Whether AI-based Chatbots Influence Destination Visit Intentions?

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Abstract. This study set out to investigate the impact of AI-based chatbot recommendations on destination visit intention. To achieve this objective, we conducted a survey using a sample of 116 individuals and analyzed the data using IBM SPSS-25 software. Our findings indicate that the AI-based chatbot recommendation has a positive and statistically significant effect on destination visit intention. These results are in line with previous research, which suggests that AI can serve as an alternative to consumers seeking information about service products, such as tourism. This study contributes to the development of tourist behavior theory in the field of tourism destination marketing by providing empirical evidence of the influence of AI-based chatbot recommendations on tourists' visiting intentions, adding to the body of knowledge on the topic.

Keywords: Artificial Intelligence, ChatGPT, Chatbot, Destination Marketing, Visit Intention.

1 Introduction

Artificial Intelligence (AI) technology is rapidly growing [1, 2], with businesses increasingly relying on chatbots to communicate directly with customers and develop personal relationships [3]. This trend is particularly evident in the travel and tourism industry, where tourists often seek information and recommendations about destinations during their inspiration search and trip planning stages [4, 5, 6, 7].

A chatbot is an internet-based computer software that mimics conversations with real people using natural language text or voice methods [8]. It can handle various text-based demands, including answering basic queries and performing complex tasks like writing thank-you notes and assisting in productivity-related conversations. Therefore, AI-based chatbots [9] can provide online information and recommendations for potential tourists, making it easier for them to plan trips to tourism destinations [10, 11].

Research on AI-based chatbots and recommendation systems has shown that they are just as effective as human experts in providing suggestions to online consumers [12, 13]. However, research on AI-based chatbots related to visiting decisions or visit intentions is limited. The literature review conducted on AI-based chatbots related to

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the intention to visit a tourist destination is limited to how people adopt AI-based chatbot technology in planning tourist trips [14].

This research seeks to investigate the capacity of AI-based chatbots to serve as a source of information for potential destination visitors and to examine the influence of such interactions on visit intention. The study is focused on tourists who have utilized AI-based chatbots, such as ChatGPT, Bing Chat, Replica, and Mitsuku, as references or sources of recommendations.

2 Method

This research utilized a survey research design to conduct explanatory analysis and examine the influence of AI-based chatbot recommendations on destinations visit intention in Indonesia. The study population comprised individuals who have used AI-based chatbots, including ChatGPT, Bing Chat, Replica, and Mitsuku, and were surveyed using nonprobability sampling with convenience sampling techniques. The survey instrument employed a questionnaire, with AI-based chatbot recommendation items adapted from [13] and intention to visit a destination items adapted from [15] and [16]. The questionnaire used a 5-point Likert scale measurement, and all responses were analyzed using simple linear regression techniques with SPSS 25 software. A total of 116 samples were collected, and the survey showed a good level of validity and reliability, with Sig = 0.000 and $\alpha = 0.870$ for the AI-based chatbot recommendation items and Sig = 0.000 and $\alpha = 0.902$ for the intention to visit a destination items.

3 Result and Discussion

Coefficients Analysis

The results of a coefficients analysis between AI-based Chatbot Recommendation and Destination Visit Intention variables shown in Table 1 as follow:

Table 1. Coefficients Analysis.

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	7.739	1.539		5.031	.000
AI-based Chatbot Recommendation	.899	.259	.310	3.468	.001

a. Dependent Variable: Destination Visit Intention

From table 1, the constant value (a) is 7,739, while the regression coefficient (b) is 0,899. Then the simple regression equation can be written as follows:

$Y = 7.739 + 0.899X + e$

The equation suggests that if there is no AI-based Chatbot Recommendation, the Destination Visit Intention value will be 7,739. The presence of AI-based Chatbot

Recommendation has a positive impact on Destination Visit Intention, with an increase of 0.899 for every addition of AI-based Chatbot Recommendation. Specifically, for every unit increase in AI-based Chatbot Recommendation, Destination Visit Intention will increase by 0.899.

Determination Analysis

The results of Determination coefficient analysis between AI-based Chatbot Recommendation and Destination Visit Intention variables shown in Table 2 as follow:

Table 2. Determination Analysis

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.310[a]	.096	.088	3.190478071565081
a. Predictors: (Constant), AI-based Chatbot Recommendation				

From table 2 it is obtained that the coefficient of determination (R Square) is 0.96 which means that the effect of the independent variable (AI-based Chatbot Recommendation) on the dependent variable (Destination Visit Intention) is 96% and the remaining 4% is caused by other factors.

Hypothesis Testing

The following table 3 presents the outcomes of testing the hypothesis regarding the positive relationship between the AI-based Chatbot Recommendation and Destination Visit Intention.

Table 3. Hypothesis Testing

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	122.413	1	122.413	12.026	.001[b]
	Residual	1150.244	113	10.179		
	Total	1272.657	114			

a. Dependent Variable: Destination Visit Intention
b. Predictors: (Constant), AI-based Chatbot Recommendation

From the table 3 above, the value of Sig (0.001) or <0.05 is obtained, then H0 is rejected. From these results, it can be concluded that H0 is rejected and H1 is accepted. From the results of the coefficients analysis, a positive value of 0.899 was found for the AI-based Chatbot Recommendation variable (see table 3), so that it can be concluded that there is a positive influence between AI-based Chatbot Recommendation on Destination Visit Intention.

3.1 Discussion

The objective of this investigation is to examine the impact of AI-based chatbot recommendations on destination visit intention. This study provides empirical evidence on how prospective tourists make decisions regarding tourism destinations that are influenced by recommendations from AI-based chatbots.

Our findings indicate that the AI-based chatbot recommendation is a highly influential factor (96%) compared to other factors not examined in this study in determining tourists' decision to visit a tourism destination and has a substantial positive effect with a statistically significant coefficient of 0.899.

Our findings have confirmed that what influences potential tourists to visit a tourism destination is not only derived from human recommendations that have been described by [17, 18, 19, 20, 21, 22]. However, it can also be influenced by robots (in this case chatbots), so our findings have confirmed [12] and [11] which stated that AI, such as chatbots can be an alternative to potential consumers in seeking information before buying a service product like a tourism product.

The results of this study have provided theoretical and practical implications for researchers and managers of tourism destinations. The theoretical implication is that our findings can provide additional factors that can determine potential tourists to intend to visit a tourism destination other than the factors that have been mentioned so far by several experts such as internal factors, external factors, situational factors, and marketing-mix factors of tourism destinations [23, 24, 25, 26,] in the information search stage about tourism destinations. In addition, our findings have added to the sources of information that are considered by tourists in determining and intending to visit tourism destination other than: search engines [27, 28, 29, 30], social media and user-generated content (UGC) [31, 32, 33].

Our research findings can serve as a valuable reference for managers of tourism destinations looking to better understand tourist behavior, particularly during the information search stage. It is crucial for managers to recognize that the sources of information and factors influencing their target market's intention to visit a tourism destination are increasingly influenced by AI-based chatbot recommendations. As such, managers must have a strong internet presence to ensure they are captured by AI chatbots and can have their destination recommended to potential visitors.

4 Conclusion

This research aims to explore the connection between AI-based chatbots and tourist behavior in the realm of destination marketing. The results demonstrate that recommendations provided by AI-based chatbots have a significant and positive impact on a tourist's decision to visit a destination. Further research on this topic is required, and it is expected to provide new understanding into the factors that influence destination visit intentions, particularly those influenced by AI-based chatbot recommendations. However, the study has some limitations, such as a small sample size, and was conducted using a cross-sectional survey. Future studies should employ longitudinal sur-

veys and other techniques, such as factor analysis, structural equation modeling, and others, to broaden the scope of the findings.

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