THE INFLUENCE OF PERCEPTION OF EASE, USEFULNESS, ENJOYMENT, AND INTERACTION ON USER SATISFACTION AND PURCHASE INTENTION THROUGH THE CHATBOT "TANYA" ON THE TOKOPEDIA PLATFORM

Raihanatul Jennah[1]
Universitas Islam Indonesia, Yogyakarta, Indonesia
21311451@students.uii.ac.id

Arif Hartono[2*]
Universitas Islam Indonesia, Yogyakarta, Indonesia
arif.hartono@uii.ac.id **(corresponding)**

Abstract

The rapid growth of digital technology has accelerated the use of artificial intelligence in customer service, particularly through chatbots on e-commerce platforms. This study examines the effects of Perceived Ease of Use, Perceived Usefulness, Perceived Enjoyment, and Interaction on user Satisfaction, as well as their influence on Purchase Intention, with a focus on Tokopedia's "TANYA" chatbot. Using a quantitative approach, data were collected via an online survey from 195 users who had interacted with the chatbot and analyzed through Partial Least Squares Structural Equation Modeling (PLS-SEM). The results show that Perceived Ease of Use, Perceived Usefulness, and Interaction significantly and positively affect Satisfaction, while Perceived Enjoyment does not. Furthermore, both Satisfaction and Interaction have a significant impact on Purchase Intention. These findings offer practical insights for enhancing AI-based chatbot strategies to improve user satisfaction and stimulate purchasing behavior in e-commerce settings.

Keywords: Perceived Ease of Use, Perceived Usefulness, Perceived Enjoyment, Interaction, Satisfaction, Purchase Intention

INTRODUCTION

The rapid advancement of communication technology has fundamentally changed how businesses engage with consumers. One of the most transformative innovations is Artificial Intelligence (AI), which utilizes sophisticated algorithms to simulate human behavior and automate decision-making processes (Goel & Davies, 2019). As reported by McKinsey & Company (2024), AI adoption across industries has grown sharply from 55% to 72% in one year highlighting its expanding role, particularly in marketing. In this domain, AI enhances personalization, operational efficiency, and customer experience (Aditya et al., 2023). These benefits are especially evident in e-commerce, where AI-driven tools reshape shopping behavior through tailored product recommendations, automated assistance, and data-informed strategies (Bawack et al., 2022).

Artificial intelligence, particularly in the form of chatbots, has become a vital component in enhancing customer experience within the e-commerce sector. In Indonesia, where e-commerce users are projected to reach 244.67 million, platforms like Shopee, Tokopedia, and Lazada utilize chatbots to manage transactions and address customer inquiries efficiently (Li et al., 2023). Tokopedia's "TANYA" chatbot, for example, leverages natural language processing and data analytics to offer personalized product recommendations, resolve complaints, and assist with orders—thereby improving user satisfaction and fostering loyalty (Anggraeni & Anggara Sekti, 2024). Based on the Technology Acceptance Model (TAM), user adoption of chatbot technology is influenced by perceived usefulness, ease of use, and enjoyment (Davis, 1989; Davis et al., 1992). Perceived usefulness refers to the extent to which users believe the chatbot helps them accomplish tasks, while perceived enjoyment pertains to the pleasure derived from interacting with it. These perceptions significantly affect user satisfaction, which ultimately shapes purchase intentions and encourages repeat usage (Pereira et al., 2021; Pizzi et al., 2021; Samsir, 2020).

Although research on AI and chatbots has gained traction, limited studies explore the mediating role of user satisfaction in the relationship between AI-related perceptions and purchase intention particularly within the Indonesian e-commerce context. Moreover, few studies have focused specifically on Tokopedia's "TANYA" chatbot, despite its wide usage and integration with local consumer behavior. This research addresses that gap by examining how perceived ease of use, perceived usefulness, perceived enjoyment, and interaction with "TANYA" influence user satisfaction and, ultimately, purchase intention.

Thus, the objective of this study is to analyze the impact of interacting with Tokopedia's AI-powered chatbot "TANYA" on user satisfaction and purchase intention. By positioning user satisfaction as a mediating variable, this research contributes to a deeper understanding of how AI technologies influence consumer behavior in a rapidly evolving digital marketplace.

REVIEW OF LITERATURE

Theory of Planned Behavior (TPB)

The Theory of Planned Behavior (TPB), proposed by Ajzen (1991), expands on the Theory of Reasoned Action by adding perceived behavioral control to the traditional components of attitude and subjective norms. TPB asserts that behavioral intention—driven

by how favorably individuals evaluate a behavior, their perception of social expectations, and their perceived ability to perform it is the most direct predictor of actual behavior (Ajzen, 2020; Persada et al., 2021).

While TPB provides a useful framework to understand user behavior in structured decision-making environments, its explanatory power may be challenged in dynamic digital contexts like AI chatbots, where emotional impulses, interface design, and evolving technological norms can override deliberate intention. For example, interface responsiveness or perceived novelty may prompt users to act even in the absence of clear behavioral intention. Furthermore, TPB's limited capacity to integrate affective responses or spontaneous interactions suggests that complementary frameworks such as Technology Acceptance Model (TAM) or Uses and Gratifications Theory (UGT) could enrich its explanatory depth in the context of AI-driven tools.

Nonetheless, TPB remains relevant in framing user satisfaction and purchase intention, especially when aligned with variables such as perceived ease of use, usefulness, and enjoyment. These constructs influence how users form attitudes and evaluate their ability and willingness to use chatbot technologies in a commercial setting.

Perceived ease of use and Satisfaction

Perceived ease of use (PEOU), defined as the belief that a system is free of effort (Santoso & Zusrony, 2020), plays a pivotal role in shaping both attitudes and satisfaction. In Tokopedia's chatbot (TANYA), this encompasses intuitive interface design, seamless task execution, and minimal technical difficulty. Prior studies (Mahmudah & Kartikaningdyah, 2020; Suryatenggara & Dahlan, 2022; Marie et al., 2023a) affirm that high PEOU correlates with greater user satisfaction, particularly among digitally literate demographics such as Generation Z.

However, user satisfaction is not determined by ease alone. For instance, Tan & Lim (2023) found that while young users favored simple navigation, they also demanded speed, personalization, and reliability. Moreover, in contexts such as e-banking or AI customer support, studies (Goli et al., 2023; Almansour & Elkrghli, 2023) suggest that perceived security and trust may override ease of use in determining satisfaction. This underscores that PEOU, while crucial, interacts with other dimensions, which may differ across platforms and user segments:

H_1: Perceived ease of use of Tokopedia's chatbot (TANYA) has a positive effect on user satisfaction.

Perceived Enjoyment and Satisfaction

Perceived enjoyment, referring to the intrinsic pleasure derived from using a system, has emerged as a critical driver of satisfaction in interactive technologies (Maharani et al., 2024). In the chatbot context, this includes engaging conversational tone, responsiveness, and emotional appeal.

Empirical research highlights the centrality of enjoyment in fostering user loyalty, especially among younger users (Tan & Lim, 2023; Rouibah et al., 2021). However, the relationship is not uniform: Pozón-López et al. (2021) suggest that entertainment value must be balanced with functionality to sustain satisfaction over time. Notably, some users may prioritize goal-oriented outcomes over enjoyment, particularly in high-stakes purchases or for older demographics less responsive to emotional design.

Therefore, while enjoyment enhances satisfaction, its impact may vary by user intention, cultural orientation, or usage context dimensions underexplored in current chatbot research:

H_2: Perception of pleasure in using the Tokopedia chatbot (TANYA) has a positive effect on user satisfaction.

Perceived Usefulness and Satisfaction

Perceived usefulness (PU), the degree to which a technology improves task performance, has long been a core predictor of satisfaction in the Technology Acceptance Model (Eka Setyawati, 2020). In TANYA's case, this reflects its ability to efficiently answer queries, facilitate purchases, or solve user issues.

Studies (Almansour & Elkrghli, 2023; Maharani, 2024) consistently show that when users perceive clear utility, satisfaction and platform trust increase. However, conflicting evidence suggests PU may be mediated by expectation alignment: Goli et al. (2023) found that overly ambitious chatbot claims that fail to deliver can backfire, reducing satisfaction despite theoretical usefulness.

Moreover, novice users or those with low digital literacy may fail to realize the usefulness due to cognitive overload or lack of familiarity (Zahrotun Nisa et al., 2024). These nuances point to the need for adaptive design that calibrates usefulness to varying user capabilities:

H_3: The perceived usefulness of the Tokopedia chatbot (TANYA) has a positive effect on user satisfaction.

Interaction and Purchase Intention

User interaction defined by clarity, responsiveness, and relevance has been shown to directly shape purchase intention in AI-assisted commerce (Kusuma et al., 2023; Liu et al., 2025). High-quality interaction not only builds social presence but also mitigates uncertainty (Wang et al., 2021), reinforcing user confidence in decision-making.

In TANYA's case, interactive elements such as real-time assistance and context-aware dialogue are likely to enhance perceived control and trust, key antecedents of intention (Ajzen, 2020). Yet, studies like Song & Shin (2024) argue that over-automation or generic responses can reduce authenticity, thus dampening the effect of interaction quality on intention.

Furthermore, subjective norms, peer influence, or societal expectations can amplify or moderate the impact of chatbot interaction. This suggests the need to consider social context when assessing interaction efficacy:

H_4: User interaction with the Tokopedia chatbot (TANYA) has a positive effect on purchase intention.

User Satisfaction and Purchase Intention

User satisfaction is a well-established determinant of purchase intention, particularly in online shopping (Rifqi Ashfa & Ishak, 2023). Satisfied users tend to exhibit stronger loyalty, higher trust, and increased likelihood of repeat purchase (Basyar et al., 2016; Fitri et al., 2020).

In chatbot settings, Pizzi et al. (2021) emphasize that proactive features such as personalized suggestions are more effective than passive ones in converting satisfaction into behavioral outcomes. However, cultural expectations may moderate this relationship: in

some contexts, too much automation can be perceived as intrusive or impersonal, reducing satisfaction despite efficiency (Khalaf Alharthey, 2019).

In Tokopedia's chatbot scenario, satisfaction acts as a psychological bridge between technical experience and buying behavior. Yet, its effect may be enhanced or diminished based on user intent, trust history, and purchase complexity:

H_5: User satisfaction with the Tokopedia chatbot (TANYA) has a positive effect on purchase intention.

RESEARCH METHOD

This study employs a quantitative approach to examine purchase intention driven by chatbot interactions on Tokopedia, utilizing primary data collected via an online questionnaire. Respondents were selected through purposive sampling to ensure relevance, targeting Indonesian citizens who are Tokopedia users with prior experience using the platform's chatbot, "TANYA." Although this sampling method enhances focus on the research objectives, it may introduce bias that affects generalizability; therefore, the questionnaire was distributed across various online channels, including Tokopedia user groups and social media platforms, to capture a more diverse participant base. The research was conducted nationally without geographic limitations to reflect the broad accessibility of digital commerce in Indonesia. Key variables analyzed include perceived ease of use, perceived usefulness, perceived enjoyment, interaction quality, satisfaction, and purchase intention. All constructs were measured using a six-point Likert scale adapted from Taherdoost (2019), which excludes a neutral option to minimize central tendency bias and elicit more definitive responses. Participants were informed about the study's purpose, data confidentiality, and the voluntary nature of their participation before completing the survey.

Table 1.
Likert Scale Points

Scale Description	Point
Strongly Disagree (STS)	1
Disagree (TS)	2
Somewhat Disagree (ATS)	3
Somewhat agree (AS)	4
Agree (S)	5
Strongly Agree (ST)	6

This study targeted Tokopedia users in Indonesia who interacted with the "TANYA" chatbot. Using SEM sampling guidelines (Hair et al., 2021), a sample size of 150–300 was determined by multiplying 30 indicators by 5–10, and a pilot test with 40 respondents confirmed validity ($R > 0.3$) and reliability (Cronbach's Alpha > 0.6). Variable definitions were adapted from prior studies: perceived ease of use (Pereira et al., 2021), perceived usefulness (Goli et al., 2023; Tan & Lim, 2023), perceived enjoyment (Navarro et al., 2021), interaction quality (Mulyadi & Liauw, 2020; Siddik et al., 2024), satisfaction (Santini et al.,

2018), and purchase intention (Desyanata & Rivai, 2024). Data were analyzed using PLS-SEM via SmartPLS, suitable for complex, nonparametric models. Measurement model validity was ensured through factor loadings (≥ 0.5), AVE (> 0.5), and HTMT (< 0.85), while reliability was assessed using Cronbach's Alpha and Composite Reliability (> 0.6). The structural model was evaluated using VIF (< 5), path coefficients (±1), and R^2 (weak: 0.19–0.33; moderate: 0.33–0.67; strong: > 0.67), confirming that the model met the statistical requirements for hypothesis testing.

RESULTS AND DISCUSSION

Table 2.
Descriptive Profile of Respondents

Classification	Category	Frequency	Percentage (%)
Gender	Male	69	35.4
	Female	126	64.6
Age	<19 years	54	27.7
	20-22 years	95	48.7
	23-26 years	38	19.5
	27-30 years	3	1.5
	>30 years	5	2.6
Occupation	Student	150	76.9
	Private employee/Entrepreneur	34	17.4
	Government employee (PNS)	1	0.5
	State-owned enterprise employee (BUMN)	1	0.5
	Others	9	4.7
Monthly Income	≤ Rp 2,000,000	30	15.4
	Rp 2,000,001 - Rp 4,000,000	129	66.2
	Rp 4,000,001 - Rp 6,000,000	30	15.4
	Rp 6,000,001 - Rp 8,000,000	2	1.0
	Rp 8,000,001 - Rp 10,000,000	3	1.5
	≥ Rp 10,000,001	1	0.5
Experience Using Chatbot	First time	7	3.6
	Occasionally	117	60.0
	Often	68	34.9
	Very often	3	1.5
Purpose of Using Chatbot	Obtaining product information	125	64.1
	Problem-solving/complaints	159	81.5

Suggestions or product recommendations	40	20.5
Others	1	0.5

A substantial portion of the participants in this research were women (64.6%), predominantly within the age bracket of 20 to 22 years (48.7%), and the majority identified as students (76.9%). Most reported a monthly income between IDR 2,000,001 and IDR 4,000,000 (66.2%). Regarding their experience with Tokopedia's chatbot "TANYA," 60% used the service irregularly, while 34.9% used it frequently. The primary motivation for using the chatbot was to resolve issues or file complaints (81.5%), followed by seeking product information (64.1%) and obtaining product suggestions or recommendations (20.5%). These findings indicate that the most active users of Tokopedia's chatbot are young, educated individuals who tend to use the service sporadically, mainly to receive assistance in problem-solving.

Descriptive Analysis of Research Variables

A descriptive analysis of the variables Perceived Ease of Use, Perceived Enjoyment, Perceived Usefulness, Interaction, Satisfaction, and Purchase Intention was carried out based on the average score given by respondents to each item, with the lowest score of 1 and the highest of 6. The assessment interval of 0.833 divides the scores into six category classes, ranging from very low to extremely high, making it easier to interpret the level of respondents' responses to each variable in this study

Table 3.
Descriptive Scale Assessment Range of Variables

Rating Range	Description
1,00-1,83	Strongly Disagree
1,84-2,66	Disagree
2,67-3,49	Somewhat Disagree
3,50-4,32	Somewhat Agree
4,33-5,15	Agree
5,16-6,00	Strongly Agree

Derived from the author's analysis of original data (2025)

The descriptive analysis shows high respondent agreement across variables, especially in Ease of Use and Interaction, highlighting user preference for intuitive and engaging platforms. Interestingly, Perceived Enjoyment scored close to Usefulness, suggesting users value both function and enjoyment. This similarity raises questions—does enjoyment stand alone or reflect ease and utility? The uniformly high scores may also indicate a halo effect, pointing to the need for deeper research on whether enjoyment uniquely drives satisfaction or merely mirrors general approval.

Variable Perceived use of us

Table 4.
Descriptive Analysis of the Perceived Use of the Variable

Code	Question Item	Mean	Description
PEOU1	Interaction with the Tokopedia chatbot is clear and easy to understand.	4.86	Agree
PEOU2	It is easier to use the Tokopedia chatbot to find the products I want to buy.	4.85	Agree
PEOU3	The Tokopedia chatbot is easy to use	4.97	Agree
	Average Total	4,89	Agree

Derived from the author's analysis of original data (2025)

As illustrated in Table 4, respondents generally agreed with all items measuring the Perceived Ease of Use variable, with an overall average score of 4.89, categorized as Agree (4.33–5.15). This indicates that Tokopedia's chatbot (TANYA) is perceived as easy to use in terms of interface, navigation, and its ability to assist in information retrieval and transactions. Among the three indicators, PEOU3 "Tokopedia chatbot is easy to use" received the highest average score of 4.97, highlighting ease of use as the chatbot's main strength. Thus, the system provides an efficient and comfortable experience without technical obstacles, optimally supporting user interaction with digital services.

Variable Perceived Usefulness

Table 5.
Descriptive Analysis of the Perceived Use of the Variable.

Code	Question Item	Mean	Description
PU1	Tokopedia Chatbot is useful in my daily life.	4.92	Agree
PU2	Tokopedia Chatbot increases my productivity.	4.91	Agree
PU3	Tokopedia Chatbot helps me do many things more conveniently.	4.94	Agree
	Average Total	4.92	Agree

Derived from the author's analysis of original data (2025)

As illustrated in Table 5, the majority of respondents agreed with all items in the Perceived Usefulness variable, with an average score of 4.92, which falls into the Agree category (4.33–5.15). This indicates that Tokopedia's chatbot (TANYA) is perceived to provide tangible benefits, particularly in enhancing productivity, convenience, and supporting users' daily activities. Among the three indicators, PU3 "Tokopedia chatbot helps me accomplish many tasks more comfortably" received the highest average score of 4.94, highlighting comfort as the most prominent benefit. These findings demonstrate that the chatbot system delivers an effective and efficient digital service experience, facilitating users in various transactional and informational activities on the Tokopedia platform.

Perceived Enjoyment Variable

Table 6.
Descriptive Analysis of Perceived Enjoyment Variable.

Code	Question Item	Mean	Description
PP1	I like talking to the Tokopedia chatbot	4.83	Agree
PP2	It is fun and exciting to share conversations with the Tokopedia chatbot	4.91	Agree
PP3	The conversation with the Tokopedia chatbot is interesting.	4.94	Agree
PP4	I prefer to choose a product if it is recommended by the Tokopedia chatbot rather than if I choose it myself	4.87	Agree
	Average Total	4.89	Agree

Derived from the author's analysis of original data (2025)

As illustrated in Table 6, respondents generally agreed with all statements in the Perceived Enjoyment variable, as indicated by an average score of 4.89, falling within the "Agree" category (4.33–5.15). This suggests that users perceive Tokopedia's chatbot (TANYA) as providing a pleasant, engaging, and comfortable interaction experience. Among the four indicators, PP3 "The conversation with Tokopedia's chatbot is interesting" received the highest average score of 4.94, highlighting that conversational engagement is the most strongly felt source of enjoyment. This demonstrates that the system successfully delivers emotionally engaging interactions through both answering questions and offering product recommendations, thereby enhancing user comfort and satisfaction in digital interactions on Tokopedia.

Interaction Variables

Table 7.
Descriptive Analysis on Interaction Variables

Code	Question Item	Mean	Description
INT1	Tokopedia chatbot has the knowledge to answer my questions.	4.97	Agree
INT2	Tokopedia chatbot is always available to fulfill my requests.	4.94	Agree
INT3	Tokopedia chatbot is consistently polite to users.	4.94	Agree
	Average Total	4.95	Agree

Derived from the author's analysis of original data (2025)

As illustrated in Table 7, respondents overall agreed with all items in the Interaction variable, with an average score of 4.95, categorized as Agree (4.33–5.15). This indicates that Tokopedia's chatbot (TANYA) is perceived to provide responsive, polite interaction and effectively meets user needs during communication. Among the three indicators, INT1 "Tokopedia chatbot has the knowledge to answer my questions"—received the highest average score of 4.97, highlighting that the chatbot's ability to deliver relevant and accurate

answers is the most valued aspect of interaction. These findings suggest that the system offers an informative, 24/7, and pleasant digital communication experience, enhancing user comfort in transactions and service on the Tokopedia platform.

Satisfaction Variable

Table 8.
Descriptive Analysis on Satisfaction Variable

Code	Question Item	Mean	Description
SAT1	I am satisfied with the use of the Tokopedia chatbot	5.07	Agree
SAT2	I am satisfied with the Tokopedia chatbot	5.13	Agree
SAT3	Tokopedia chatbot does a good job.	5.01	Agree
SAT4	Tokopedia chatbot does what I expect.	4.88	Agree
SAT5	I am happy with the Tokopedia chatbot	4.97	Agree
SAT6	I am satisfied with the experience of talking to the Tokopedia chatbot	5.12	Agree
	Average Total	5.03	Agree

Derived from the author's analysis of original data (2025)

As illustrated in Table 8, respondents generally agreed with all items in the Satisfaction variable, with an average score of 5.03, falling within the "Agree" category (4.33–5.15). This indicates that users are satisfied with their experience using Tokopedia's chatbot (TANYA) in terms of service quality, ease of use, and interaction outcomes. Among the six indicators, SAT2—"I am satisfied with Tokopedia's chatbot"—had the highest average score of 5.13, highlighting overall satisfaction as the most dominant aspect. These findings suggest that the chatbot system successfully meets user expectations by providing effective service and a pleasant interaction experience, reinforcing a positive overall evaluation of Tokopedia's chatbot.

Purchase Intention Variable

Table 9.
Descriptive Analysis on Purchase Intention Variable

Code	Question Item	Mean	Description
PI1	Because of the Tokopedia chatbot, I will consider buying a product from this app.	5.05	Agree
PI2	Because of the Tokopedia chatbot, I will buy a product from this app	4.97	Agree
PI3	Because of the Tokopedia chatbot, I might make a purchase on this app in the future.	4.89	Agree
PI4	I will consider buying a product from this app using the Tokopedia chatbot.	4.87	Agree
PI5	I will consider my next product using the Tokopedia chatbot	5.01	Agree

Average Total	4.96	Agree

Derived from the author's analysis of original data (2025)

As illustrated in Table 9, respondents overall agreed with all items in the Purchase Intention variable, with an average score of 4.96, categorized as Agree (4.33–5.15). This indicates that the Tokopedia chatbot (TANYA) effectively encourages users' purchase intentions both currently and in the future. Among the five indicators, PI1 "Because of the Tokopedia chatbot, I will consider buying products from this app" had the highest average score of 5.05, showing that the intention to consider purchasing is the strongest form of intent influenced by the chatbot. These findings suggest that the Tokopedia chatbot effectively impacts consumer decisions from evaluation to purchase intention by providing informative, comfortable, and efficient interaction experiences.

Measurement Model Testing (Outer Model)
Convergent Validity Test Results

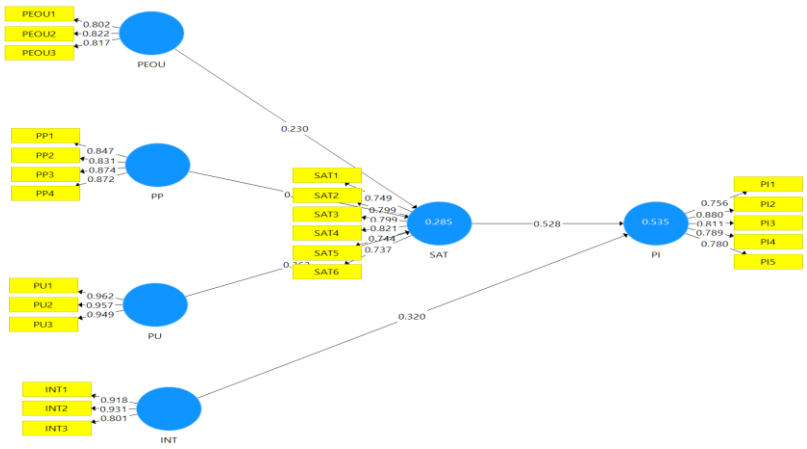

Figure 1
Convergent Validity Test Path Model

Table 10.
Outer Loading for Convergent Validity Test

	Research Variables					
	INT	**PEOU**	**PI**	**PP**	**PU**	**SAT**
INT1	0.918					
INT2	0.931					
INT3	0.801					
PEOU1		0.802				
PEOU2		0.822				
PEOU3		0.817				

PI1	0.756			
PI2	0.88			
PI3	0.811			
PI4	0.789			
PI5	0.78			
PP1		0.847		
PP2		0.831		
PP3		0.874		
PP4		0.872		
PU1			0.962	
PU2			0.957	
PU3			0.949	
SAT1				0.749
SAT2				0.799
SAT3				0.799
SAT4				0.821
SAT5				0.744
SAT6				0.737

Derived from the author's analysis of original data (2025)

Note: INT = Interaction; PEOU = Perceived Use of Us; PI = Purchase Intention; PP = Perceived Enjoyment; PP = Perceived Usefulness; SAT = Satisfaction.

As presented in Table 10, each item associated with the study's variables exhibits an outer loading value exceeding 0.70, confirming the validity of all indicators used. For instance, the Interaction construct (INT) is strongly reflected by its indicators, with one reaching a notably high outer loading of 0.931, demonstrating a robust correlation with the underlying construct. Consequently, the constructs fulfill the required validity thresholds and are deemed appropriate for further examination. Additionally, Table 10 provides a summary of the Average Variance Extracted (AVE) values to support the assessment of convergent validity.

Table 11.
AVE Value Measurement Results

Variable	AVE
Intention to Use	0.784
Perceived Ease of Use	0.662
Purchase Intention	0.647

Perceived Enjoyment	0.733
Perceived Usefulness	0.914
Satisfaction	0.601

Derived from the author's analysis of original data (2025)

As illustrated in Table 11, the Average Variance Extracted (AVE) values for all variables in the research model exceed the minimum threshold of 0.50, indicating that each construct meets the criteria for convergent validity. The Perceived Usefulness construct has the highest AVE of 0.914, demonstrating that its indicators are highly representative of the measured variable. The Interaction (0.784), Perceived Enjoyment (0.733), and Perceived Ease of Use (0.662) constructs also show strong AVE values, while Satisfaction, although having the lowest AVE at 0.601, remains valid as it surpasses the cutoff point. Overall, these results confirm that the variables effectively explain the variance of their indicators; thus, all constructs are valid in terms of convergent validity based on the AVE test.

Discriminant Validity Test Results

Table 12.
Square Root AVE Value of Discriminant Validity.

	INT	**PEOU**	**PI**	**PP**	**PU**	**SAT**
INT	0.885					
PEOU	0.437	0.814				
PI	0.560	0.412	0.804			
PP	0.583	0.699	0.569	0.856		
PU	0.577	0.549	0.387	0.680	0.956	
SAT	0.455	0.437	0.674	0.419	0.497	0.775

Derived from the author's analysis of original data (2025)

Note: INT = Interaction; PEOU = Perceived Use of Us; PI = Purchase Intention; PP = Perceived Enjoyment; PP = Perceived Usefulness; SAT = Satisfaction.

As illustrated in Table 12, the discriminant validity results using the Fornell-Larcker criterion show that all constructs meet the discriminant validity requirements, as the diagonal values representing the square root of the AVE for each construct (highlighted in bold) are greater than their correlations with other constructs in the same row and column. For example, the Interaction construct has a square root of AVE value of 0.885, which is higher than its correlations with Purchase Intention (0.560) and Perceived Usefulness (0.577). A similar pattern is observed for other constructs, including Perceived Usefulness, which has the highest value of 0.956, indicating very strong discriminant validity. Therefore, all variables are considered discriminantly valid. Subsequently, discriminant validity was further assessed using the Heterotrait-Monotrait (HTMT) ratio, with results presented in Table 13.

Table 13.
Heterotrait-monotrait Test Results

	INT	PEOU	PI	PP	PU	SAT
INT						
PEOU	0.542					
PI	0.65	0.511				
PP	0.666	0.861	0.654			
PU	0.631	0.65	0.427	0.744		
SAT	0.523	0.537	0.777	0.477	0.543	

Derived from the author's analysis of original data (2025)

Note: INT = Interaction; PEOU = Perceived Use of Us; PI = Purchase Intention; PP = Perceived Enjoyment; PP = Perceived Usefulness; SAT = Satisfaction

Table 12 displays the outcomes of the discriminant validity assessment using the Heterotrait-Monotrait Ratio (HTMT) approach, revealing that each construct's HTMT value is below the 0.85 threshold. This confirms that the results fulfill the required standards, indicating that all constructs in this research demonstrate acceptable discriminant validity.

Reliability Test Results

Table 14.
Reliability Test Results of Variables

Variabel	Cronbach's Alpha	Composite Reliability (CR)
Interaction	0.859	0.915
Perceived Ease of Use	0.745	0.855
Purchase Intention	0.862	0.901
Perceived Enjoyment	0.878	0.916
Perceived Usefulness	0.953	0.970
Satisfaction	0.867	0.900

Derived from the author's analysis of original data (2025)

Table 14 indicates that every variable demonstrates Cronbach's Alpha and Composite Reliability (CR) scores above the 0.6 threshold, aligning with the reliability standards set for this research. As such, the outcomes of the reliability assessment are deemed satisfactory. Elevated values of Cronbach's Alpha and CR reflect enhanced consistency and dependability of the measurement tools employed. For example, the Perceived Usefulness variable shows Cronbach's Alpha and CR values exceeding 0.9, which strongly supports its reliability. Hence, all variables can be regarded as reliable.

Structural Model Testing (Inner Model)

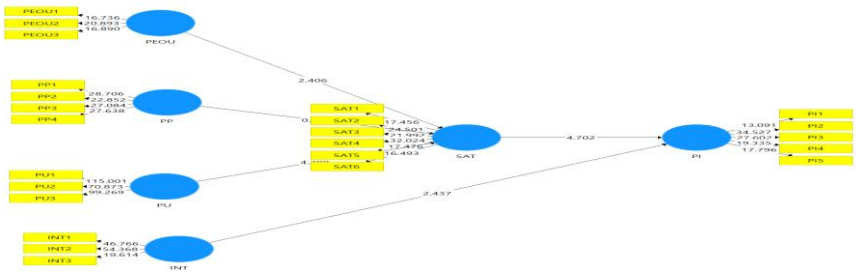

Figure 2
Bootstrapping Structural Model Test
Source: Primary Data (2025)

Collinearity Test Results

Table 15.
Collinearity Test Results

	INT	PEOU	PI	PP	PU	SAT
INT			1.261			
PEOU						1.996
PI						
PP						2.595
PU						1.899
SAT			1.261			

Derived from the author's analysis of original data (2025)

Table 15 reveals that all variables have Cronbach's Alpha and Composite Reliability (CR) scores surpassing the minimum criterion of 0.6, which complies with the reliability requirements established for this study. Therefore, the reliability test results are considered acceptable. Higher Cronbach's Alpha and CR values indicate greater internal consistency and reliability of the measurement instruments utilized. For instance, the Perceived Usefulness variable records Cronbach's Alpha and CR values above 0.9, providing strong evidence of its reliability. Consequently, every variable in this study can be classified as reliable.

Path Coefficient Test Results

Table 16.
Path Coefficient Test Results

Variable Relationship	Path Coefficient (β)	Description
INT -> PI	0.320	Positive
PEOU -> SAT	0.230	Positive
PP -> SAT	0.011	Positive

PU -> SAT	0.363	Positive
SAT -> PI	0.528	Positive

Derived from the author's analysis of original data (2025)

The path coefficient analysis in Table 16 reveals that all variable relationships exhibit positive effects, as reflected by the positive β values, indicating that enhancements in the independent variables contribute to increases in the dependent variables. Specifically, the Tokopedia chatbot (TANYA) serves not only as a technical feature but also as a digital agent that actively shapes user experience by facilitating information retrieval, transaction processing, and personalized product recommendations. The strong path coefficient between Satisfaction and Purchase Intention (β = 0.528) highlights that greater user satisfaction with TANYA significantly boosts purchase intention. Furthermore, the positive influence of Interaction on Purchase Intention (β = 0.320) underscores the importance of chatbot responsiveness and the quality of user interaction in fostering user confidence and driving purchasing decisions.

Determination (R-Square) Test

Table 17.
Determination (R-Square) Test Results

Variable	R Square	R Square Adjusted
Purchase Intention	0.535	0.531
Satisfaction	0.285	0.274

Derived from the author's analysis of original data (2025)

As illustrated in Table 17, the R Square value for the Purchase Intention variable is 0.535 with R Square Adjusted 0.531, indicating that 53.5% of Purchase Intention variability can be explained by the independent variables in the model, indicating that the predictive power of the model is moderate. Meanwhile, for the Satisfaction variable, R Square is 0.285 and R Square Adjusted is 0.274, indicating that only 28.5% of Satisfaction variability can be explained by the independent variables, so the model's ability to predict Satisfaction is weak to moderate. Overall, these results confirm that the model has adequate explanatory power for Purchase Intention, but further strengthening is needed for the Satisfaction variable.

Q-Square Test Results

Table 18.
Q-Square Test Results

Variable	Q-Square (Q^2) predict
Purchase Intention	0.336
Satisfaction	0.162

Derived from the author's analysis of original data (2025)

Based on the results of the Q-Square test in Table 18, both endogenous variables, namely Purchase Intention and Satisfaction, show a Q^2 value greater than 0, indicating that both have predictive ability. Purchase Intention has a Q^2 value of 0.336, indicating a strong

prediction by the independent variables in the model, while Satisfaction with a Q^2 value of 0.162, although lower, still shows predictive ability. Thus, this research model is proven to be predictive and has an adequate fit to the data used.

Hypothesis Test Results

Table 19.
Hypothesis Test Results

Hypothesis	t-value	p-value	Conclusion
PEOU → SAT	2.406	0.016	H1 is accepted and significant.
PP → SAT	0.090	0.928	H2 is rejected and not significant.
PU → SAT	4.288	0.000	H3 is accepted and significant
INT → PI	2.437	0.015	H4 is accepted and significant
SAT → PI	4.702	0.000	H5 is accepted and significant

Derived from the author's analysis of original data (2025)

The hypothesis testing results indicate that all direct relationships in the research model are statistically significant and supported, except for H2. Specifically, Perceived Enjoyment does not significantly influence Satisfaction ($t = 0.090$; $p = 0.928$), suggesting that users' enjoyment when interacting with Tokopedia's chatbot does not directly impact their satisfaction. In contrast, H1 and H3, which test the effects of Perceived Ease of Use and Perceived Usefulness on Satisfaction, are supported ($t = 2.406$ and 4.288; $p < 0.05$), highlighting that the chatbot's ease of use and functional value enhance user satisfaction. Additionally, H4 confirms that Interaction Quality positively affects Purchase Intention ($t = 2.437$; $p = 0.015$), implying that better interaction experiences motivate users to purchase. Finally, H5 is strongly supported, showing that Satisfaction significantly boosts Purchase Intention ($t = 4.702$; $p = 0.000$), affirming satisfaction as a key determinant in users' buying behavior on Tokopedia.

Positive Influence of Perceived Ease of Use on Satisfaction

The findings demonstrate that Perceived Ease of Use has a significant positive effect on Satisfaction, suggesting that the simpler and more intuitive a technology is, the more satisfied users tend to be. Tokopedia's chatbot "TANYA" exemplifies this, as its user-friendly interface, smooth navigation, and responsive system contribute to a seamless interaction that enhances user satisfaction. These results align with prior research emphasizing that ease of use is a key determinant of satisfaction in digital platforms (Mahmudah & Kartikaningdyah, 2020; Marie et al., 2023a; Suryatenggara & Dahlan, 2022). Marie et al. (2023b) highlighted that users are more satisfied when tasks can be completed efficiently through easy-to-use systems, while Maharani (2024) confirmed that meeting performance expectations through usability contributes significantly to user contentment. In this study, tech-savvy users with high expectations toward digital services particularly appreciated the accessible and interactive features of "TANYA," reinforcing that the easier the system is to operate, the more likely it is to deliver a satisfying and engaging experience.

Negative Influence of Perceived Enjoyment on Satisfaction

The findings of this study reveal that perceived enjoyment does not significantly influence user satisfaction in the context of the "TANYA" chatbot, indicating that the pleasurable experience of using the chatbot is insufficient to enhance overall satisfaction. This contrasts with previous studies in tourism and hospitality, such as Pereira et al. (2021), which emphasized the positive role of enjoyment in boosting user satisfaction. In e-commerce settings, however, research by Tan and Lim (2023) found that system quality, information quality, and perceived usefulness are stronger predictors of satisfaction, while enjoyment has little impact possibly due to risk perception and low trust in chatbot services. Similarly, Gümüş and Çark (2021) noted that although enjoyment enhances the user experience, it does not consistently translate into continued use or satisfaction, especially among users who prioritize human interaction or have specific service expectations. These findings suggest that in the e-commerce context, functional utility, trust, and interaction preferences outweigh entertainment value in shaping user satisfaction.

Positive Influence between Perceived Usefulness and Satisfaction

The study's findings reveal that Perceived Usefulness significantly and positively affects user Satisfaction with Tokopedia's chatbot (TANYA). This aligns with prior research demonstrating that users' belief in a technology's ability to enhance performance or simplify task completion directly boosts satisfaction in digital services (Almansour & Elkrghli, 2023; Lee et al., 2022). Specifically, Perceived Usefulness reflects users' assessment of how effectively the technology supports their goals (Setyawati, 2020). In the case of TANYA, the chatbot is seen as an efficient and effective tool for answering inquiries, resolving issues, and facilitating transactions, thereby strengthening positive perceptions of its utility. Consequently, the sense of usefulness is crucial in elevating user satisfaction, particularly when the system delivers convenience, speed, and clarity throughout the transaction and information support process.

The Influence of Interaction on Purchase Intention

The findings of this study reveal that Interaction has a positive and significant influence on Purchase Intention, indicating that the more intense and high-quality the interaction between users and Tokopedia's chatbot (TANYA), the higher the likelihood of purchase. Effective interaction such as accurate responses, relevant product suggestions, and quick assistance enhances users' confidence and perceived support, encouraging them to complete transactions. This result aligns with previous studies by Kusuma et al. (2023) and Song & Shin (2024), who emphasized the role of user-system interaction in shaping purchasing decisions. Similarly, Dash et al. (2021) and Maharsi et al. (2021) noted that enjoyable and informative chatbot engagement increases user trust and comfort in online shopping. Wang et al. (2021) further explained that such interactions reduce uncertainty and strengthen consumer belief that their expectations will be met. Thus, a smooth, fast, and satisfying communication experience with TANYA significantly strengthens user trust, which is a key driver of purchasing behavior on Tokopedia.

Positive Influence of Satisfaction on Purchase Intention

The findings of this study reveal that user satisfaction has a positive and significant effect on purchase intention, indicating that the more satisfied users are with Tokopedia's chatbot (TANYA), the more likely they are to make a purchase. Satisfaction reflects users' overall evaluation of their experience, encompassing ease of use, information accuracy, and interaction quality. When the chatbot delivers fast, relevant, and effective assistance, it enhances users' perception of service quality, thereby increasing their trust and confidence in the platform. This aligns with previous research by Dash et al. (2021) and Maharsi et al. (2021), which found that satisfaction with a digital service significantly drives purchase decisions. In Tokopedia's context, satisfaction not only facilitates a smoother shopping process but also strengthens user motivation, trust, and loyalty, ultimately encouraging repeat purchases.

CONCLUSION

This study found that perceived ease of use, usefulness, and interaction significantly influence both user satisfaction and purchase intention when using Tokopedia's chatbot "TANYA," while perceived enjoyment has no notable effect on satisfaction. User satisfaction also acts as a key mediator, linking user perceptions to their buying decisions. These results highlight the importance of functional and interactive features over hedonic ones in chatbot design. Practical implications suggest improving chatbot accessibility, clarity, speed, and interactivity to enhance user experience and conversion rates. Despite its contributions, the study is limited by its young, student-dominated sample, focus on a single platform, and cross-sectional design.

REFERENCES

Adam, M., Wessel, M., & Benlian, A. (2021). Ai-Based Chatbots In Customer Service And Their Effects On User Compliance. Electronic Markets, 31(2), 427–445. Https://Doi.Org/10.1007/S12525-020-00414-7

Aditya, A., Risanto, P., Fahmy, D., Saputri, R., Budi, H., Abdurrasyid, H., Ridlo, R., Rima, A.-H., Wijayanti, R., Moh, I., Johni, S., Arief, P., & Rukmana, Y. (2023). Artificial Intelligence Marketing Get Press Indonesia.

Afianti, Y., Ramadhani, N. A., Rahmi, A. R., & Madiistriyanto, H. (2023). Pemasaran Digital Efektif Dalam Platform Tokopedia: Studi Kasus. 2(7). Http://Www.Topbrand-Award.Com/Top-Brand-Survey/Survey

Ajzen, I. (2020). The Theory Of Planned Behavior: Frequently Asked Questions. Human Behavior And Emerging Technologies. Https://Doi.Org/10.1002/Hbe2.195

Almansour, B. Y., & Elkrghli, S. (2023). Factors Influencing Customer Satisfaction On E-Banking Services: A Study Of Libyan Banks. International Journal On Technology, Innovation, And Management (Ijtim), 3(1), 1. Https://Doi.Org/10.54489/Ijtim.V3i1.211

Alshammari, S. H., & Babu, E. (2025). The Mediating Role Of Satisfaction In The Relationship Between Perceived Usefulness, Perceived Ease Of Use And Students' Behavioural Intention To Use Chatgpt. Scientific Reports, 15(1).

Https://Doi.Org/10.1038/S41598-025-91634-4

Anggraeni, S., & Anggara Sekti, B. (2024). Pemanfaatan Kecerdasan Buatan Dalam Pengembangan Pasar E-Commerce: Studi Kasus Chatbot Dan Penerapan Ai Dalam Diagnostik Penuaan.

Ashfaq, M., Yun, J., Yu, S., & Loureiro, S. M. C. (2020). I, Chatbot: Modeling The Determinants Of Users' Satisfaction And Continuance Intention Of Ai-Powered Service Agents. Telematics And Informatics, 54. Https://Doi.Org/10.1016/J.Tele.2020.101473

Hamzah, A. A. Bin, & Shamsudin, M. F. (2020). Why Customer Satisfaction Is Important To Business? (Vol. 2, Issue 1). Www.Jusst.Abrn.Asia

Azzuri Maharani, H., Studi Manajemen, P., & Teknologi Dan Bisnis Ahmad Dahlan Lamongan, I. (2024). Influencer Marketing Dan Direct Marketing Dengan Moderasi Interaksi Sosial Pada Niat Pembelian Kembali Di Live Streaming Tiktok (Studi Pada Mahasiswa Institut Teknologi Dan Bisnis Ahmad Dahlan Lamongan). Www.Ekrutmedia.Com,

Basyar, K., Jurusan Manajemen, S., & Ekonomi, F. (2016). Dengan Kepuasan Sebagai Variabel Intervening. Www.Jpnn.Com

Bawack, R. E., Wamba, S. F., Carillo, K. D. A., & Akter, S. (2022). Artificial Intelligence In E-Commerce: A Bibliometric Study And Literature Review. Electronic Markets, 32(1), 297–338. Https://Doi.Org/10.1007/S12525-022-00537-Z

Dash, G., Kiefer, K., & Paul, J. (2021). Marketing-To-Millennials: Marketing 4.0, Customer Satisfaction And Purchase Intention. Journal Of Business Research, 122, 608–620. Https://Doi.Org/10.1016/J.Jbusres.2020.10.016

Faiqul, T., Basuki, H., & Febrianta, Y. (2024). Pengaruh Empathy Response, Anonymity, Dan Customization Terhadap Customer Trust Pada Chatbot Customer Service Tokopedia. 5, 4054.

Filieri, R. (2016). What Makes An Online Consumer Review Trustworthy? Annals Of Tourism Research, 58, 46–64. Https://Doi.Org/Https://Doi.Org/10.1016/J.Annals.2015.12.019

Fitri, S., Ratri, C., Hidayat, A., Manajemen, J., & Ekonomi, F. (2020). Anteseden Kepuasan Pelanggan Terhadap Niat Beli Ulang. Http://Journal.Stimykpn.Ac.Id/Index.Php/Tb

Ghozali, I. (2018). Aplikasi Analisis Multivariete Spss 25. Semarang: Universitas

Hanif, R., Astuti, W., & Sunardi, S. (2018). The Mediating Role Of Customer Satisfaction In The Effect Of Perceived Enjoyment On Customer Trust In Online Investment Application.

Jailani, Ms., Jeka, F., & Negeri Sulthan Thaha Saifuddin Jambi, U. (2023). Populasi Dan Sampling (Kuantitatif), Serta Pemilihan Informan Kunci (Kualitatif) Dalam Pendekatan

Leni Masnidar Nasution. (2017). Statistik Deskriptif.

Li, J., Wu, L., Qi, J., Zhang, Y., Wu, Z., & Hu, S. (2023). Determinants Affecting Consumer Trust In Communication With Ai Chatbots: The Moderating Effect Of Privacy Concerns. Journal Of Organizational And End User Computing, 35(1). Https://Doi.Org/10.4018/Joeuc.328089

Liu, H., Zhang, P., Cheng, H., Hasan, N., & Chiong, R. (2025). Impact Of Ai-Generated Virtual Streamer Interaction On Consumer Purchase Intention: A Focus On Social

Presence And Perceived Value. Journal Of Retailing And Consumer Services, 85. Https://Doi.Org/10.1016/J.Jretconser.2025.104290

Londa, D. R., Worang, F. G., Arie, F. V, Londa, D. R., Worang, F. G., & Arie, F. V. (2022). The Influence Of Perceived Credibility, Perceived Ease Of Use, And Perceived Usefulness Toward Customer Satisfaction In Using Bsgtouch. Jurnal Emba, 10(4), 934–945.

Maghfiroh, N., & Palupi, G. S. (2023). Analisis Pengaruh Variabel Keterjangkauan Teknologi Informasi Dalam Live Streaming Shopping Tiktok Pada Minat Pembelian. In Jeisbi (Vol. 04).

Natalia Ririn Furadantin. (2018). Analisis Data Menggunakan Aplikasi Smartpls V.3.2.7.

Navarro, M. M., Prasetyo, Y. T., Young, M. N., Nadlifatin, R., & Redi, A. A. N. P. (2021). The Perceived Satisfaction In Utilizing Learning Management Systems Among Engineering Students During The Covid-19 Pandemic: Integrating Task Technology Fit And Extended Technology Acceptance Model. Sustainability (Switzerland), 13(19). Https://Doi.Org/10.3390/Su131910669

Peña-García, N., Gil-Saura, I., Rodríguez-Orejuela, A., & Siqueira-Junior, J. R. (2020). Purchase Intention And Purchase Behavior Online: A Cross-Cultural Approach. Heliyon, 6(6). Https://Doi.Org/10.1016/J.Heliyon.2020.E04284

Pereira, T., Limberger, D. P. F., & Ardigó, D. C. M. (2021). The Moderating Effect Of The Need For Interaction With A Service Employee On Purchase Intention In Chatbots. In Telematics And Informatics Reports (Vols. 1–4). Elsevier B.V. Https://Doi.Org/10.1016/J.Teler.2022.100003

Rifqi Ashfa, M., & Ishak, A. (2023). Pengaruh Kualitas Layanan Dan Kepuasan Pelanggan Terhadap Niat Beli Dan Pembelian Sebenarnya Tokopedia (Vol. 02, Issue 05). Https://Journal.Uii.Ac.Id/Selma/Index

Sekaran, U., & Bougie Roger. (2016). Research Methods For Businee (7th Ed.). Www.Wileypluslearningspace.Com

Setyawati, R. E. (2020). Pengaruh Perceived Usefulness, Perceived Ease Of Use Terhadap Behavioral Intention To Use Dengan Atittude Towards Using Sebagai Variabel Intervening (Studi Kasus Pada Gopay Dikota Yogyakarta). In Jurnal Ekobis Dewantara (Vol. 3, Issue 1).

Tan, P. K., & Lim, C. M. (2023). Factors That Affect User Satisfaction Of Using E-Commerce Chatbot: A Study On Generation Z. International Journal Of Business And Technology Management. Https://Doi.Org/10.55057/Ijbtm.2023.5.1.23

Tokopedia. (2024). Siapa Itu Tanya ? Https://Www.Tokopedia.Com/Help/Article/Siapa-Itu-Tanya.

Wahyuningtyas, Y. P., & Widiastuti, D. A. (2015). Adminjurnal,+22-30. Jurnal Kajian Bisnis, 23(2), 112–120.

Wang, M., Sun, L. L., & Hou, J. D. (2021). How Emotional Interaction Affects Purchase Intention In Social Commerce: The Role Of Perceived Usefulness And Product Type. Psychology Research And Behavior Management, 14, 467–481. Https://Doi.Org/10.2147/Prbm.S301286

Wirtz, J., Patterson, P. G., Kunz, W. H., Gruber, T., Lu, V. N., Paluch, S., & Martins, A. (2018). Brave New World: Service Robots In The Frontline. Journal Of Service Management, 29(5), 907–931. Https://Doi.Org/10.1108/Josm-04-2018-0119

Yehuda, M., & Hadiprawoto, T. R. (2024). Analisis Pengaruh Strategi Marketing 4.0 Pada Intensi Pembelian Dan Peran Moderasi Kategori Produk. Journal Of Economic, Bussines And Accounting (Costing). Https://Api.Semanticscholar.Org/Corpusid:271782683

Yin, J., & Qiu, X. (2021). Influence Mechanism Research On The Ai Marketing Technology Of Online Shopping Platform On Consumers' Purchase Intention-Structural Equation Model Based On Flow Experience.

Yun, J., & Park, J. (2022). The Effects Of Chatbot Service Recovery With Emotion Words On Customer Satisfaction, Repurchase Intention, And Positive Word-Of-Mouth. Frontiers In Psychology, 13. Https://Doi.Org/10.3389/Fpsyg.2022.922503

Zahrotun Nisa, F., Rahmadani, A., Dwi Febrianti, G., & Nurlyn Ajrina, N. (2024). Prosiding Seminar Nasional Teknologi Dan Sistem Informasi (Sitasi) 2024 Surabaya