MULTIDISCIPLINARY SCIENTIFIC RESEARCH
BJMSR VOL 11 NO 2 (2026) P-ISSN 2687-850X E-ISSN 2687-8518
Available online at https://www.cribfb.com
Journal homepage: https://www.cribfb.com/journal/index.php/BJMSR
Published by CRIBFB, USA

HARNESSING ARTIFICIAL INTELLIGENCE FOR REPURCHASE INTENTION: THE MEDIATING ROLE OF SOCIAL PLATFORMS AND CONSUMER EXPERIENCE

Sajeeb Kumar Shrestha [(a)] *Krishna Prasad Pandey* [(b)] *Sanket Shrestha* [(c)] *Sabita Karki* [(d)] *Dipak Mahat* [(e)1]

[(a)] *Associate Professor, Faculty of Management, Tribhuvan University, Kathmandu, Nepal; E-mail: drsajeeb@gmail.com*
[(b)] *PhD Scholar, Faculty of Environmental Management, Prince of Songkla University, Hat Yai, Thailand; E-mail: 6410930139@email.psu.ac.th*
[(c)] *Student, Computer Science with Artificial Intelligence, Birmingham City University, United Kingdom; E-mail: sanketshrestha09@gmail.com*
[(d)] *Student, Faculty of Management, Tribhuvan University, Kathmandu, Nepal; E-mail: savykarki@gmail.com*
[(e)] *Student, Faculty of Management, Tribhuvan University, Shanker Dev Campus, Kathmandu, Nepal; E-mail: dipakmahatdm2047@gmail.com*

ARTICLE INFO

Article History:

Received: 5th October 2025
Reviewed & Revised: 5th October 2025 to 5th April 2026
Accepted: 7th April 2026
Published: 13th April 2026

Keywords:

Artificial Intelligence, Customer, Experience, Repurchase, Social

JEL Classification Codes:

M31, M15, O33

Peer-Review Model:

External peer review was done through double-blind method.

ABSTRACT

Rapid advancements in artificial intelligence (AI) technologies have substantially transformed online service processes in the digital travel and flight booking industry, where customer interaction, conversion efficiency, and experience are critical drivers of repurchase intention. This study examines the direct and indirect effects of AI technology on repurchase intention by incorporating customer interaction in service processes (CISP), conversion rate optimization (CRO), and customer experience satisfaction (SCE) as mediating variables. Adopting descriptive and causal-comparative research designs, data were collected from 480 respondents in the Kathmandu Valley who had booked flights online within the preceding six months, using a convenience sampling technique. Partial Least Squares Structural Equation Modelling (PLS-SEM) was employed for data analysis. The results indicate that AI technology has a significant positive effect on customer interaction ($\beta = 0.349$, $t = 2.784$, $p < 0.001$) and conversion rate optimization ($\beta = 0.516$, $t = 1.995$, $p < 0.001$). Customer interaction significantly influences customer experience ($\beta = 0.567$, $t = 3.706$, $p = 0.004$), while conversion rate optimization also has a strong positive effect on customer experience ($\beta = 0.458$, $t = 5.856$, $p < 0.001$). Satisfying customer experience significantly predicts repurchase intention ($\beta = 0.419$, $t = 1.991$, $p < 0.001$). However, the direct effect of AI technology on repurchase intention is not statistically significant ($\beta = -0.063$, $t = 0.801$, $p = 0.451$). Mediation analysis confirms full mediation, as AI technology indirectly influences repurchase intention through CRO and SCE ($\beta = 0.402$, $t = 2.743$, $p = 0.048$) and through CISP and SCE ($\beta = 0.302$, $t = 3.006$, $p = 0.005$). Overall, the model explains 47.3% of the variance in repurchase intention, demonstrating that AI-driven service features enhance repeat purchase behaviour primarily through improved interactions, optimized conversion processes, and satisfying customer experiences, rather than through a direct effect.

INTRODUCTION

Artificial intelligence (AI) is transforming customer service in the aviation industry by enhancing the travel experience at every stage, from booking to post-flight services (Sumitha & Santhosh, 2023; Barua & Kaiser, 2025). AI-powered solutions are being deployed to personalise customer interactions, anticipate customer preferences, and optimise service delivery (Kumar, Ashraf, & Nadeem, 2024). AI algorithms process extensive data to provide tailored flight and travel recommendations, manage bookings, and deliver real-time updates and support via intelligent chatbots (Kim, So, Shin, & Li, 2025). These innovations improve operational efficiency while significantly enhancing customer satisfaction by offering personalized, responsive, and seamless experiences. As airlines integrate AI more deeply into their customer service models, its ability to foster customer loyalty and retention through personalized services and enhanced convenience becomes increasingly evident. In particular, AI is expected to have a profound impact on customers' repurchase intentions in the context of flight bookings (Alkaied, Khattab, Shaar, Zaid, & Al-Bazaiah, 2024).

Repurchase intention, defined as a customer's likelihood of choosing the same airline for future travel based on past experiences, is influenced by various factors such as service satisfaction, convenience, competitive pricing, loyalty programs, and quality of customer interactions (Bakır, Atalık, & Itani, 2025). Customer satisfaction, in turn, indirectly drives repurchase intention by shaping perceptions of customer value and equity (Hellier, Geursen, Carr, & Rickard, 2003). To

[1]Corresponding author: *ORCID ID: 0000-0003-0540-1180*

https://doi.org/10.46281/bjmsr.v11i2.2850

To cite this article: Shrestha, S. K., Pandey, K. P., Shrestha, S., Karki, S., & Mahat, D. (2026). HARNESSING ARTIFICIAL INTELLIGENCE FOR REPURCHASE INTENTION: THE MEDIATING ROLE OF SOCIAL PLATFORMS AND CONSUMER EXPERIENCE. *Bangladesh Journal of Multidisciplinary Scientific Research*, *11*(2), 17-27. https://doi.org/10.46281/bjmsr.v11i2.2850

boost repurchase intentions, airlines focus on improving service reliability, providing competitive pricing, and enhancing personalization through AI and data analytics.

AI adoption in social media platforms is also revolutionizing business-customer interactions, especially in the airline sector. AI-enabled digital marketing reshapes how businesses create content, generate leads, lower customer acquisition costs, manage experiences, and engage with audiences on social media (Esch & Black, 2021; Acatrinei et al., 2025). Tools such as chatbots, personalized content, and automated support substantially improve interactions on these platforms, influencing customer perceptions, engagement, and satisfaction. Investigating how AI-driven social media interactions impact conversion rates, from inquiries to actual sales, is critical. Enhanced engagement via AI improves conversion outcomes for airlines (Jiang, Tran, & Williams, 2023).

In online hotel bookings, factors such as high search rankings, numerous recommendations, and strong location ratings significantly boost conversion rates (Tang, Wang, & Kim, 2022). Understanding the role of conversion rate optimization (CRO) strategies in improving customer satisfaction during booking and purchase is essential to determine whether a streamlined process enhances the customer experience. Examining the direct influence of positive customer experiences on repeat purchases and identifying elements such as ease of use, personalization, and support quality that drive repurchase intentions is equally crucial (Sapkota & Adhikari, 2024).

Additionally, exploring how customer behaviours, such as travel frequency, booking preferences, and responses to marketing initiatives, affect the relationship between customer satisfaction and repurchase intention provides valuable insights (Dutta, 2016). Studies show that online shopping habits and experiences influence customer satisfaction, which, in turn, shapes expectations and online repurchase intention (Ashfaq, Yun, Waheed, Khan, & Farrukh, 2019; Shrestha et al., 2024). Identifying the habits that strongly impact repeat purchases and leveraging these insights to enhance loyalty strategies is vital for airlines aiming to increase customer retention (Reitsamer, Stokburger-Sauer, & Kuhnle, 2024).

Despite the growing integration of artificial intelligence into airline customer service and digital engagement channels, empirical evidence remains limited regarding how AI-driven interactions translate into customers' repurchase intentions in flight booking contexts. The central scientific problem is the insufficient understanding of the mechanisms by which AI influences repurchase intention, particularly through the mediating roles of social platforms and consumer experience. Accordingly, this study aims to examine how AI-driven customer service influences customers' repurchase intention in the airline industry, with particular emphasis on the mediating effects of AI-enabled social platforms and consumer experience in the flight booking context. This unresolved gap constrains airlines' ability to design evidence-based AI strategies that effectively enhance customer loyalty and sustain long-term competitive advantage in the aviation industry.

The article is then structured into five sections. The literature review synthesises current research on artificial intelligence in customer service, customer interaction on social platforms, conversion rate optimisation, customer experience, and repurchase intention. The materials and methods section elaborates on the research design, sampling, measurement of variables, and analytical procedures. The results section presents descriptive statistics, reliability and validity assessments, path coefficients, and mediation effects. The discussion interprets these findings in relation to the hypotheses and previous literature, highlighting theoretical and practical implications. The paper concludes with a summary of contributions, limitations, and directions for future research.

LITERATURE REVIEW

AI integration into customer-facing platforms has transformed consumer engagement by enhancing personalization, satisfaction, and repeat purchase behaviour. Its influence spans social media interactions, conversion rate optimization, and overall customer experience, providing a foundation for this study. AI technology shapes customer interaction on social platforms by delivering personalized stimuli and virtual assistance, which affect emotional and cognitive responses, leading to behaviours such as engagement, feedback, and active participation (Sung, Bae, Han, & Kwon, 2021). Personalized AI interventions increase customer satisfaction, enhance engagement, and strengthen loyalty and retention (Singh & Singh, 2024). Moreover, AI-driven technologies influence internal consumer states, fostering increased engagement and higher conversion rates. Customization and predictive capabilities enable AI to anticipate consumer needs, thereby improving satisfaction and fostering loyalty (Haleem, Javaid, Qadri, Singh, & Suman, 2022). The SOR model highlights how AI-generated stimuli impact customer behaviours, illustrating the critical role of AI in shaping social media interactions (Vafaei-Zadeh, Nikbin, Wong, & Hanifah, 2024).

In addition to engagement, AI significantly impacts conversion rate optimisation (CRO) by enabling dynamic personalisation of product recommendations and content based on user behaviour (Nazir, Khadim, Asadullah, & Syed, 2023). Predictive analytics help forecast consumer behaviour, optimizing marketing strategies and refining engagement techniques to enhance conversion efficiency. AI automates marketing decisions, adjusts messages in real time, and dynamically manages pricing and inventory strategies, providing a competitive advantage while stimulating customer behaviour, as reflected in the SOR model (Kumar, Ashraf, & Nadeem, 2024).

Customer interactions on social platforms also contribute to a satisfying customer experience. AI-powered tools, such as personalised content delivery and responsive chatbots, increase engagement by ensuring timely, customised responses. This positive feedback loop enhances satisfaction, strengthens brand connections, and encourages value co-creation, which directly affects repurchase intentions (Omeish, Al Khasawneh, & Khair, 2024; Singgalen, 2024). Effective CRO strategies complement this by improving customer segmentation, tailoring marketing efforts, and responding constructively to feedback, thereby elevating consumer emotions, satisfaction, and repeat-purchase intentions (Wu, Wu, & Schlegelmilch, 2020; Purnomo, 2023).

High-quality customer experiences, both online and offline, further increase repurchase intentions by fostering trust, ease of use, and perceived usefulness, thereby reinforcing loyalty and encouraging repeat business (Koch & Hartmann,

2023; Majeed, Asare, Fatawu, & Abubakari, 2022). AI technologies such as recommendation algorithms, chatbots, and personalized marketing enhance these experiences by offering tailored suggestions and improving user satisfaction, thereby fostering greater perceived value in interactions and promoting repurchase intentions (Huseynov, 2023; Singh & Singh, 2024). Collectively, the literature demonstrates that AI directly and indirectly enhances customer engagement, optimizes conversion rates, and delivers satisfying experiences, ultimately driving repurchase behaviour.

This study seeks to investigate the impact of AI-driven customer service on customers' repurchase intentions within the airline industry. It particularly focuses on the mediating roles of AI-enabled social platforms and customer experience in the context of flight booking. The following are the hypotheses of the study:

H_1: AI technology has a direct and positive impact on customer interaction on social platforms.
H_2: AI technology has a direct, positive impact on conversion rate optimization.
H_3: Customer interaction on social platforms has a direct, positive impact on customer satisfaction.
H_4: Conversion rate optimization has a direct and positive impact on satisfying customer experience.
H_5: A satisfying customer experience has a direct and positive impact on customer repurchase intention in flight bookings.
H_6: Artificial intelligence technology positively impacts repurchase intention.

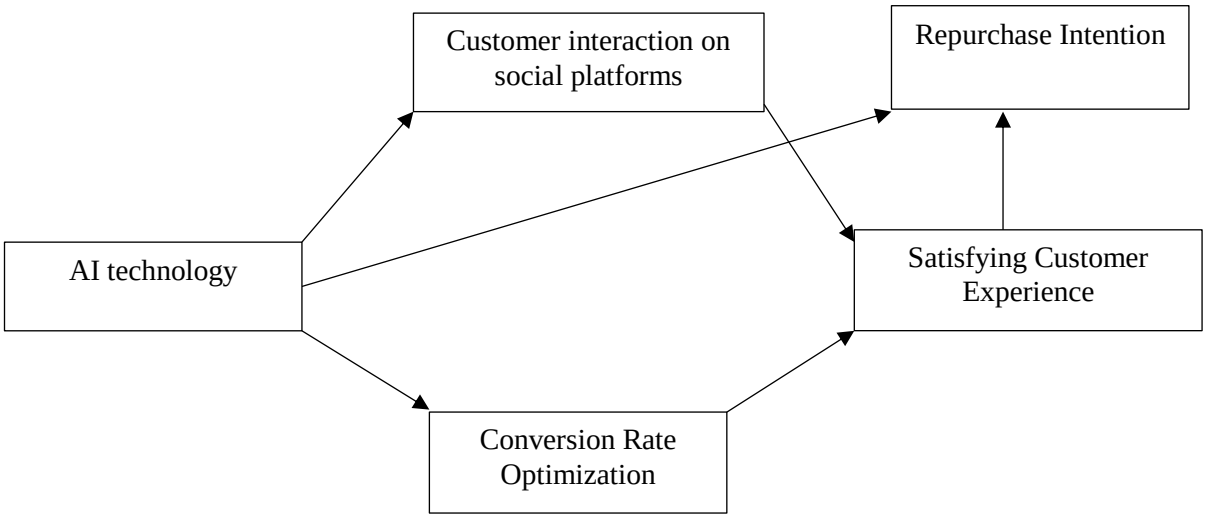

Figure 1. Research Framework

MATERIALS AND METHODS

This study employed a mixed research design, combining descriptive and causal-comparative approaches to investigate the impact of artificial intelligence on customer repurchase intention in the airline industry. The research focused on individuals aged 18 and above residing in Kathmandu Valley, although the exact population size was unknown. A non-probability convenience sampling technique was used due to its suitability for studies with limited resources or the need for rapid data collection from a specific community. The participants were individuals who had booked flights online within the last six months, including both domestic and international flights.

The sample size was determined using Cochran's formula, which is ideal for studies with large populations when the exact population size is unknown:

$$n = \frac{z^2 pq}{e^2}$$

The calculated minimum sample size was 384 respondents, but to account for potential non-responses and enhance robustness, the target was set at 500 respondents. A total of 480 responses were collected, of which 474 were retained after data cleaning and processing.

Data were collected using adapted structured questionnaires, distributed via Google Forms and direct surveys. A five-point Likert scale was employed to assess the impact of independent variables AI Technology, Social Platform Interaction, and Conversion Rate Optimisation on the dependent variable Repurchase Intention, with Customer Satisfaction serving as a mediating variable. The study clearly outlined conceptual and operational definitions for all variables to ensure clarity and replicability.

The study followed a systematic analysis approach, employing Smart PLS 4.0 to examine structural relationships and mediating effects. This approach allowed testing of both direct and indirect effects of AI technology on customer repurchase intention.

The study received ethical approval from the Nepal Philosophical Research Centre under reference number 12-23-0023 prior to data collection. Written informed consent was obtained from all participants, confirming voluntary

participation, the right to withdraw at any time, and the confidentiality of responses, thereby protecting participants' privacy. These steps ensured compliance with ethical principles of autonomy, privacy, and voluntary participation.

The study's strengths include a robust sample size, a combined descriptive and causal-comparative design, and the application of Smart PLS 4.0, which enabled detailed analysis of mediating effects. Limitations include the use of convenience sampling, which may affect generalizability beyond Kathmandu Valley, and reliance on self-reported data, which may introduce response bias.

RESULTS

The following section presents the empirical findings of the study, examining the relationships among Artificial Intelligence Technology (AIT), Customer Interaction on Social Platforms (CISP), Conversion Rate Optimization (CRO), Satisfying Customer Experience (SCE), and Repeated Purchase Intention (RPI). The results cover respondent demographics, reliability and validity assessments, model explanatory power, path coefficients, and mediation effects, providing a comprehensive understanding of how AI-driven interventions influence customer repurchase behaviour in Nepal's flight booking industry.

Respondents' Profile

Table 1. Respondent's Profile

S.N	Category	Group	Frequency	Percent
1	Gender	Male	261	55.1%
		Female	204	43.0%
2	Age	Below 20	41	8.6%
		20-30	138	29.1%
		31-40	183	38.6%
		Above 40	112	23.6%
3	Marital Status	Unmarried	203	42.8%
		Married	230	48.5%
		Divorced/Separated	35	7.4%
		Widow	6	1.3%
4	Income	Below Rs. 30,000	33	7.0%
		Rs. 30,000-Rs. 40,000	142	30.0%
		Rs. 40,001-Rs. 50,000	162	34.2%
		Above Rs. 50,000	137	28.9%
5	Online Purchase Frequency (per month)	1-2 times	188	39.7%
		3-4 times	193	40.7%
		5-6 times	69	14.6%
		Above 6 times	24	5.1%

Table 1 presents the demographic and behavioural characteristics of the 474 respondents. In terms of gender, the majority were male (55.1%), followed by females (43.0%), and a small proportion identified as other (1.9%). Age-wise, the largest group was 31-40 years old (38.6%), followed by 20-30 years old (29.1%), with respondents aged 40+ and 20 -29 making up 23.6% and 8.6%, respectively. Regarding marital status, married individuals accounted for the largest proportion (48.5%), followed by unmarried individuals (42.8%). A smaller percentage were divorced/separated (7.4%) or widows (1.3%). Educational qualifications showed that most respondents held a Bachelor's degree (45.8%), followed by those with qualifications above a Bachelor's degree (33.3%), and below a Bachelor's degree (20.9%). Income distribution indicated that the largest group earned between Rs. 40,001 and Rs. 50,000 (34.2%), followed by Rs. 30,000 to Rs. 40,000 (30.0%), with fewer earning above Rs. 50,000 (28.9%) or below Rs. 30,000 (7.0%). Regarding online purchase frequency, 40.7% made 3-4 purchases per month, followed by 39.7% who made 1-2 purchases per month. A smaller segment made 5-6 purchases (14.6%), while the least frequent buyers made more than 6 purchases monthly (5.1%). These insights highlight the varied demographic composition and purchasing behaviours within the sample population.

Construct Reliability and Convergent Validity

Table 2. Reliability and Convergent Validity

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
AIT	0.720	0.739	0.934	0.643
CISP	0.810	0.836	0.927	0.646
CRO	0.839	0.752	0.767	0.761
RPI	0.795	0.847	0.757	0.732
SCE	0.774	0.696	0.789	0.648

Table 2 presents the Cronbach's alpha, composite reliability, and AVE values used to assess reliability and convergent validity. Cronbach's alpha values indicated strong internal consistency for all constructions exceeding the acceptable cutoff of 0.70. The highest alpha value was 0.839 for Conversion Rate Optimisation, while the lowest was 0.720 for Artificial Intelligence Technology, demonstrating that the items within each construct reliably measured the intended concept. Composite reliability values for all constructs were above 0.70, confirming reliability and consistency in measuring the latent variables. Composite reliability is often preferred over Cronbach's alpha as it accounts for varying factor loadings, offering a more precise measure of reliability. Convergent validity was assessed through the (AVE) values, all of which

exceeded the threshold of 0.50. This indicates that the constructs accounted for more than half of the variance in their respective indicators, suggesting that the items are closely related to the underlying latent variables they were designed to measure. Although the composite reliability for Satisfying Customer Experience was slightly below the threshold at 0.696, it was close enough to be considered acceptable. Overall, the findings supported the measurement model's reliability and validity, indicating that the constructs were robust and accurately represented the collected data.

Heterotrait and Monotrait (HTMT) Discriminant Validity

Table 3. Heterotrait and Monotrait (HTMT) Discriminant Validity

	AIT	CISP	CRO	RPI	SCE
AIT					
CISP	0.317				
CRO	0.309	0.433			
RPI	0.388	0.425	0.472		
SCE	0.436	0.233	0.428	0.658	

Table 3 presents the evaluation of discriminant validity using the Heterotrait-Monotrait (HTMT) ratio of correlations. The results demonstrate that all HTMT values are below the generally accepted threshold of 0.85, indicating adequate discriminant validity among the constructs. Specifically, the HTMT values show the following relationships: Artificial Intelligence Technology (AIT) and Customer Interaction in Service Processes (CISP) had an HTMT value of 0.317, suggesting distinct constructs. Similarly, AIT and Conversion Rate Optimisation (CRO) showed a low correlation of 0.309, reinforcing their discriminant validity. The relationship between AIT and Repeated Purchase Intention (RPI) had a slightly higher, yet still acceptable, value of 0.388, while AIT and Satisfying Customer Experience (SCE) exhibited an HTMT value of 0.436.

Further, CISP and CRO had an HTMT value of 0.433, and CISP and RPI were slightly higher at 0.425. The relationship between CISP and SCE was 0.233, the lowest among the pairwise comparisons, indicating strong discriminant validity. HTMT values between CRO and other constructs ranged from 0.428 with SCE to 0.472 with RPI, all within acceptable limits. The strongest correlation was observed between RPI and SCE, with an HTMT value of 0.658, which is still well below the threshold. These findings confirm that each construct is distinct from the others, demonstrating robust discriminant validity in the measurement model.

Fronell & Larcker Criterion

Table 4. Fronell & Larcker Criterion

	AIT	CISP	CRO	RPI	SCE
AIT	0.802				
CISP	0.105	0.804			
CRO	0.365	0.064	0.679		
RPI	0.474	0.584	0.455	0.729	
SCE	0.392	0.384	0.268	0.123	0.656

Table 4 presents the evaluation of discriminant validity using the Fornell-Larcker criterion. This approach involves comparing each construct's square root of the AVE with the inter-construct correlations. In the resulting table, diagonal elements represent the square root of AVE for individual constructs, while off-diagonal elements show the correlations between different constructs.

The square root of the AVE for each construct is as follows: Artificial Intelligence Technology (AIT) is 0.802, Customer Interaction in Service Processes (CISP) is 0.804, Conversion Rate Optimization (CRO) is 0.679, Repeated Purchase Intention (RPI) is 0.729, and Satisfying Customer Experience (SCE) is 0.656. All diagonal values are higher than the corresponding off-diagonal values, indicating that each construct shares more variance with its own indicators than with the indicators of other constructs.

The correlation between AIT and CISP is 0.105, which is significantly lower than the square root of the AVE for AIT (0.802) and CISP (0.804), confirming discriminant validity. Similarly, CRO's correlations with other constructs range from 0.064 (with CISP) to 0.455 (with RPI), all of which are lower than its square root of the AVE (0.679). The same pattern is observed for RPI and SCE. These results confirm that the constructs in the model are distinct and adequately discriminate from one another, thereby ensuring robust discriminant validity.

Coefficient of Determination

Table 5. Coefficient of Determination

	R^2	Adjusted R^2
CISP	0.301	0.295
CRO	0.379	0.374
SCE	0.326	0.321
RPI	0.473	0.486

Table 5 presents analyses of the coefficient of determination (R^2) and the adjusted R^2 to evaluate the model's explanatory power in predicting the variance of the dependent variables. For Customer Interaction in Service Processes (CISP), an R^2 value of 0.301 indicates that 30.1% of its variance is explained by the independent variables, with an adjusted R^2 of 0.295, which provides a slightly more refined estimate that accounts for the number of predictors in the model. Conversion Rate Optimization (CRO) exhibited an R^2 of 0.379, suggesting that 37.9% of its variance is explained by the model, with an adjusted R^2 of 0.374.

Satisfying Customer Experience (SCE) had an R^2 of 0.326, indicating that the independent variables account for 32.6% of its variance, while the adjusted R^2 of 0.321 further validates the model's robustness. Repeated Purchase Intention (RPI) demonstrated the highest explanatory power, with an R^2 of 0.473, indicating that the model explains 47.3% of the variance. Interestingly, its adjusted R^2 increased slightly to 0.486, implying a stronger fit after adjusting for the model's complexity. Overall, these results confirm that the model has a reasonable level of explanatory power for each construct.

Cross Loading and Collinearity Assessment

Table 6. Cross Loading and Collinearity Assessment

	AIT	CISP	CRO	RPI	SCE	VIF
AIT_1	0.833					3.343
AIT_2	0.864					4.42
AIT_3	0.864					4.636
AIT_4	0.811					3.164
AIT_5	0.592					1.629
AIT_6	0.811					2.524
AIT_7	0.862					3.053
AIT_8	0.738					1.763
CISP_1		0.678				2.075
CISP_2		0.792				2.174
CISP_3		0.833				2.395
CISP_4		0.861				3.222
CISP_5		0.867				3.727
CISP_6		0.818				2.673
CISP_7		0.765				2.246
CRO_1			0.593			1.272
CRO_2			0.687			1.377
CRO_3			0.805			1.338
CRO_4			0.781			1.222
RPI_1				0.973		1.359
RPI_2				0.663		1.428
RPI_3				0.656		1.299
SCE_1					0.618	1.161
SCE_2					0.629	1.311
SCE_3					0.766	1.33
SCE_4					0.596	1.29
SCE_5					0.655	1.292

Table 6 presents the item loadings for the constructs Artificial Intelligence Technology (AIT), Customer Interaction in Service Processes (CISP), Conversion Rate Optimization (CRO), Repeated Purchase Intention (RPI), and Satisfying Customer Experience (SCE), effectively demonstrating their discriminant validity. Each item exhibited the highest loading on its respective construct, with all loadings exceeding 0.50, confirming the absence of cross-loading issues. This result indicates a strong association of each item with its designated construct, ensuring clarity and accuracy in measurement. These findings align with the earlier Fornell and Larcker criterion results, further validating that each construct is distinct and confirming discriminant validity.

Additionally, the variance inflation factor (VIF) values were examined to detect multicollinearity among items. A VIF value above 5 indicates potential multicollinearity concerns. In this study, all VIF values were below this threshold, demonstrating that multicollinearity was not an issue. High correlations between items, which can suggest collinearity, are problematic only if the VIF exceeds the threshold. The findings highlight the robustness of the constructs, with no evidence of multicollinearity, ensuring the reliability and integrity of the measurement model.

Path Coefficient Assessment

Table 7. Path Coefficient Assessment

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P-Values	CI 95.00%
AIT -> CISP	0.349	0.309	0.059	2.784	0.000	0.073
AIT -> CRO	0.516	0.471	0.056	1.995	0.000	0.053
AIT -> RPI	-0.063	0.109	0.083	0.801	0.451	0.002
CISP -> SCE	0.567	0.474	0.045	3.706	0.004	0.057
CRO -> SCE	0.458	0.568	0.044	5.856	0.000	0.042
SCE -> RPI	0.419	0.514	0.081	1.991	0.000	0.047

Table 7 presents the path analysis results, highlighting the intricate relationships between factors influenced by AI technology in shaping repurchase intentions for flight bookings in Nepal. The analysis summarised key metrics, including path coefficients, sample means, standard deviations, t-statistics, p-values, and 95% confidence intervals, providing a detailed view of their significance and impact. The sample mean represented the average effect size for each relationship, with values closer to 1 indicating a strong positive correlation. This implied that changes in one variable caused substantial changes in another. Notably, all relationships demonstrated strong positive connections except for the direct impact of AI technology on repurchase intention.

AI technology showed a significant, positive direct effect on customer interaction on social platforms, with a p-value below the 0.05 significance threshold, indicating the robustness of this effect. Similarly, AI technology had a significant positive impact on conversion rate optimization, a critical factor for improving customer satisfaction and driving sales in Nepal's flight booking sector. This relationship also showed statistical significance (p-value < 0.05). However, the direct effect of AI technology on repurchase intention was not statistically significant, as evidenced by a p-value exceeding the 0.05 threshold.

The analysis further explored the impact of customer interaction on social platforms and the role of conversion rate optimization in customer experience. Both factors significantly enhanced customer satisfaction, with p-values indicating strong statistical significance. Furthermore, a satisfying customer experience was a crucial determinant of repurchase intention, confirming its essential role in fostering customer loyalty and repeat business.

Overall, while AI technology had significant direct effects on customer interaction and conversion rate optimization, its direct impact on repurchase intention was not significant. Instead, its indirect influence through enhanced customer interactions and optimized conversion rates contributed to a satisfying customer experience, which, in turn, significantly affected repurchase intention. These findings emphasized the complex interplay of factors driving customer loyalty and repurchase behaviour, underscoring the importance of digital engagement and customer satisfaction in the Nepalese flight booking industry.

Mediation Effects

Table 8. Mediation Effects

	Original sample (O)	**Sample mean (M)**	**Standard deviation (STDEV)**	**T statistics (|O/STDEV|)**	**P values**	**CI 95.00%**
CRO -> SCE -> RPI	0.331	0.431	0.123	1.801	0.000	0.093
AIT -> CRO -> SCE	0.317	0.319	0.316	1.984	0.000	0.073
AIT -> CISP -> SCE	0.218	0.218	0.011	1.924	0.004	0.004
AIT -> CRO -> SCE -> RPI	0.402	0.402	1.003	2.743	0.048	0.054
AIT -> CISP -> SCE -> RPI	0.302	0.452	0.902	3.006	0.005	0.041
CISP -> SCE -> RPI	0.252	-0.299	1.215	2.351	0.000	0.065

Table 8 presents the analysis, providing a detailed examination of the indirect mediation effects involving artificial intelligence technology, customer interaction on social platforms, conversion rate optimization, customer satisfaction, and repurchase intention in the context of flight bookings in Nepal. Metrics such as path coefficients, sample means, standard deviations, t-statistics, p-values, and 95% confidence intervals were used to analyze these relationships, with a specific focus on mediation effects. The findings revealed significant indirect mediation effects, illustrating how intermediary variables enhanced the overall connections among the primary variables.

A mediation effect was observed along the path from conversion rate optimization to customer satisfaction and, ultimately, to repurchase intention. Conversion rate optimization positively influenced a satisfying customer experience, which, in turn, significantly increased repurchase intention. This mediation effect was statistically significant, as indicated by a p-value of 0.000 and a t-statistic of 1.801, with the confidence interval further confirming the robustness of these findings. Additionally, the indirect path from artificial intelligence technology to conversion rate optimization and then to customer satisfaction was significant. AI technology improved conversion rate optimization, leading to a more satisfying customer experience, evidenced by a p-value of 0.000 and a t-statistic of 1.984.

The analysis also highlighted significant mediation effects involving customer interaction on social platforms. The path from AI technology to customer interaction on social platforms, and then to a satisfying customer experience, showed a significant mediation effect, with a p-value of 0.004 and a t-statistic of 1.924. Furthermore, the path from AI technology through conversion rate optimization and satisfying customer experience to repurchase intention displayed significant mediation, supported by a p-value of 0.048 and a t-statistic of 2.743. Similarly, the path from AI technology through customer interaction on social platforms and satisfying customer experience to repurchase intention demonstrated strong mediation effects, with a p-value of 0.005 and a t-statistic of 3.006.

Additionally, the analysis revealed a significant indirect path from customer interaction on social platforms through satisfying customer experience to repurchase intention, evidenced by a p-value of 0.000 and a t-statistic of 2.351. These findings underscore the pivotal role of a satisfying customer experience as a key mediator, amplifying relationships among variables and positively influencing repurchase intention. This comprehensive analysis highlighted the intricate interplay of factors, underscoring the importance of optimizing intermediary variables to enhance customer loyalty and drive repurchase behaviour in Nepal's flight booking sector.

DISCUSSIONS

The results of this study provide both confirmation and nuanced insights into the hypothesised relationships among Artificial Intelligence (AI) technology, customer interaction on social platforms, conversion rate optimisation, customer satisfaction optimisation, and repurchase intention in Nepal's flight booking sector.

The analysis confirmed that AI technology has a significant and positive impact on customer interaction on social platforms (H_1) and conversion rate optimization (H_2), as indicated by path coefficients of 0.349 and 0.516, respectively, with p-values below 0.05. These findings are consistent with prior research emphasising AI's role in enhancing personalised engagement and operational efficiency, thereby improving customer satisfaction and loyalty (Nazir et al., 2023; Parbat et al., 2021; Singh, 2021). Similarly, customer interaction on social platforms (H_3) and conversion rate optimisation (H_4) were found to positively influence a satisfying customer experience, with t-statistics of 3.706 and 5.856, respectively, confirming that engagement and operational optimisation jointly enhance customer satisfaction. Satisfying customer experience (H_5) also had a significant positive effect on repurchase intention, reinforcing the idea that satisfaction mediates the relationship between AI-enabled processes and loyalty outcomes. This aligns with studies emphasizing that high-quality service experiences are critical determinants of repeat business in the airline industry (Karki & Karki, 2023; Ho & Chung, 2020).

Notably, the direct impact of AI technology on repurchase intention (H_6) was not statistically significant (path coefficient = -0.063, p = 0.451). This finding suggests that AI's influence on repurchase intention is largely indirect, operating through intermediary variables such as customer interaction, conversion rate optimization, and customer satisfaction. A post hoc explanation for this non-significant result is that while AI facilitates engagement and operational efficiency, repurchase behaviour ultimately depends on the perceived value and satisfaction experienced by the customer, rather than the mere presence of AI technology. This highlights the mediating role of customer experience in translating AI capabilities into actual loyalty behaviour.

The mediation analysis further confirmed the importance of intermediary variables. Paths such as AI → CRO → SCE → RPI and AI → CISP → SCE → RPI were statistically significant, indicating that AI's effect on repurchase intention is substantially mediated by conversion rate optimization, customer interaction, and a satisfying customer experience. Similarly, the indirect effect of customer interaction on social platforms, via customer satisfaction, on repurchase intention was significant. These findings reinforce the critical role of satisfaction as a mediator, echoing prior research that emphasizes customer experience as the key conduit through which technological interventions influence loyalty (Shiwakoti et al., 2022; Moses et al., 2023).

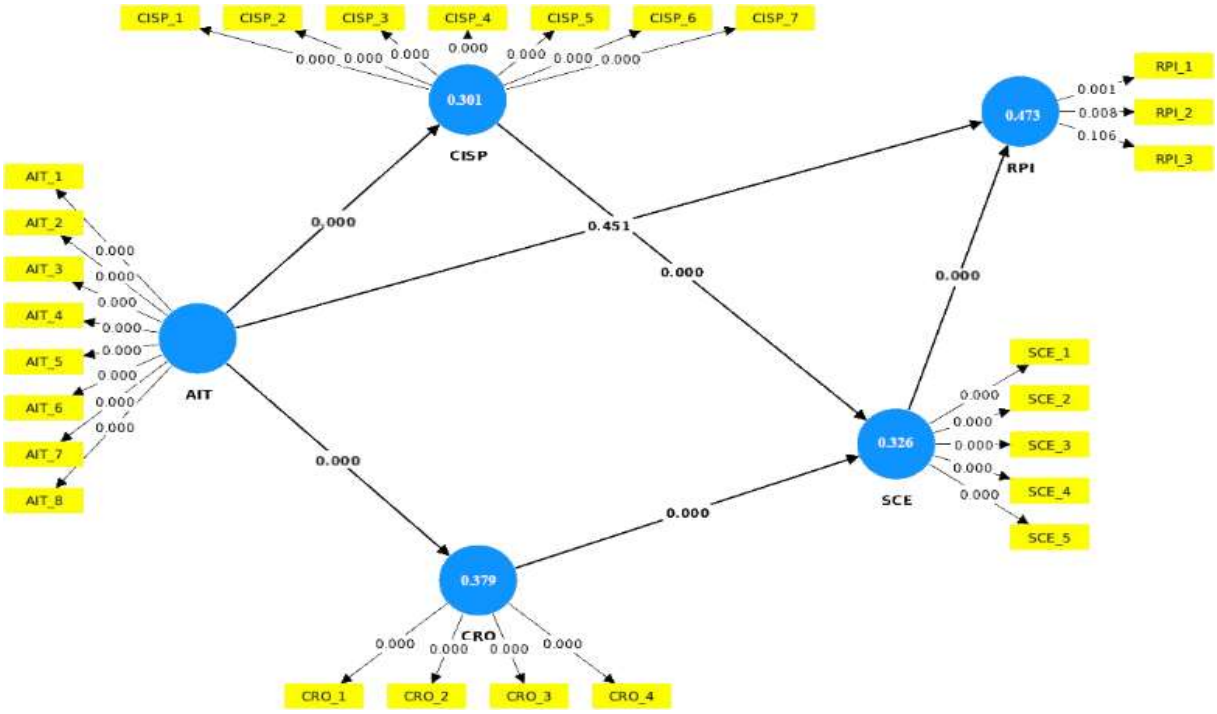

Figure 2. Model Assessment Graph

The results largely corroborate prior findings in the airline and hospitality sectors. Nazir et al. (2023) and Parbat et al. (2021) similarly report that AI enhances engagement and satisfaction, which drive repurchase intentions. The lack of a significant direct effect of AI on repurchase intention aligns with theoretical perspectives that suggest technology alone does not automatically generate loyalty; it is effective only when combined with meaningful customer experiences (Raed et al., 2023). The strong mediation effects observed in this study extend the existing literature by providing empirical evidence from Nepal's flight booking industry, highlighting the importance of digital engagement, personalised services, and optimised operational processes in fostering loyalty.

CONCLUSIONS

This study explored the role of AI technology in enhancing customer experience and influencing repurchase intentions in the airline industry. The research highlights how AI improves service quality, customer engagement, and digital enhancement, thereby contributing to a personalized customer experience. AI-driven features, such as personalized recommendations, efficient booking processes, and responsive customer support, exceed customer expectations, increasing the likelihood of repurchase. Furthermore, AI enables timely, relevant, and engaging interactions on digital platforms, reinforcing customer loyalty. The study also emphasises the importance of digital and contactless services in the post-pandemic airline industry, with AI playing a pivotal role in meeting evolving customer needs for personalizedpersonalised, efficient, and safe services. Airlines investing in AI technologies are better positioned to foster satisfaction and loyalty, securing a competitive edge in a rapidly changing market. This research provides valuable insights into how AI can improve customer loyalty and underscores the need to integrate AI with strategies to enhance service quality and engagement. Additionally, the study opens avenues for future research into AI's long-term behaviour in customer behaviour and its implementation in the airline industry, which could help optimize strategies for customer experiences and loyalty.

This study enhances the theoretical understanding of how AI influences customer experiences and repurchase intentions in the airline industry by highlighting its role in service quality and engagement, while extending existing theories by distinguishing the significance of a satisfying customer experience as a key determinant of repurchase intentions, necessitating multi-faceted models to capture customer interactions with AI.

The study offers actionable insights for airline practitioners on integrating AI to improve service quality, enhance personalization, streamline processes, and increase customer engagement through digital and mobile platforms, ultimately driving loyalty and repurchase intentions, particularly amid the post-pandemic shift toward digital and contactless services.

Future research should explore the long-term impact of AI on customer behaviour and loyalty across different contexts, examine the ethical implications of AI in decision-making, and investigate challenges to AI adoption across airline segments, thereby contributing to a comprehensive understanding of AI's role in shaping customer experiences and business success.

Author Contributions: Conceptualization, S.K.S., K.P.P. and S.S.; Methodology, D.M., S.K.S. and S.S.; Software, D.M., K.P.P. and S.S.; Validation, D.M., K.P.P. and S.S.; Formal Analysis, D.M., S.K.S. and S.S.; Investigation, S.K.K., K.P.P. and S.S.; Resources, S.K.K., K.P.P. and S.S.; Data Curation, D.M., S.K.K. and S.S.; Writing – Original Draft Preparation, D.M., S.K.S. and S.S.; Writing – Review & Editing, D.M., K.P.P. and S.S.; Visualization, D.M., K.P.P. and S.S.; Supervision, D.M.; Project Administration, D.M., K.P.P. and S.S.; Funding Acquisition, S.K.S. and K.P.P. Authors have read and agreed to the published version of the manuscript.

Institutional Review Board Statement: Ethical review and approval were waived for this study because the research does not involve vulnerable groups or sensitive issues.

Funding: The authors received no direct funding for this research.

Acknowledgements: The authors have no acknowledgements to declare.

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: The data presented in this study are available on request from the corresponding author. The data are not publicly available due to restrictions.

Declaration of Generative AI and AI-Assisted Technologies in the Writing Process: During the preparation of this work, the author(s) used Grammarly for proofreading and spell checking since the Authors are not native speakers. All intellectual content, analysis, and interpretations were produced solely by the authors. After using this AI tool/service, the author(s) reviewed and edited the content as needed, taking full responsibility for the publication's content.

Conflicts of Interest: The authors declare no conflict of interest.

REFERENCES

Acatrinei, C., Apostol, I. G., Barbu, L. N., Chivu, R. G., & Orzan, M. C. (2025). Artificial intelligence in digital marketing: Enhancing consumer engagement and supporting sustainable behavior through social and mobile networks. Sustainability, *17*(14), 6638. https://doi.org/10.3390/su17146638

Alkaied, R. N., Khattab, S. A., Shaar, I. M., Zaid, M. K., & Al-Bazaiah, S. A. (2024). The impact of artificial intelligence on repurchase intentions: the mediation approach. *Business Informatics, 18*(3), 87–107. https://doi.org/10.17323/2587-814X.2024.3.87.107

Ashfaq, M., Yun, J., Waheed, A., Khan, M. S., & Farrukh, M. (2019). Customers' expectation, satisfaction, and repurchase intention of used products online: Empirical evidence from China. *Sage Open*, *9*(2), 2158244019846212. https://doi.org/10.1177/2158244019846212

Bakır, M., Atalık, Ö., & Itani, N. (2025). Service quality and repurchase intentions in the airline industry: a multiple mediation analysis through customer citizenship behaviour. *Current issues in tourism*, *28*(24), 4025-4046. https://doi.org/10.1080/13683500.2024.2410935

Barua, B., & Kaiser, M. S. (2025). A Next-Generation Approach to Airline Reservations: Integrating Cloud Microservices with AI and Blockchain for Enhanced Operational Performance. *IET Blockchain*, *5*(1), e70020. https://doi.org/10.1049/blc2.70020

Dutta, B. (2016). Exploring the factors of consumer repurchase intention in online shopping. *International Journal of Computer Science and Information Security*, *14*(12), 520-543.

Esch, P. v., & Black, J. S. (2021). Artificial Intelligence (AI): Revolutionizing Digital Marketing. *Australasian Marketing Journal*, *29*(3), 199-203. https://doi.org/10.1177/18393349211037684

Haleem, A., Javaid, M., Qadri, M. A., Singh, R. P., & Suman, R. (2022). Artificial intelligence (AI) applications for marketing: A literature-based study. *International Journal of Intelligent Networks, 3*, 119–132. https://doi.org/10.1016/j.ijin.2022.08.005

Hellier, P. K., Geursen, G. M., Carr, R. A., & Rickard, J. A. (2003). Customer repurchase intention: A general structural equation model. *European Journal of Marketing, 37*(11/12), 1762-1800. https://doi.org/10.1108/03090560310495456

Ho, M. H.-W., & Chung, H. F. (2020). Customer engagement, customer equity and repurchase intention in mobile apps. *Journal of Business Research, 121*, 13–21. https://doi.org/10.1016/j.jbusres.2020.07.046

Huseynov, F. (2023). The Role of Internet of Behaviors (IoB) in Digital Marketing. In *Contemporary Approaches of Digital Marketing and the Role of Machine Intelligence* (pp. 123-144). IGI Global Scientific Publishing. Global. https://doi.org/10.4018/978-1-6684-7735-9.ch003

Jiang, Y., Tran, T. H., & Williams, L. (2023). Machine learning and mixed reality for smart aviation: Applications and challenges. *Journal of Air Transport Management, 111*, 102437 https://doi.org/10.1016/j.jairtraman.2023.102437

Karki, S., & Karki, S. (2023). Service Quality and Customer Satisfaction among Domestic Air Passengers in Nepal. *International Journal of Innovative Science, Engineering & Technology, 10*(9), 74–82. Retrieved from file:///C:/Users/Personal/Downloads/IJISET_V10_I9_06.pdf

Kim, H., So, K. K. F., Shin, S., & Li, J. (2025). Artificial intelligence in hospitality and tourism: Insights from industry practices, research literature, and expert opinions. *Journal of Hospitality & Tourism Research*, *49*(2), 366-385. https://doi.org/10.1177/10963480241229235

Koch, C., & Hartmann, M. (2023). Importance of the perceived quality of touchpoints for customer journey analysis–evidence from the B2B sector. *Electronic Commerce Research*, *23*(3), 1515-1538. https://doi.org/10.1007/s10660-022-09654-5

Kumar, V., Ashraf, A. R., & Nadeem, W. (2024). AI-powered marketing: What, where, and how?. *International journal of information management*, *77*, 102783. https://doi.org/10.1016/j.ijinfomgt.2024.102783

Majeed, M., Asare, C., Fatawu, A., & Abubakari, A. (2022). An analysis of the effects of customer satisfaction and engagement on social media on repurchase intention in the hospitality industry. *Cogent Business & Management*, *9*(1), 2028331. https://doi.org/10.1080/23311975.2022.2028331

Moses, A. A., Nair, S., & Karim, A. M. (2023). The Effect of Digital Applications on Customer Satisfaction in the Malaysian Passenger Airline Industry: Post- Pandemic Era. *International Journal of Academic Research in Economics and Management Sciences, 12*(4), 130–144. http://dx.doi.org/10.6007/IJAREMS/v12-i4/19661

Nazir, S., Khadim, S., Asadullah, M. A., & Syed, N. (2023). Exploring the influence of artificial intelligence technology on consumer repurchase intention: The mediation and moderation approach. *Technology in Society*, *72*, 102190. https://doi.org/10.1016/j.techsoc.2022.102190

Omeish, F., Al Khasawneh, M., & Khair, N. (2024). Investigating the impact of AI on improving customer experience through social media marketing: An analysis of Jordanian Millennials. *Computers in Human Behavior Reports*, *15*, 100464. https://doi.org/10.1016/j.chbr.2024.100464

Parbat, T., Benhal, R. S., & Jain, H. (2021, September). Understanding the customer perception using machine learning while booking flight tickets. In *2021 Third International Conference on Inventive Research in Computing Applications (ICIRCA)* (pp. 1011-1017). IEEE. https://doi.org/0.1109/ICIRCA51532.2021.9544550

Purnomo, Y. J. (2023). Digital Marketing Strategy to Increase Sales Conversion on E-commerce Platforms. *Journal of Contemporary Administration and Management, 1*(2), 54–62. https://doi.org/10.61100/adman.v1i2.23

Raed, H., Altaher, A. M., Barnat, S. E., Ahmad, H., Halim, M., Hammouri, Q., & Darawsheh, S. R. (2023). The effect of groups' reference, usefulness perception, and products quality on intention to buy and online shopping decision. *International Journal of Data and Network Science, 7*(3), 1361–1368. https://doi.org/10.5267/j.ijdns.2023.4.002

Reitsamer, B. F., Stokburger-Sauer, N. E., & Kuhnle, J. S. (2024). How and when effective customer journeys drive brand loyalty: the role of consumer-brand identification. *Journal of Service Management, 35*(6), 109-135. https://doi.org/10.1108/JOSM-08-2023-0374

Sapkota, A., & Adhikari, S. (2024). Factors Affecting the Repurchase Intention in E-Commerce in Kathmandu Valley: Higher Order Structural Analysis Using PLS-SEM. *Nepalese Journal of Insurance and Social Security, 7*(1), 84–93. https://doi.org/10.58665/njiss.64

Shiwakoti, N., Hu, Q., Pang, M. K., Cheung, T. M., Xu, Z., & Jiang, H. (2022). Passengers' Perceptions and Satisfaction with Digital Technology Adopted by Airlines during COVID-19 Pandemic. *Future Transportation, 2*(4), 988–1009. https://doi.org/10.3390/futuretransp2040055

Shrestha, S. K., Karki, T. B., Mahat, D., & Neupane, D. (2024). The role of social influence in mediating the relationship between relative advantage and purchase intentions for smartphones: A study in Kathmandu, Nepal. *International Journal of Management and Sustainability*, *13*(4), 935–948. https://doi.org/10.18488/11.v13i4.3957

Singgalen, Y. A. (2024). Hotel Customer Satisfaction: A Comprehensive Analysis of Perceived Cleanliness, Location, Service, and Value. *Journal of Business and Economics Research, 5*(3), 352−369. https://doi.org/10.47065/jbe.v5i3.6015

Singh, B. (2021). Predicting airline passengers' loyalty using artificial neural network theory. *Journal of air transport management*, *94*, 102080. https://doi.org/10.1016/j.jairtraman.2021.102080

Singh, P., & Singh, V. (2024). The power of AI: enhancing customer loyalty through satisfaction and efficiency. *Cogent Business & Management*, *11*(1), 2326107. https://doi.org/10.1080/23311975.2024.2326107

Sumitha, K., & Santhosh, K. (2023). Exploring the Role of Artificial Intelligence in Improving Passenger Satisfaction in the Airline Industry: An Analysis of Customer Feedback and AI-Driven Solutions. *International Journal of Advance and Applied Research, 10*(4), 174–180. https://zenodo.org/records/7827975

Sung, E. C., Bae, S., Han, D. I. D., & Kwon, O. (2021). Consumer engagement via interactive artificial intelligence and mixed reality. *International journal of information management*, *60*, 102382. https://doi.org/10.1016/j.ijinfomgt.2021.102382

Tang, L., Wang, X., & Kim, E. (2022). Predicting Conversion Rates in Online Hotel Bookings with Customer Reviews. *Journal of Theoretical and Applied Electronic Commerce Research*, *17*(4), 1264–1278. https://doi.org/10.3390/jtaer17040064

Vafaei-Zadeh, A., Nikbin, D., Wong, S. L., & Hanifah, H. (2025). Investigating factors influencing AI customer service adoption: An integrated model of stimulus–organism–response (SOR) and task-technology fit (TTF) theory. *Asia pacific journal of marketing and logistics*, *37*(6), 1465-1502. https://doi.org/10.1108/APJML-05-2024-0570

Wu, J., Wu, T., & Schlegelmilch, B. B. (2020). Seize the Day: How Online Retailers Should Respond to Positive Reviews. *Journal of Interactive Marketing*, *52*(1), 52-60. https://doi.org/10.1016/j.intmar.2020.04.008

Publisher's Note: CRIBFB stays neutral about jurisdictional claims in published maps and institutional affiliations.