the pandemic, AR helped brands maintain an emotional closeness with consumers, even in times of physical distancing	Questionnaire
Natarajan et al. (2023)	Use of AR in tourism and hospitality	It identifies several ways in which AR can improve the tourist experience, increasing consumers' trust and purchase intention.	Descriptive Research
Voicu et al.(2023)	Perceived usefulness and satisfaction with AR	AR is seen as a tool that enriches the consumer experience, reducing uncertainty and increasing brand loyalty through the preview of products and the possibility of personalization.	Questionnaire
Lim et al. (2024)	Facilitating factors of AR in the hotel industry	The survey identifies that the ease of use and innovation of AR are key factors for the adoption of the technology and that they positively influence the experience and satisfaction of customers.	Questionnaire
Kaliappen & Hassan (2022)	Augmented Reality and immersive experience in tourism	It demonstrates that AR can enrich the guest experience by offering an immersion in the tourist destination even before the trip, which contributes to Brand *Love*.	Interviews
Hilken et al. (2017)	Interactive experiences and brand love	It shows that AR, by enabling detailed and customizable views	Analysis of variance

Dağ et al.(2024)	Satisfaction and loyalty with the use of AR	AR enriches the consumer experience and increases *brand love* and purchase intent.	Questionnaire and Regression
ÖZKUL & Kumlu, (2019)	AR's perspective on the guest experience	It explores how AR can be used in check-in and viewing hotel amenities, improving the experience and enhancing *Brand Love* and customer loyalty.	Qualitative Study
Lodhi et al., (2024)	Trends and acceptance of AR in hospitality	Biometric analysis of articles to understand how AR influences customer satisfaction and future adoption trends in the hotel industry.	Biometric Analysis

AR significantly enhances consumer behavior in the hotel industry by offering interactive and immersive experiences that influence decision-making. Guests can explore rooms, amenities, and local attractions in 3D before booking, reducing uncertainty and boosting confidence (Lavoye et al., 2021). This personalized engagement increases satisfaction and emotional connection, reinforcing brand love.

AR can further enhance the guest experience during the stay itself by delivering real-time information about events and services, strengthening engagement and increasing the likelihood of future visits. Emotional satisfaction, in turn, supports the development of brand love—a powerful driver of brand loyalty and purchase intent (Gómez-Suárez et al., 2017; Ghosh, 2024; Antoniadis et al., 2019).

These three interrelated concepts—brand love, loyalty, and purchase intent—form a behavioral loop. Emotional attachment fosters loyalty, which boosts purchase intent, which in turn reinforces love for the brand (Rocha-Vallejos et al., 2022). AR supports this cycle by:

- Creating immersive and satisfying experiences (Dağ et al., 2024),
- Offering self-projection and easier decision-making during high cognitive load moments (Hilken et al., 2022),
- Building proximity and emotional connection (Voicu et al., 2023; Lim et al., 2024b),
- And reinforcing memory and loyalty via engaging digital interaction (Nascimento & Loureiro, 2024).

AR's influence is particularly notable among Millennials and Gen Z, who are digital natives and expect personalized, tech-driven interactions (KHAN & M, 2019; Kuleto et al., 2021). These generations are highly responsive to immersive content and more likely to convert such

experiences into loyalty and purchase behavior. However, the potential of AR for older adults is also significant if usability barriers are addressed. Designing intuitive, accessible, and interest-driven interfaces could increase adoption among senior users, especially if supported by training and positive digital experiences (Seifert & Schlomann, 2021; Appel et al., 2020).

The rising demand for impactful and personalized experiences makes AR a strategic tool for nurturing brand love. It allows hotels to maintain meaningful connections, even in crises like COVID-19, highlighting its relevance not only as a convenience, but also as a resilience-building technology (Afonso & Hipólito, 2022; Huang & Liu, 2021).

3. METHODOLOGY

This study seeks to answer the central research question: "Does the use of augmented reality in the hotel industry influence Brand Love and customer loyalty?" Although augmented reality (AR), the hospitality sector, and the concept of Brand Love have each been extensively researched individually, few studies have explored the intersection of all three. This research thus adopts an innovative approach by examining the potential relationships between these concepts.

To address the research objectives, a quantitative methodology was employed. This methodological choice is grounded in the need to collect measurable and analyzable data, allowing the identification of patterns, testing of hypotheses, and statistical examination of potential correlations. As stated by Padilha (2021), quantitative research ensures objectivity through a logically structured process, enabling statistical validation and theoretical grounding. It reduces subjectivity and increases the credibility and robustness of the findings by relying on existing theoretical frameworks.

Data were collected through an online questionnaire (Google Forms), available for two months (August–September). A total of 115 valid responses were obtained.

The sample size was considered adequate for the analyses applied, since the study focuses on identifying relationships between key variables and exploring user profiles, which are common objectives in marketing research (Hair et al., 2014).

Because the questionnaire was administered online and respondents were recruited through a non-probability approach, the findings should be interpreted as context-specific evidence rather than statistically representative of all hotel customers. However, the study provides useful insights into

how AR-related experiences may contribute to Brand Love and loyalty, and future research can strengthen generalizability by replicating the model across different hotel segments and countries. All constructs were measured using multi-item scales. Internal consistency was assessed through Cronbach's alpha, following standard practice for evaluating reliability in marketing research (Hair et al., 2014).

The results indicate acceptable to excellent reliability across the constructs, with coefficients ranging from 0.692 to 0.907.

Table 2. Scale reliability (Cronbach's alpha)

Construct	**Cronbach's alpha (α)**
POS_CONS_BEH	0.894
EASINESS_USE	0.889
UTILITY_SATISFACTION	0.907
RISK	0.692
INTENTION_RETURN	0.884

To analyze the collected data, four types of statistical analyses were conducted using SPSS (Statistical Package for the Social Sciences):

1. Descriptive Statistics: Provided an overview of the sample characteristics and general patterns within the data.
2. Mann-Whitney U Test: This non-parametric test for two independent groups was used to evaluate whether the use of AR applications significantly influenced Brand Loyalty in the hotel industry.
3. Sociodemographic Analysis: Explored potential links between participants' demographic variables—such as age, marital status, employment, and financial situation—and their experiences with AR.
4. Multiple Linear Regression: Assessed the predictive relationship between AR-related variables and Brand Love, allowing the identification of significant influencing factors.
5. Cluster Analysis: Identified homogeneous subgroups among participants based on their responses, facilitating the segmentation of different AR user profiles in the hotel context.

The integration of these four analytical approaches provided a comprehensive understanding of the phenomenon, enriching the interpretation of the data and ensuring greater depth in the conclusions drawn.

4. RESULTS

4.1 Descriptive Analysis

The descriptive analysis presented in this section aims to provide an overview of the data collected through an online survey conducted to examine the adoption and perception of Augmented Reality (AR) technologies in the hospitality industry. The objective was to explore how individuals perceive and engage with AR in this context, with particular emphasis on usage experience, demographics, and socioeconomic background.

A total of 115 valid responses were gathered. One of the first questions asked respondents whether they had ever used AR in the hospitality sector, allowing for a preliminary segmentation of the sample. As shown in Figure 3, 55% of participants reported having never used AR in the hotel industry, whereas 45% indicated prior experience with this technology.

In terms of gender distribution, the sample comprised 64% female respondents (n = 74) and 36% male respondents (n = 41). The age distribution ranged widely, with the highest concentration of participants falling in the 20–24 age group (32%), followed by 25–29 (23%), and smaller proportions in subsequent brackets. The full breakdown is illustrated below:

Regarding employment status, 57% of respondents were employees (n = 66), 16% were working students (n = 18), 12% were students (n = 14), 10% were self-employed (n = 12), 3% were unemployed (n = 4), and 1 respondent was retired.

When asked to evaluate their financial comfort on a scale from 1 (very uncomfortable) to 5 (very comfortable), participants reported a mean score of 3.5, suggesting a generally moderate to comfortable financial position across the sample.

4.2 Comparative Results: Users vs. Non-Users of Augmented Reality

To better understand how prior experience influences perceptions of augmented reality (AR) in the hotel industry, participants were divided into two groups: those who have previously used AR applications in a hotel setting and those who have not. Their responses were compared across a series of statements assessing ease of use, perceived utility, emotional response, and influence on loyalty and decision-making.

The results show that participants who have already used AR in hotels consistently report more positive perceptions than those who have not. For instance, users rated the ease of learning how to use AR applications higher (4.6) than non-users (4.1), suggesting that familiarity reduces perceived complexity. Similarly, users felt more confident about their ability to become proficient with AR (4.4 vs. 4.1) and about having access to support if needed (4.5 vs. 4.1). This indicates that experience with the technology increases digital self-efficacy and reduces uncertainty.

In terms of perceived utility, users agreed more strongly that AR applications in hotels are useful in daily life (4.5 vs. 3.8) and make it easier to access relevant information (4.6 vs. 4.1). They also found AR to be pleasant and helpful (4.6 vs. 4.1), showing that those with exposure tend to perceive the technology as both functional and enjoyable.

Interestingly, AR users were also more likely to report that AR positively influences their well-being during travel (4.3 vs. 3.7) and that they would return to hotels using such technologies (4.4 vs. 3.9). This suggests that AR does not just provide immediate benefits but can also foster long-term emotional connections with the hotel brand. Moreover, users were more inclined to agree that AR could influence their next stay decision (4.3 vs. 3.8) and even their intention to return (4.1 vs. 3.5), pointing to a potential role of AR in enhancing brand loyalty.

On the other hand, non-users expressed slightly greater concern regarding risks such as the incorrect use of information (3.6 vs. 3.3) and lack of security (3.7 vs. 3.5). This suggests that unfamiliarity with the technology may lead to higher perceived risk, reinforcing the need for clear communication and user-friendly design to build trust among first-time users.

Overall, the data indicates that prior experience with AR applications is associated with higher levels of perceived ease of use, utility, and positive emotional impact, as well as stronger intentions to return and recommend. These findings support the idea that user experience plays a crucial role in shaping attitudes toward technological innovation in hospitality, and that increasing exposure to AR may be key to enhancing both satisfaction and brand loyalty.

Table 3. Mean Comparison

Statements	Users of Augmented Reality Applications	Non-Users of Augmented Reality Applications
I consider learning how to use augmented reality applications easy	4.6	4.1
I consider learning how to use real applications easy	4.5	4.1
I can/could become experienced in using augmented reality applications	4.4	4.1
I have the necessary resources to use an augmented reality application	4.5	4.3
When I face difficulties using augmented reality, I know people with the knowledge to help me	4.5	4.1
Augmented reality applications in hotels are/would be extremely useful in my life	4.5	3.8
Augmented reality applications in hotels make/would make it easier for me to access information	4.6	4.1
Using augmented reality applications is/would be pleasant and helpful	4.6	4.1
Using augmented reality applications influences/would influence my well-being during the trip	4.3	3.7
Using augmented reality in hotels runs the risk of the information not being used correctly	3.3	3.6
Using augmented reality applications may not provide the necessary security to users	3.5	3.7
I would consider returning to hotels that use augmented reality applications	4.4	3.9
Using augmented reality applications in hotels makes/would make me stay longer in the hotel	3.8	3.3
Using augmented reality applications in hotels has/would have an influence on my choice of stay for the next trip	4.3	3.8
Using augmented reality applications in hotels makes/would make me decide whether or not to return to a hotel	4.1	3.5

Table 4. Mann-Whitney

	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15
Mann-Whitney U	1281.000	1324.000	1354.000	1618.000	1541.000	1102.000	1132.000	1199.500	1088.000	1418.000	1515.000	1171.500	1320.000	1233.000	1244.500
Wilcoxon W	3297.000	3340.000	3370.000	3634.000	3557.000	3118.000	3148.000	3215.500	3104.000	2796.000	2893.000	3187.500	3336.000	3249.000	3260.500
Z	-2.240	-1.947	-1.744	-.129	-.628	-3.272	-3.135	-2.736	-3.267	-1.273	-.716	-2.827	-1.857	-2.436	-2.334
Asymp. Sig. (2-tailed)	.025	.051	.081	.897	.530	.001	.002	.006	.001	.203	.474	.005	.063	.015	.020
a. Grouping Variable: Have you used augmented reality applications in the hospitality industry? For example: Viewing rooms, hotel spaces															

Statements	Users of Augmented Reality Applications	Non-Users of Augmented Reality Applications
Using augmented reality applications may not provide the necessary security to users	3.5	3.7
I would consider returning to hotels that use augmented reality applications	4.4	3.9
Using augmented reality applications in hotels makes/would make me stay longer in the hotel	3.8	3.3
Using augmented reality applications in hotels has/would have an influence on my choice of stay for the next trip	4.3	3.8
Using augmented reality applications in hotels makes/would make me decide whether or not to return to a hotel	4.1	3.5

Considering that the participants were divided into those who had never used augmented reality (AR) (variable 1) and those who had (variable 2), the results of the Mann-Whitney analysis reveal interesting differences between these groups.

In the perception of the ease of learning and use of AR, those who have already used the technology (variable 2) consider it significantly easier to learn compared to those who have never used it (variable 1). Experienced users have a higher average rating (64.87 versus 52.33), and this

difference is statistically significant (p = 0.025). This suggests that familiarity with AR increases confidence and positive perception of the ease of its use.

The perception of the usefulness of AR in hotels also presents marked differences. When asked about the usefulness of AR, those who have used it evaluate its importance much more positively, with an average rating of 68.31 compared to 49.49 for the group that never used it. This difference is highly significant (p = 0.001), indicating that direct experience with AR reinforces the perception of its value. In addition, those who have used AR tend to see technology as an enabler in accessing information (mean 67.73 for group 2 versus 49.97 for group 1; p = 0.002) and associate its use with a positive impact on well-being during their hotel stay (68.58 versus 49.27; p = 0.001). These results suggest that AR improves the travel experience, especially for users who have already had contact with this technology.

When it comes to perceived safety, both groups share similar concerns. The analysis found no significant differences in views on security between those who had used AR and those who had not, either in terms of user safety or the risk of misuse of information. This indicates that while the benefits of AR are more visible to those who have already used it, safety concerns are a common issue and should be addressed equally for all audiences.

Finally, the influence of AR on the choice of accommodation and the decision to return was also more notable among those who had already used the technology. The variable "influence of AR on the choice of stay" had a mean rating of 65.79 among those who had already used AR, against 51.57 for those who had never used it (p = 0.015), suggesting that AR may become a determining factor in the choice of accommodation. Similarly, the desire to return to hotels that use AR is stronger among technology users (66.97 versus 50.60; p = 0.005), which indicates that AR can be a valuable differentiator in customer loyalty and loyalty.

Based on the analysis of the variables related to financial situation, nationality, and employment status, it is possible to identify a distinct sociodemographic profile of users who have adopted augmented reality (AR) in the hotel industry.

Table 5. Marital Status and Use of Augmented Reality in Hospitality

Marital Status	Used AR (n)	Did Not Use AR (n)	Total (n)	% Who Used AR
Married	11	16	27	40.7%
Divorced	0	1	1	0.0%
Single	41	46	87	47.1%
Total	52	63	115	**45.2%**

Table 6. Employment Status and Use of Augmented Reality in Hospitality

Employment Status	Used AR (n)	Did Not Use AR (n)	Total (n)	% Who Used AR
Unemployed	0	4	4	0.0%
Student	5	9	14	35.7%
Self-employed	8	3	11	72.7%
Employed (by others)	30	37	67	44.8%
Retired	0	1	1	0.0%
Working student	9	9	18	50.0%
Total	52	63	115	**45.2%**

Table 7. Financial Situation and Use of Augmented Reality in Hospitality
(Scores: 2 = Very Uncomfortable, 5 = Very Comfortable)

Financial Situation Score	Used AR (n)	Did Not Use AR (n)	Total (n)	% Who Used AR
2 (Very Uncomfortable)	0	4	4	0.0%
3	18	34	52	34.6%
4	29	24	53	54.7%
5 (Very Comfortable)	5	1	6	83.3%
Total	52	63	115	**45.2%**

Table 8. Nationality and Use of Augmented Reality in Hospitality

Nationality	Used AR (n)	Did Not Use AR (n)	Total (n)	% Who Used AR
Belarussian	1	0	1	100.0%
Brazilian	0	2	2	0.0%
Chinese	1	0	1	100.0%
Spanish	2	0	2	100.0%
French	3	1	4	75.0%
German	0	2	2	0.0%
Irish	1	0	1	100.0%
Italian	5	0	5	100.0%
Portuguese	39	53	92	42.4%
Swiss	0	1	1	0.0%
Total	52	63	115	**45.2%**

In terms of nationality, the highest adoption rates are observed among respondents from Belarus, China, Spain, France, Ireland, Italy, and Switzerland. These results suggest that cultural familiarity with technology and broader exposure to digital innovations may influence AR adoption. By contrast, Portuguese respondents—who represent the majority of the sample—show a lower usage rate (42.4%), indicating a more gradual integration of AR in domestic hospitality experiences.

Financial situation also plays a decisive role. Respondents in higher financial categories (levels 4 and 5) report higher AR usage, particularly those in category 5, where 83.3% have used the

technology. Conversely, those in lower financial categories, such as category 2, report no usage at all. This trend indicates that financial comfort may facilitate access to AR-compatible devices and experiences.

Employment status is another relevant factor. Most AR users are either employed or self-employed, suggesting that job stability and disposable income contribute to the willingness to engage with new technologies. While a small group of students also reported usage, none of the unemployed respondents had used AR. This highlights that economic security may be a prerequisite for engaging with AR in hospitality.

The average age of AR users is 31, placing them within the young adult demographic. This group is typically more familiar with technology, open to innovation, and more financially independent—factors that align with greater adoption of emerging technologies like AR.

In summary, the typical user of augmented reality in the hotel sector is around 31 years old, financially comfortable, employed, and from a country or culture that embraces technological innovation. These characteristics point to a current positioning of AR as a niche technology, more accessible to tech-savvy and economically stable individuals.

4.3 Multiple Linear Regression Analysis

The multiple linear regression analysis was conducted to assess the extent to which three predictors—Ease of Use and Learning, Perceived Risk, and Perceived Utility—influence the dependent variable "Love for the Brand."

Model Fit

The model yielded a multiple correlation coefficient of $R = 0.677$, indicating a moderately strong relationship between the set of independent variables and the dependent variable. The coefficient of determination (R^2) = 0.458 suggests that approximately 45.8% of the variance in "Love for the Brand" can be explained by the predictors included in the model. The adjusted $R^2 = 0.423$, showing that even when adjusting for the number of predictors, the explanatory power remains moderate.

Table 9. Multiple Linear Regression Results – Predicting Brand Love

Predictor	Unstandardized (B)	Coefficient Std. Error	Standardized Coefficient (Beta)	t	Sig. (p)
(Constant)	–0.424	0.720	–	–0.589	0.559
Ease of Use and Learning	**0.860**	0.352	**0.589**	**2.445**	**0.018**
Perceived Risk	0.048	0.077	0.070	0.619	0.539
Perceived Utility	0.096	0.322	0.071	0.297	0.768

Model Summary

R	R^2	Adjusted R^2	Std. Error of Estimate
0.677	0.458	0.423	0.612

ANOVA Summary

Source	Sum of Squares	df	Mean Square	F	Sig. (p)
Regression	14.886	3	4.962	13.234	**< 0.001**
Residual	17.623	47	0.375		
Total	32.510	50			

The model was statistically significant, $F(3,48) = 13.234$, $p < 0.001$, indicating that, collectively, the predictors reliably forecast the dependent variable. This confirms that the model as a whole is valid for further interpretation.

The regression analysis revealed that among the three predictors—Ease of Use and Learning, Perceived Risk, and Perceived Utility—only Ease of Use and Learning had a statistically significant impact on Brand Love. Specifically, the unstandardized coefficient for this variable was 0.860, and the standardized beta coefficient was 0.589, with a p-value of 0.018. This indicates that as consumers perceive a product or service to be easier to use and learn, their level of attachment and positive feelings toward the brand significantly increases.

In contrast, Perceived Risk had a very small effect on Brand Love, with a coefficient of 0.048 and a standardized beta of 0.055. However, this relationship was not statistically significant, as indicated by the p-value of 0.619. Similarly, Perceived Utility also failed to show a meaningful impact on Brand Love. The coefficient for this variable was 0.096, with a beta of 0.051, and the p-value was 0.768. These results suggest that, within the context of this study, perceptions of usefulness and risk do not play a significant role in shaping consumers' emotional connection with the brand.

Among the three variables analyzed, only Ease of Use and Learning had a statistically significant impact on Love for the Brand. These findings suggest that making the product or service easier to use and understand plays a key role in building emotional attachment to the brand. While perceived risk and utility did not show significant effects in this sample, future research could explore whether these relationships emerge in other consumer segments or contexts.

4.4 Cluster Analysis

To explore distinct user profiles regarding the adoption of Augmented Reality (AR) in the hospitality industry, a hierarchical cluster analysis was initially performed. The dendrogram

revealed the presence of two broad clusters, suggesting a binary division among users—those generally favorable toward AR and those less so. However, a more detailed inspection of the dendrogram also indicated meaningful subdivisions within these primary clusters, revealing more nuanced behavioral and attitudinal patterns.

In order to capture this complexity, we proceeded with a K-means cluster analysis, specifying four clusters. This approach allowed for a more granular segmentation of respondents, enabling a richer interpretation of user attitudes, perceptions, and levels of engagement with AR technologies in hotel settings.

The final four-cluster solution provided a clearer understanding of the varying degrees of AR acceptance and usage intentions, offering practical insights into how different user segments perceive the value and usability of this technology in their travel experiences.

Table 10. Cluster Means for Statements on Augmented Reality in Hotels

Statement	Cluster 1	Cluster 2	Cluster 3	Cluster 4
I consider/would consider it easy to learn how to use augmented reality applications	5.00	4.22	3.24	4.85
I consider/would consider it easy to learn how to use augmented reality applications (duplicate item)	4.96	4.11	3.40	4.78
I can/could become experienced in using augmented reality applications	5.00	4.05	3.32	4.58
I have the necessary resources to use an augmented reality application	5.00	4.30	3.44	4.89
When I feel difficulties in using augmented reality, I know people with knowledge who can help me	4.92	4.46	3.16	4.85
Augmented reality applications in hotels are/would be extremely useful in my life	4.88	3.86	3.00	4.85
Augmented reality applications in hotels make/would make it easier to access information	5.00	4.00	3.48	4.93
Using augmented reality applications is/would be pleasant and facilitating	5.00	4.14	3.04	4.93
Using augmented reality applications influences/would influence my well-being during the trip	4.73	3.62	2.53	4.89
In the use of augmented reality in hotels, we run the risk of the information not being used correctly	4.85	3.51	3.36	2.30
Using augmented reality applications may not provide the necessary security to users	4.58	3.81	3.16	2.89
I consider/would consider returning to hotels that use augmented reality applications	4.96	3.86	2.96	4.93
Using augmented reality applications in hotels may/would make me stay longer at the hotel	4.96	2.92	2.20	4.00
Using augmented reality applications in hotels may/would influence my choice of accommodation on my next trip	5.00	3.51	2.76	4.93
Using augmented reality applications in hotels may/would make me decide whether to return to a hotel	5.00	3.14	2.48	4.70

Cluster 1: "Augmented Reality Lovers"

This cluster comprises confident, enthusiastic, and tech-savvy users who are highly familiar with Augmented Reality (AR). Respondents in this group consistently give the highest ratings across all statements, clearly indicating strong affinity with AR technologies. For these individuals, using AR applications is intuitive and effortless. They feel fully equipped with the necessary resources and support, and they perceive AR in hotel settings as extremely beneficial—enhancing access to information and enriching the overall travel experience. Furthermore, they report that AR positively influences their well-being and plays a decisive role in their intent to return to a hotel. In short, this cluster is composed of passionate advocates who perceive AR as an indispensable tool in hospitality.

Persona: A woman around 30 years old, financially stable, enthusiastic about innovation and digital experiences. She finds AR easy to use and believes it significantly enhances her stay, influencing her hotel choice and loyalty.

Cluster 2: "AR Explorers"

This group represents individuals who are experimenting with AR and showing growing interest, but who are not yet entirely convinced of its benefits. Their responses reflect a generally positive but somewhat cautious attitude. They find AR relatively easy to use and feel moderately supported when facing technical challenges. While they acknowledge AR's potential to enhance access to information, they express hesitations—particularly around security and proper use of information. This indicates that they see value in the technology but are still in the process of adaptation.

Persona: A young woman with financial means who has had initial experiences with AR in hospitality. She sees its potential to improve her stay and is eager to learn, but remains somewhat hesitant and seeks reassurance regarding trust and usability.

Cluster 3: "AR Disinterested"

Users in this cluster show the lowest interest and engagement with AR. They consistently provide low ratings across the board, indicating a perception that AR adds little or no value to their hotel experience. They do not consider AR influential or beneficial and express no intention of returning to hotels that offer it. Furthermore, they show concerns regarding the misuse of information and lack of safety. This cluster reflects a resistant stance toward technological innovation in hospitality.

Persona: An older man with a more traditional mindset and limited financial resources. He views AR as unnecessary and potentially risky, showing skepticism toward new digital experiences in hotels.

Cluster 4: "AR Interested but Cautious"

This cluster includes users who are curious and generally positive about AR, but less enthusiastic than the "Lovers." They find AR relatively easy to use and appreciate its benefits, especially in facilitating access to information and enhancing comfort during the stay. However, they still express some uncertainty, particularly regarding safety and the overall impact on their travel experience. This group reflects openness to innovation but retains a preference for familiar and secure experiences.

Persona: A financially stable young person who enjoys traveling and is receptive to new technologies. While they recognize the value of AR, they still opt for more traditional approaches due to lingering concerns and a desire for a balanced, secure experience.

5. DISCUSSION OF RESULTS AND LIMITATIONS

The results of this study reinforce the central role that Augmented Reality (AR) can play in enhancing Brand Love and Brand Loyalty within the hotel sector. The data collected support the idea that AR contributes significantly to the creation of immersive and personalized experiences that directly influence customer satisfaction, emotional attachment, and the intention to return. AR should be interpreted not only as a service technology, but as an interactive marketing communication interface that allows consumers to engage with the brand through experience-based interaction. In this sense, AR operates as a brand touchpoint where customers do not simply receive information, but actively interact with branded content, strengthening meaning-making and emotional closeness. This interpretation supports recent research positioning AR as a communication format that can intensify experiential engagement and contribute to stronger consumer–brand relationships, including Brand Love (Tian & Wang, 2025; Rauschnabel et al., 2024).

Beginning with the influence of AR usage on emotional connection and loyalty, the linear regression analysis demonstrated that the use of AR significantly increases customers' emotional attachment to the hotel brand. This finding corroborates the arguments presented in the literature by Rauschnabel et al. (2024) and Afonso and Hipólito (2022), who emphasized the potential of

AR to bring customers closer to a brand through memorable and emotionally engaging experiences. Additionally, the results suggest a positive association between AR usage and loyalty, as demonstrated by a mean score of 4.4 among users regarding their intention to return. These findings align with existing research that points to the relevance of personalization and immersive experiences in influencing consumer choices and loyalty behaviors.

The study's first objective aimed to examine the relevance of facilitating factors, such as ease of learning and perceived risk, in shaping return intentions. Results from the Mann-Whitney analysis confirmed that ease of use and interactivity are highly valued by participants, with an average rating of 4.6 for ease of learning. This confirms previous studies, such as those by Bernardos et al. (2011) and Lim et al. (2024), which underscore the importance of intuitive interaction and personalized content in AR experiences. Respondents who perceived AR as user-friendly reported a greater intention to return, reinforcing the role of usability in fostering brand loyalty. Moreover, the analysis revealed that users of AR applications demonstrated more favorable attitudes toward the brand than non-users, further confirming the impact of AR on loyalty.

A central contribution of this study is the finding that ease of use plays a stronger role in Brand Love than perceived risk or perceived utility. This result suggests that AR is most effective when it delivers interaction fluency, enabling users to focus on immersive experience rather than effort or friction. Recent AR marketing research similarly indicates that consumer responses depend on experiential and perceptual cues generated by AR, and that the quality of the interaction shapes evaluations over time (Söderström et al., 2024; Tian & Wang, 2025). Therefore, usability is not merely a technical requirement: it is a strategic experience-design and communication effectiveness condition that supports emotional attachment and stronger brand relationships.

Conversely, perceived risk—particularly in terms of data privacy and security—did not emerge as a significant impediment to return intention, contrary to theoretical expectations. Although Lim et al. (2024) suggest that privacy risks may influence consumer behavior, the findings of this study indicate that consumers may have limited awareness or concern regarding these risks, especially at the current stage of AR adoption. This highlights a potential disconnect between theoretical risks and actual user perceptions, suggesting that privacy concerns may become more salient as AR technologies gain wider popularity and usage.

The second objective addressed consumers' perception of usefulness and satisfaction with AR. The results indicated that previous use of AR significantly influences perceived usefulness, as

evidenced by a statistically significant difference between users (M = 68.31) and non-users (M = 49.49), with $p < 0.001$. This reinforces the notion that direct experience with AR technologies contributes to stronger perceptions of their practical value. This conclusion is in line with the findings of Voicu et al. (2023a), who argued that AR facilitates and enhances the customer experience, leading to higher levels of satisfaction and loyalty. Furthermore, satisfaction with AR usage had a direct and positive effect on purchase intention and intention to return. This impact was particularly evident among younger generations, who tend to be more receptive to digital and interactive innovations in the tourism and hospitality industry.

The third objective focused on the relationship between satisfaction with AR and the development of Brand Love and purchase intent. The data demonstrated that satisfaction with AR significantly contributes to the formation of emotional bonds between customers and brands, echoing the insights of Rocha-Vallejos et al. (2022), who emphasized the importance of personalized and interactive experiences in establishing long-term brand relationships. Consumers who reported higher satisfaction with AR experiences—particularly those who used it to explore hotel rooms or amenities—also showed stronger purchase intent, underscoring the influence of immersive technologies on consumer decision-making and emotional engagement. The multiple regression analysis further confirmed the role of AR satisfaction in predicting both brand loyalty and purchase intention, particularly for Millennials and Generation Z, as also highlighted by Kuleto et al. (2021), who noted the increasing importance of innovation and personalization in younger consumers' choices.

Overall, the study provides strong evidence that AR can be a powerful strategic tool for the hotel industry, enabling the design of immersive, personalized, and engaging consumer experiences. These experiences positively affect emotional bonds, perceived usefulness, and customer loyalty. While theoretical frameworks often emphasize the role of perceived risk in moderating technology adoption, the findings suggest that, in this particular sample, concerns around privacy and data protection did not significantly deter users. This may be attributed to a general lack of familiarity with AR applications and limited understanding of the underlying technologies, which may lead to a minimization of privacy concerns.

Although this study is grounded in hospitality, its implications extend to other industries where digital experiences increasingly shape brand value. The findings reinforce that AR contributes to relationship outcomes when integrated as a coherent customer journey touchpoint, consistent with

research emphasizing the role of multiple touchpoints and omnichannel journeys in shaping customer perceptions and loyalty (Kim & So, 2024; Weippert & Kraus, 2024; Weidig et al., 2024). In this way, the study contributes beyond technology adoption perspectives by clarifying how AR-based experiences can function as relational brand assets through experience quality mechanisms (Kumar et al., 2024; Calisto & Sarkar, 2024).

From a managerial perspective, these insights have practical implications. The implementation of AR, particularly when it emphasizes ease of use and personalization, has the potential to differentiate hotel brands in an increasingly competitive and experience-driven market. Furthermore, the cluster analysis revealed that the most receptive audience for AR consists of young consumers with stable employment and financial conditions—an important consideration for strategic targeting and resource allocation during AR implementation.

As for limitations, the reduced weight of privacy concerns in the study sample suggests a need for further investigation into consumer understanding of AR-related risks. Future research should focus on the evolution of risk perception as AR becomes more prevalent and should explore the potential for integrating AR with complementary technologies such as Artificial Intelligence to enhance personalization even further. Although previous studies highlight concerns regarding data security and privacy, this study did not identify significant differences between users and non-users in this regard. Both groups expressed low levels of concern, possibly indicating a broader lack of awareness. This finding points to an important gap in the literature: the need to investigate why consumers show limited concern about privacy in an era where data protection is increasingly valued. Addressing this gap could contribute to a more nuanced understanding of consumer behavior toward AR adoption in hospitality and beyond.

6. CONCLUSION

This research sought to explore the impact of Augmented Reality (AR) on the development of Brand Love and Brand Loyalty in the hospitality sector, focusing on understanding how enabling factors, perception of utility, perceived risk and customer satisfaction influence consumer attitudes towards brands. The results obtained allow us to affirm that AR has a relevant role in promoting an enriched and emotionally engaging experience, which contributes to the creation of more solid bonds between the customer and the brand.

The analysis of the data confirmed the importance of factors such as the ease of use and interactivity of AR, which, by facilitating navigation and access to relevant information, contribute to a positive perception of the technology. Consumers who perceive AR as intuitive and useful showed a greater predisposition to develop an affective connection with the brand and to express intentions of return and recommendation. The perception of usefulness thus proved to be fundamental for the strengthening of Brand Love and brand loyalty, as AR not only makes the decision-making process more convenient, but also adds an emotional value to the stay experience. However, the study also points to the need to minimize the perceived risk associated with AR. Issues such as data privacy and security continue to be barriers to the acceptance of this technology, underlining the importance of brands ensuring high standards of security and transparency in the use of AR. This is especially relevant as a negative experience or perceptions of insecurity can negatively impact customer trust and loyalty.

Likewise, satisfaction with the AR experience proved to be a determining factor for the development of Brand Love and Brand Loyalty, by providing an immersive experience that brings the consumer closer to the brand. This satisfaction, combined with the innovation and personalization that AR offers, reinforces the customer's emotional connection, promoting return and increasing the likelihood of positive recommendations.

In practical terms, the results of this research provide valuable guidance for hotel managers who want to implement AR as a competitive advantage. Ensuring ease of use, maximizing the perception of usefulness and addressing safety concerns are key steps to enhance the impact of AR in strengthening the emotional bond with the brand. In addition, the study suggests that personalizing AR experiences could be a strategic differentiator in the hospitality market, attracting customers who value innovation and exclusivity.

From a marketing management perspective, the results suggest that augmented reality should be treated as a strategic digital brand touchpoint rather than only a technological feature. Hotels should prioritize ease of use and seamless interaction, since usability was the strongest driver of Brand Love. AR should also be integrated across the customer journey (pre-stay, on-site, post-stay) to strengthen brand communication and loyalty. Finally, the segmentation results indicate that hotels can improve effectiveness through targeted marketing, focusing on the most receptive customer profiles and emphasizing experiential value (immersion, personalization, convenience) in communication campaigns.

For further research, a larger sample and a more in-depth analysis of the impact of AR on different consumer segments and cultural contexts are recommended, as the uptake of the technology may vary depending on the profile of customers. Additionally, it would be useful to explore the role of other emerging technologies in combination with AR, such as Artificial Intelligence, in order to understand the potential of an integrated experience and maximize customer engagement with the brand.

In summary, the present study contributes to the understanding of the role of Augmented Reality in the creation of Brand Love and Brand Loyalty in the hotel sector, highlighting its potential to transform the customer experience and strengthen the emotional relationships between consumers and brands. By demonstrating that AR can be a strategic tool to build customer loyalty and improve the consumer experience, this research reinforces the importance of technological innovation as a pillar for competitiveness and differentiation in the hotel industry.

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