

# An Artificial Intelligence Driven Destination Branding and Online Reputation Management Influencing Tourists Revisit Intention in Saudi Arabia

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**Abstract:** The rapid advancement of artificial intelligence (AI) has significantly transformed the tourism industry by reshaping destination branding strategies and online reputation management practices. AI-driven travel platforms, review systems, and recommendation engines increasingly influence how tourists perceive destinations and make travel decisions. This study investigates the role of AI-based destination branding and online reputation management in shaping tourists' revisit intentions, using Madinah as an empirical case. A quantitative research design was adopted, and data were collected through a structured AI-based questionnaire administered to 150 visitors to Madinah. The survey measured tourists' perceptions of AI-driven destination branding features, AI-enabled online reputation management tools, and revisit intention. The collected data were analysed using SPSS, employing systematic statistical framework incorporating reliability analysis, descriptive statistics, correlation analysis, and regression modelling to evaluate the relationships among key constructs. Mathematical representations were used to formalize construct measurement and model specification. The study offers valuable insights for tourism authorities, destination marketers, and platform developers by emphasizing the strategic importance of AI tools in enhancing destination image and encouraging repeat visits. It also contributes to academic literature by providing empirical evidence from an emerging tourism market, supporting future research on AI-driven tourism experiences. This research is among the early empirical studies to examine AI's role in destination branding and online reputation management in influencing revisit intentions within the Saudi Arabian tourism context.

**Keywords:** Destination Branding, Madinah Tourism, Reputation Management, Revisit Intention, Smart Tourism.

## 1 Introduction

AI technologies have revolutionized branding strategies and reputation management approaches in the tourism industry through their fast adoption processes. AI algorithms that recommend destinations, analyze reviews automatically, and personalize the experience of tourists are now increasingly used in tourism for decision making processes related to tourists' destination perceptions [1].

Reputation and destination image have emerged as factors that shape tourist trust, satisfaction, and the tendency to revisit certain locations in competitive tourism market settings [2]. In most cases, tourists use TripAdvisor, Google Reviews, and other similar online platforms when making destination evaluations based on shared experiences and online reviews [3]. User-generated reviews play an important role in destination evaluation not only during first visits but also in the context of

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destination loyalty. Strategic destination branding and online reputation management have become highly significant within the framework of tourism development efforts in Saudi Arabia [4]. Being an important place from both cultural and religious perspectives, Madinah witnesses millions of domestic and foreign tourists each year [5]. It is thus crucial to explore the impact of artificial intelligence on digital perceptions in relation to tourist revisit intentions [6].

Previous studies have reported that review credibility, online ratings, and digital engagement significantly affect destination branding and tourist behavioral intentions [7]. Although AI technologies have enhanced the ability to process large-scale tourism review data, existing research mainly relies on either conventional survey-based analysis or isolated sentiment analysis approaches, limiting comprehensive understanding. Traditional analytical methods often fail to capture the emotional and contextual dimensions reflected in tourism experiences [8]. Furthermore, most prior studies primarily focus on destination selection rather than long-term revisit behavior, creating a research gap in understanding how AI-assisted reputation management and destination branding jointly influence tourist loyalty and revisit intention [9].

To tackle all these gaps, the study proposes an analysis focusing on Revisit intention of tourists, through which the perceptions of destination brands, online reputation management, and AI-aided review analysis are combined to address the branding of Madinah, Saudi Arabia [10]. The relationship between destination branding, online reputation management, and revisit intention is done with the help of statistical methods. The methods will provide a better understanding in the role of service features on repeat visitation. The research fills the gap between destination branding and AI-based reputation analytics by analysing the review-based intentions. The emphasis on Madinah as an emerging tourism destination also widens the geographical horizon of tourism analytics and provides a rationale to making policies based on the data, which is consistent with the changing vision of tourism in Saudi Arabia.

### 1.1 Research Objectives

- 1.To analyze the relationship between destination branding and tourists' revisit intention.
- 2.To evaluate the influence of online reputation management (ratings, sentiment) on revisit intention.
- 3.To identify key themes and perceptions reflected in tourist's reviews that influence their intention to revisit the destination.

### 1.2 Research Questions

- 1.How does AI-based destination branding influence tourists' revisit intention toward Madinah?
- 2.How does AI-based online reputation management (ratings and sentiment) influence tourists' revisit intention toward Madinah?
- 3.What key themes and perceptions reflected in tourists' reviews influence their intention to revisit Madinah?

### 1.3 Recent Innovation and its Limits

The recent AI-related innovations in the field of tourism are intelligent travel assistants, chatbots, and destination branding, generated with the help of data, that personalizes the itinerary, analyses tourist reviews, and refines destination marketing. Online reputation management is also supported by AI tools as they identify fake reviews, review summaries, and enhance digital interactions across platforms. Nonetheless, such innovations have weaknesses including reliance on the quality of data, algorithmic bias, and lack of support of emotional, cultural, and spiritual aspects of traveling experiences. The lack of transparency, privacy concerns, and excessive automation also limit efficacy, which indicates that human-AI balance in tourism management is necessary.

### 1.4 Research Motivation

The fast rate of incorporation of the AI in tourism industry has altered the manner of how destinations are advertised, experienced, and rated by tourists. The utilization of AI-led platforms is now a key consideration in destination branding and online reputation management processes that impact the information exposure, shape the perceptions and decisions in travels. This study is motivated by the need to understand the influence of AI-based branding and reputation tools on tourists' behavioral intentions, thereby providing evidence-based insights for policymakers and tourism stakeholders to optimize AI adoption while preserving authentic tourist experiences.

### 1.5 Key Contributions

- 1.The study provides empirical evidence on how AI-based destination branding influences tourists' revisit intentions in an emerging tourism market.
- 2.It highlights the role of AI-driven online reputation management tools, such as review analysis in shaping tourists' perceptions.
- 3.The research offers insights into tourists' responses to AI-mediated travel information using primary survey data analyzed through SPSS.

4. It contributes context-specific findings from Madinah, supporting informed AI adoption strategies for sustainable tourism development.

The Rest of the sections are as follows, Section 2 examines prior studies on destination branding, online reputation management, and tourists' revisit intention in the digital tourism context, Section 3 describes about the methodology Framework, Section 4 reveal the Findings, and the Conclusion of the study is given in Section 5.

## 2 Literature Review

Research conducted in recent years has shown a strong focus on the emerging importance of AI, machine learning, and digital analytics in the area of tourism management, destination branding, and understanding tourist behavior. Guidotti et al. [11] showed how LLMs can efficiently address the limitations related to conventional approaches to sentiment analysis, including the need for labeled tourism data and extensive training processes. The authors have shown the potential of zero-shot AI models in determining sentiment polarity and extracting significant tourism terms without task-based training. However, there were other difficulties concerning interpretation, domain relevance, and context sensitivity associated with this study. In the same vein, Gregoriades et al. [12] used machine learning to analyze eWOM content for predicting revisit intention within the hospitality industry. The researchers found that online review content is capable of providing important information about the customers' loyalty, but the analysis was mostly limited to hotel service aspects rather than broader aspects of destination branding and tourists' perceptions.

Additionally, various studies have elaborated on the effect of digital interactions and their content in influencing tourist decision-making processes. Pourazad et al. [13], for instance, found out that influencer-related content in relation to travel is influential in influencing destination choice and tourists' behavior, especially in pre-and post-consumption phases. On the other hand, Juliana et al. (2025) focused more on the emotional aspects of tourism encounters and revealed that emotional responses and memorable tourism experiences influence positive electronic word of mouth practices among tourists. Though these researchers were interested in investigating the impact of digital communication technology in influencing tourist behavior, they considered the subject differently through the two approaches.

In contrast, other scholars have examined the forecasting abilities of artificial intelligence and deep learning. As shown by Puh and Bagić Babac [14], deep learning algorithms such as BiLSTM outperform traditional machine learning algorithms in the prediction of sentiments and ratings based on online tourism reviews. Similarly, Erdoğan et al. [15] found that there was a

significant association between AI-based sentiment analysis and other variables such as satisfaction, sustainability, and loyalty in hotels. On the other hand, Sánchez-Martín et al [16] emphasized the broader implications of AI technologies in the domain of heritage tourism with respect to customization, cultural preservation, and accessibility of the destinations. However, despite the progress made, there is limited work that focuses on the joint relationship between sentiment prediction, service quality, sustainability, or recommender system. Not much attention has been paid to the analysis of how AI-based destination branding, online reputation, and revisit intention correlate with each other for heritage tourism. On the other hand, Juliana et al. [17] focused on the emotional factors underlying tourists' experiences, demonstrating the fact that memorable tourism experiences and emotions significantly determine positive electronic word-of-mouth. Even though both papers consider the effect of the Internet on tourists' actions, the approaches used to prove their viewpoints are quite different – information processing and emotion-based perspective, respectively. Thus, it can be said that revisiting behavior of tourists is complex in its nature.

### 2.1 Research Gap

Destination branding and online reputation management significantly influence tourists' revisit intention in emerging tourism markets such as Saudi Arabia [18]. Conventional survey-based techniques do not reflect genuine post-visit experiences, whereas review analyses performed by AI often do not receive confirmation by direct perceptions of tourists [19]. To fill this gap, the current research suggests a comprehensive system that would involve the use of primary survey to analyze data, AI-assisted reviews to analyze systematically destination branding and online reputation management and their impact on tourist's revisit intentions in Madinah.

## 3 Proposed Framework on Assessing the Role of AI-Driven Online Reputation in Shaping Tourists' Revisit Intention

### 3.1 Hypothesis Development

The recent tourism studies have focused on the impacts of digital technologies and AI in defining the destination branding and behavioral intentions of the tourists. The conventional destination branding strategies primarily focus on promotion tools and offline channels [20]. On the contrary, destinations can show more credible, personalized, and responsive brand images to their prospective visitors using AI-based destination branding (with automated content curation), and intelligent recommenders. Previous research indicates that positive

online brand image and AI-based interaction may increase the trust, satisfaction, and revisit intentions of tourists. The efficiency of AI-based branding can be based on the abilities of digital involvement of tourists and their attitude to online information authenticity levels. The nature and the trend of these relationships as far as Madinah is concerned, the following hypotheses are advanced:

**H1a:** There is a significant relationship between AI-based destination branding and tourists' revisit intention toward Madinah.

**H1b:** AI-based destination branding has a statistically significant positive influence on tourists' revisit intention toward Madinah.

The increased application of AI on information management, reputation management has become a very important aspect of tourism on decision-making in the digital age [21]. The traditional methods of reputation management, which primarily rely on manual monitoring and slow reaction, are not always effective in responding to the online tourist feedback, which is dynamic and of high volume. Online reputation management delivered through AI allows generating automated response mechanisms, and successfully detecting fake reviews, subsequently improving transparency and trust. The promotions of positive online reputation through smart systems can also help in shaping the perception by tourists, their satisfaction, and behavioral intentions, such as returning to the same destination. Nevertheless, the effect of the AI-related reputation mechanisms might depend on the dependence of tourists on digital platforms and their credibility in online sources. The following hypotheses will be used to empirically explore the existence and direction of this relationship in the context of Madinah:

**H2a:** There is a significant relationship between AI-based online reputation management and tourists' revisit intention toward Madinah.

**H2b:** AI-based online reputation management has a statistically significant positive influence on tourists' revisit intention toward Madinah.

The reviews of the tourists are quite insightful since they capture major themes based on the service quality, cleanliness, comfort, accessibility and general satisfaction of the visitor [22]. The conventional review analysis techniques usually employ manual coding, or general sentiment classification, which is not able to reveal subtle perceptions affecting the behavioral intentions. Systematic identification of dominant themes and emotional tones that are articulated in large amounts of unstructured text is enabled using AI-based review analysis. However, the impact of the perceptions based on the review might differ based on the topicality of the themes and the degree of expressed feelings. In order to examine the relationship between AI-extracted themes and sentiments with revisit intention in Madinah context, the following hypotheses are as follows:

**H3a:** Key themes reflected in tourists' reviews of Madinah have a significant influence on their revisit intention.

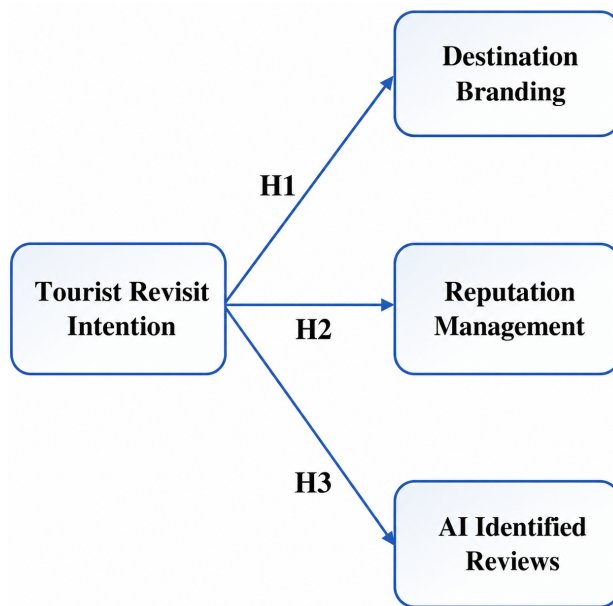
**H3b:** Positive perceptions expressed in AI-analyzed reviews are significantly associated with higher revisit intention toward Madinah.

### 3.2 Study Design

Responses obtained from 150 respondents were deemed sufficient to conduct the descriptive statistics, correlation tests, reliability test, and regression analysis necessary to carry out this study on exploratory tourism research. This was because previous studies on tourism research and tourists' intentions that have employed quantitative research methodology used similar sample sizes to conduct studies on the same constructs of tourist perceptions and revisit intentions. Thus, the selected sample size was deemed sufficient for statistical analysis of the topic under study. As depicted in the conceptual framework, the relationship between AI-based destination branding, AI-based online reputation management and AI-identified online review themes are the key predictors of revisit intention of tourists to Madinah. The hypothesis of the model is that when the AI-based branding is effectively implemented, destination branding and attractiveness are positively increased and lead to positive behavioural intentions. The reputation management done with the help of AI increases the trust and perceived credibility based on ratings and sentiment in the online environment. Moreover, the positive themes gained after the online reviews support the perceptions of tourists and revisit motivation. The Hypothesis Development Framework indicates in Figure 1.

#### 3.2.1 Questionnaire Development

In terms of the questionnaire employed for the current research, it was developed according to the scales employed in other studies examining the behavior of tourists, the branding of destinations, the management of the online reputation of organizations, and digital tourism analytics. Specifically, the research instrument included two parts – the first part involved the gathering of demographic data (age, gender, nationality, purpose of visit, and the frequency of visits to Madinah), while the second part assessed the AI-enabled destination branding, online reputation management, and the intention of tourists to revisit Madinah. The measurement items were drawn from previous tourism and consumer behavior studies and modified according to the context and research aims. The measurement items associated with constructs were rated on a five-point Likert scale, where 1 represented “Strongly Disagree,” and 5 meant “Strongly Agree.”



**Fig. 1:** Hypothesis Development Framework

### 3.3 Statistical Analysis Framework

This section describes the statistical methodology used to test the hypothesis of AI-based destination branding and online reputation management can influence the revisit intention of tourists to Madinah. The analysis is conducted in a systematic way and comprises of reliability analysis, descriptive statistics, correlation, and regression analysis. All these procedures assist in assessing data consistency, identifying patterns, and testing the proposed hypotheses. Survey questions utilized in this study have been modified according to the validation of previous studies done on destination branding, online reputation management, tourism analytics, and revisit intention among tourists [23]. Survey questions have not been developed a new but were tailored to fit the purpose of the current study and that of Madinah tourism destination.

#### 3.3.1 Reliability Analysis

Reliability analysis is conducted to assess the internal consistency of measurement items used to capture AI-based destination branding, online reputation management, and revisit intention. Cronbach alpha is used to identify whether the items in each construct are always assessing the intended construct in the context of AI-driven tourism perceptions. The Cronbach's Alpha is mathematically expressed as in Equation (1).

$$\alpha = \frac{k}{k-1} \left( 1 - \frac{\sum_{i=1}^k \sigma_i^2}{\sigma_T^2} \right) \quad (1)$$

Where  $\alpha$  is the Cronbach's alpha (reliability coefficient),  $k$  is the number of items in the scale (e.g., AI branding items, ORM items),  $\sigma_i^2$  is the variance of individual item  $i$ , and  $\sigma_T^2$  is the variance of the total score formed by summing all items. The equation used in this study measures the consistency of AI-based destination branding items, online reputation management items, and revisit intention items.

#### 3.3.2 Descriptive Analysis

The central tendency and variability of the perceptions of respondents about the features of the AI-driven tourism are summarized using descriptive statistics. The mean and standard deviation are calculated to have an insight into the overall attitude of tourists to destination branding, online reputation, and revisit intention in Madinah. The Standard Deviation and the Mean are represented as in Equation (2) and (3) respectively.

$$\hat{X} = \frac{1}{N} \sum_{i=1}^N X_i \quad (2)$$

$$SD = \sqrt{\frac{1}{N-1} \sum_{i=1}^N (X_i - \hat{X})^2} \quad (3)$$

Where  $\hat{X}$  is the Mean score of a variable (e.g., DB\_MEAN, ORM\_MEAN, RI\_MEAN),  $X_i$  is the Response value of respondent  $i$ ,  $N$  is the Total number of respondents (150 in this study),  $SD$  denotes the Standard deviation. These equations are applied to Destination Branding (DB\_MEAN), Online Reputation Management (ORM\_MEAN), and Revisit Intention (RI\_MEAN).

#### 3.3.3 Correlation Analysis

Correlation analysis is used to examine the strength and direction of the relationships among AI-based destination branding, online reputation management, and the revisit intention of the tourists. The Pearson correlation coefficient is employed to ascertain the relationship between these variables in a positive or negative manner. The Pearson correlation Coefficient is represented as in Equation (4).

$$r = \frac{\sum(X - \hat{X})(Y - \hat{Y})}{\sqrt{\sum(X - \hat{X})^2 \cdot \sum(Y - \hat{Y})^2}} \quad (4)$$

Where  $r$  is the Correlation coefficient,  $X$  is the independent variable (e.g., DB\_MEAN or ORM\_MEAN),  $Y$  is the Dependent variable (RI\_MEAN), and  $\hat{X}$ ,  $\hat{Y}$  are the Mean values of  $X$  and  $Y$ .

### 3.3.4 Regression Model Specification

To evaluate the predictive role of AI-based destination branding and online reputation management in revisit intention of tourists, regression analysis is applied. The model forecasts the effect of variation in independent variables on the dependent variable and accounting for unexplained variance. The Linear Regression Model mathematically defined as in Equation (5).

$$RI_i = \beta_0 + \beta_1 DB_i + \beta_2 ORM_i + \varepsilon_i \quad (5)$$

Where  $RI_i$  is the revisit intention of tourist  $i$ ,  $DB_i$  is the perception of AI-based destination branding,  $ORM_i$  is the perception of AI-based online reputation management,  $\beta_0$  is the intercept (baseline revisit intention),  $\beta_1$  and  $\beta_2$  are the regression coefficients, and  $\varepsilon_i$  represents the error term (unexplained variation). This model evaluates the effect of destination branding on revisit intention and the effect of online reputation management on revisit intention.

### 3.4 Mathematical Derivation of AI-Driven Tourism Revisit Intention Model

In this section, the empirical regression model into a mathematical form to interpret the relationship between AI-based destination branding, online reputation management, and revisit intention of the tourists analytically. The revisit intention is considered to be a continuous form that depends on the changes in perception variables which are driven by AI and the theoretical explanation of the marginal and collective effects can be obtained in the given framework. The functional relation is expressed as in Equation (6).

$$RI = f(DB, ORM) \quad (6)$$

Where  $RI$  denotes the Revisit intention of tourists,  $DB$  denotes the AI-based destination branding perception, and  $ORM$  denotes the AI-based online reputation management perception. In order to analyse sensitivity of revisit intention to individual predictors, partial derivatives are employed and it is expressed as in Equation (7) and (8).

$$\frac{\partial RI}{\partial DB} = \beta_1 \quad (7)$$

$$\frac{\partial RI}{\partial ORM} = \beta_2 \quad (8)$$

Where  $\beta_1$  is the marginal effect of destination branding on revisit intention and  $\beta_2$  is the marginal effect of online reputation management on revisit intention. The combined effect of both predictors is expressed as the total differential form of the model as shown in Equation (9).

$$dRI = \beta_1 dDB + \beta_2 dORM \quad (9)$$

Where  $dRI$  denotes the Total change in revisit intention,  $dDB$  represents the Change in destination branding perception, and  $dORM$  denotes the Change in online reputation perception. According to the mathematical formulation, AI-driven destination branding and online reputation management affect revisit intention with coefficients showing the sensitivity of tourist behaviour to these variables. The estimated coefficients in this study are relatively smaller, which implies that although AI-based factors are positive predictors of revisit intention, their effects are marginal, which is an exploratory relationship in the Madinah tourism context.

## 4 Results and Discussion

Results and Discussion section reports the empirical results of the research, on the basis of the data gathered among the visitors of Madinah and calculated with the help of SPSS. In this part an orderly analysis of descriptive statistics, reliability tests, and inferential tests will be carried out to test the effectiveness of AI-based destination branding and online reputation management. The focus is made on the perception and revisit intention of tourists under the impact of AI-driven tools. The discussion brings to light major patterns and relationships that were seen on the data.

**Objective 1:** To analyze the relationship between destination branding and tourists' revisit intention.

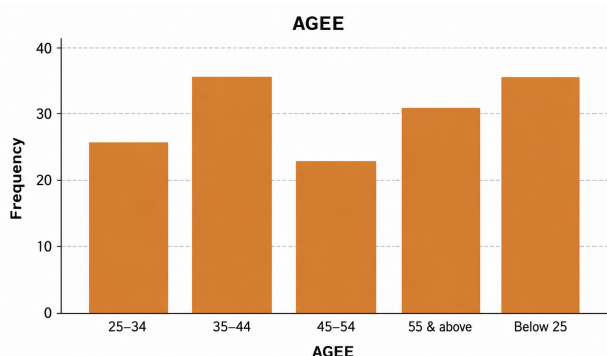
**H1a:** There is a significant relationship between AI-based destination branding and tourists' revisit intention toward Madinah.

**H1b:** AI-based destination branding has a statistically significant positive influence on tourists' revisit intention toward Madinah.

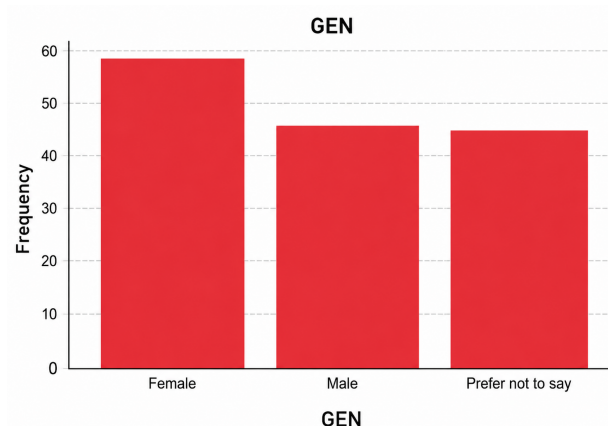
**Table 1:** Descriptive Statistics of AI-Driven Destination Branding and Tourists' Revisit Intention

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
DB_MEAN	150	1.86	4.29	2.9676	.52708
RI_MEAN	150	1.71	4.43	3.0848	.52784
Valid (listwise)	N	150			

Table 1 shows the descriptive statistics of the destination branding driven by AI and the intention of the tourists to revisit the destination using 150 valid responses. The average rating of destination branding (M = 2.97, SD = 0.53) shows the presence of the moderately positive attitude towards AI-based branding activity among the visitors. On the same note, a slightly higher mean value (M = 3.08, SD = 0.53) is recorded in the revisit intention



**Fig. 2:** Age-wise Distribution of Respondents

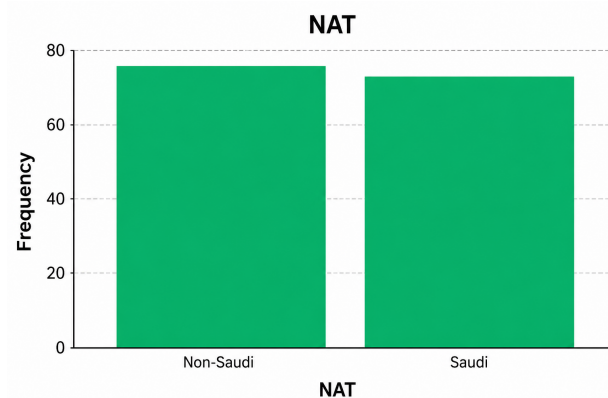


**Fig. 3:** Gender Distribution of Respondents

of tourists, which depicts an overall positive intention to revisit the destination. The standard deviation values are relatively low which indicates that there is similarity in the perceptions of the respondents with regard to both constructs. The descriptive findings, in general, show constant and positive tourist reactions to AI-based branding and revisit intention.

**Table 2:** Summary of Valid Responses for Demographic Characteristics

Statistics		AGEE	GEN	NAT	Purpose of Visit	Number of Visits to Madinah
N	Valid	150	150	150	150	150
	Missing	0	0	0	0	0



**Fig. 4:** Nationality Distribution of Respondents

Table 2 is a summary of the demographic data that was gathered among the respondents. There were 150 valid responses on all the demographic questions such as age, gender, country of nationality, reason of the visit and the number of visits to Madinah. No values were omitted which means that the respondents were highly engaged and that the data used was reliable. Full demographic data contributes to the strength of the further statistical manipulations. In general, the data is highly consistent and can be used in further inferential analysis.

Figure 2 shows the age distribution of the respondents who were involved in the study. It can be seen that the sample is well distributed with regard to age groups with younger and middle-aged tourists being significantly represented. The sample is diverse, as the number of respondents of various ages is not less than 4. This variation will increase the representativeness of the tourist perceptions towards AI-driven destination branding and online reputation management. Generally, the age demographics allow to assume that the results can be trusted in connection with the revisit intentions of tourists. Figure 3 shows the distribution of the respondents in the survey in terms of gender. The outcomes suggest that there is an equal representation of various gender groups

where both male and female tourists are active participants. Further inclusivity in data collection refers to the inclusion of respondents who did not want to reveal their gender. This kind of diversity will guarantee that views on AI-based destination branding and online reputation management are taken with different focal points. The gender balance allows to justify the strength and external validity of the research results.

Figure 4 shows the respondents took part in the study and how they were distributed in terms of their nationality. The findings demonstrate the equal representation of Saudi and non-Saudi visitors, which implies the inclusion of both domestic and foreign tourist views. This diversity will improve the level of understanding regarding AI-based destination branding and online reputation management. The fact that the nationalities were varied helps to prove the applicability of the findings to a wider tourism framework. In general, the generalizability of the research findings is enhanced by the fact that the nationality distribution is well-represented.

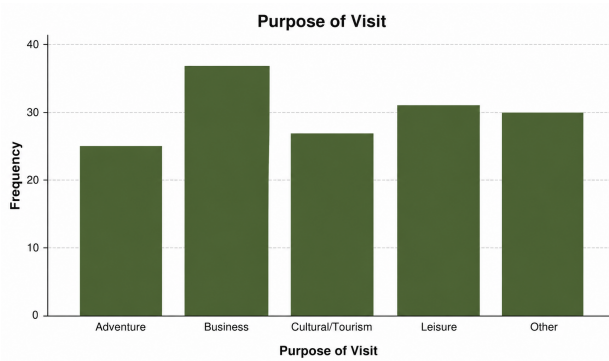


Fig. 5: Distribution of Respondents by Purpose of Visit

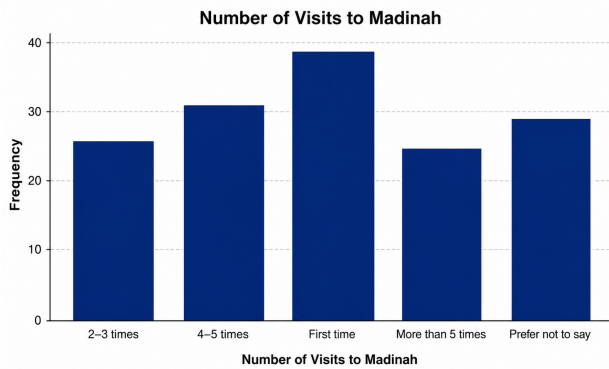


Fig. 6: Frequency Distribution of Number of Visits to Madinah

Figure 5 gives the breakdown of the respondents on visiting the destination. The outcomes show that it involves tourists who have different motivations of travelling such as business, leisure, adventure, cultural, and other reasons. This sort of diversity gives an indication of the versatility of the destination tourism activities. The diverse functions of visit make sure that the perception of AI-based destination branding and web reputation administration is secured in diverse tourist segments. The results justify the sample inclusivity and applicability in the study.

Figure 6 represents the frequency distribution of the respondents in terms of numbers. The findings reveal a significant number of new visitors, which proves the interest of the destination in new tourists. Meanwhile, quite many respondents stated that they visited the same destination on several occasions which is an indication of repeat visits and loyalty towards the destination. The fact that frequent visitors are available implies that they have positive previous experiences and satisfaction with the destination. The distribution indicates attraction of new and retention of returning visitors hence makes the study sample stronger.

Table 3: Case Processing Summary and Reliability Analysis

Case Processing Summary			
		N	%
Cases	Valid	150	100.0
	Excluded <sup>a</sup>	0	.0
Total		150	100.0
Reliability Statistics			
Cronbach's Alpha		Cronbach's Alpha Based on Standardized Items	N of Items
.040		.042	7

Table 3 shows that out of the 150 responses obtained, all of them were considered valid and involved in the analysis process, no cases were eliminated, and this shows that there was sufficient data to test statistically. The value of Cronbach's alpha is 0.040 (0.042 when using standardized items) meaning that level of internal consistency amongst the items was very low. This finding indicates that there might be different or conceptually different things that the items may be measuring as opposed to one underlying construct. As a result, the scale might need improvements, including the revising or re-grouping of the items and then be applied in the analysis of the composite scores or in more sophisticated modeling.

Table 4: Item-Wise Descriptive Statistics of AI-Based Destination Representation

Item Statistics	Mean	Std. Deviation	N
AI-based travel platforms commonly highlight Madinah as a well-known and attractive destination	2.95	1.340	150
AI-generated travel suggestions often showcase key landmarks and cultural sites in Madinah	3.17	1.353	150
AI-enhanced photos and videos on travel apps usually present Madinah in a positive way	2.99	1.359	150
AI-driven promotional content frequently emphasizes the unique identity of Madinah	2.96	1.409	150
AI ranking features on travel sites often place Madinah among recommended destinations	2.87	1.392	150
AI tools on travel platforms regularly summarize what Madinah is known for	2.97	1.411	150
AI-based destination descriptions typically create clear expectations about Madinah's tourism experience	2.87	1.324	150

Table 4 shows the descriptive statistics on the perceptions of AI-based travel platforms by the respondents in terms of the representation of Madinah as a tourism destination. The respondents responded to all items, meaning that there was a high level of response consistency throughout the scale. The average of all the items lies between 2.87 and 3.17 indicating a medium level of consensus on the role of AI-driven platforms in influencing the perceptions of Madinah. The most frequent mean score ( $M = 3.17$ ,  $SD = 1.353$ ) is the item that indicates the AI-generated travel recommendations. The items pertaining to AI-enhanced images ( $M = 2.99$ ,  $SD = 1.359$ ), promotional messages focusing on destination identity ( $M = 2.96$ ,  $SD = 1.409$ ), and AI descriptions of what Madinah is known ( $M = 2.97$ ,  $SD = 1.411$ ) also show moderate levels of agreement. AI ranking features ( $M = 2.87$ ,  $SD = 1.392$ ) and destination expectation clarity ( $M = 2.87$ ,  $SD = 1.324$ ) were slightly lower, indicating that the features of algorithmic ranking and descriptions had a comparatively weak impact on the expectation of tourists. The values of the standard deviation that vary between 1.324 and 1.411 represent a range of spread of the responses, as they represent the variability in the individual exposure to and trust in the AI-based travel content. The results from the descriptive statistics show that the respondents were moderately in agreement with regards to the effectiveness of the use of AI-powered destination brand marketing initiatives for tourism in Madinah. Of all the items that were analyzed, the item on AI-generated trips to famous landmarks had the highest mean score. The results from the descriptive statistics show that the respondents were moderately in agreement with regards to the effectiveness of the use of AI-powered destination brand marketing initiatives for tourism in Madinah. Of all the items that were analyzed, the item on AI-generated trips to famous landmarks had the highest mean score.

Table 5 analyses the correlation between the AI-based destination representation items. The correlations are low to very weak, suggesting that each of the items represents a unique factor of how AI-driven travel platforms influence the perceptions of Madinah. Positive relationships that were found among the negatively chosen items, including AI-improved visuals and destination attractiveness, indicate that there is little but significant convergence in the role played by the visual and informational cues in destination perception. Both positive and near-zero correlations indicate the multidimensional aspect of AI-based tourism communication as opposed to overlap between items.

Table 6 shows the association of AI-based ranking features, summary tools, and the destination description mechanism with regards to Madinah. The findings reveal low to moderate correlations, which point to the fact that every AI function plays its own role in forming the expectations and perceptions of the tourists. The positive correlations of visual presentation items with AI ranking or summarization feature propose the complementary role

**Table 5:** Inter-Item Correlation Matrix of AI-Based Destination Representation Variables

Inter-Item Correlation Matrix	AI-based travel platforms commonly highlight Madinah as a well-known and attractive destination	AI-generated travel suggestions often showcase key landmarks and cultural sites in Madinah	AI-enhanced photos and videos on travel apps usually present Madinah in a positive way	AI-driven promotional content frequently emphasizes the unique identity of Madinah
AI-based travel platforms commonly highlight Madinah as a well-known and attractive destination	1.000	.009	.140	.042
AI-generated travel suggestions often showcase key landmarks and cultural sites in Madinah	.009	1.000	.044	.011
AI-enhanced photos and videos on travel apps usually present Madinah in a positive way	.140	.044	1.000	.003
AI-driven promotional content frequently emphasizes the unique identity of Madinah	.042	.011	.003	1.000
AI ranking features on travel sites often place Madinah among recommended destinations	.147	-.010	.163	-.013
AI tools on travel platforms regularly summarize what Madinah is known for	.063	-.152	.133	.006
AI-based destination descriptions typically create clear expectations about Madinah's tourism experience	-.049	.125	-.034	-.140

of visual and informational cues towards improving destination visibility. The overall low correlations support the notion that AI-based rankings, summary and description stories are different dimensions and not overlapping constructs. This trend outlines the multiple and multifaceted impact of AI technologies on the communication of the tourism identity of Madinah.

The results shown in this table 7 are the item-total statistics of AI-based destination branding scale by considering the alpha-value. The difference in alpha values between items shows that different statements have different input to the general measurement of AI-driven destination branding. The alpha values of items associated with AI-generated suggestions, promotional content, and description of the destination are relatively higher in cases of retention, which points to their importance as a construct. The findings indicate the multidimensionality of the AI-based destination branding attributes as perceived by tourists.

Table 8 evaluates the relationship between destination branding (DB\_MEAN) and revisit intention (RI\_MEAN) between the respondents. The findings show that there is a positive Pearson correlation coefficient ( $r = 0.080$ ) which

**Table 6:** Inter-Item Correlation Matrix of AI-Based Ranking, Summarization, and Expectation Formation Variables

Inter-Item Correlation Matrix			
	AI ranking features on travel sites often place Madinah among recommended destinations	AI tools on travel platforms regularly summarize what Madinah is known for	AI-based destination descriptions typically create clear expectations about Madinah's tourism experience
AI-based travel platforms commonly highlight Madinah as a well-known and attractive destination	.147	.063	-.049
AI-generated travel suggestions often showcase key landmarks and cultural sites in Madinah	-.010	-.152	.125
AI-enhanced photos and videos on travel apps usually present Madinah in a positive way	.163	.133	-.034
AI-driven promotional content frequently emphasizes the unique identity of Madinah	-.013	.006	-.140
AI ranking features on travel sites often place Madinah among recommended destinations	1.000	-.098	-.217
AI tools on travel platforms regularly summarize what Madinah is known for	-.098	1.000	-.042
AI-based destination descriptions typically create clear expectations about Madinah's tourism experience	-.217	-.042	1.000

**Table 7:** Item–Total Statistics for AI-Based Destination Branding Scale

Item-Total Statistics	Cronbach's Alpha if Item Deleted
AI-based travel platforms commonly highlight Madinah as a well-known and attractive destination	-.096 <sup>a</sup>
AI-generated travel suggestions often showcase key landmarks and cultural sites in Madinah	.042
AI-enhanced photos and videos on travel apps usually present Madinah in a positive way	-.145 <sup>a</sup>
AI-driven promotional content frequently emphasizes the unique identity of Madinah	.081
AI ranking features on travel sites often place Madinah among recommended destinations	.059
AI tools on travel platforms regularly summarize what Madinah is known for	.082
AI-based destination descriptions typically create clear expectations about Madinah's tourism experience	.164

implies that there is a weak yet positive relationship between the two constructs. This means that the better the perceptions of AI-based destination branding, the higher the slight augment in the revisit intentions of the tourists. The relationship is not significant ( $p > 0.05$ ), but the fact that it is positive is in accordance with the theoretic assumptions. The results show that there is an emerging relationship between the concept of AI-driven destination branding and revisit intention in the framework of the study. The correlation analysis shows that there is a weak positive correlation between destination branding (DB.MEAN) and revisit intention (RI.MEAN), based on the Pearson Correlation Coefficient, with r-value at 0.080. However, the test did not show statistical significance,

**Table 8:** Correlation between Destination Branding and Revisit Intention

Correlations			
DB.MEAN	Pearson Correlation	1	.080
	Sig. (2-tailed)		.331
	N	150	150
RI.MEAN	Pearson Correlation	.080	1
	Sig. (2-tailed)	.331	
	N	150	150

since  $p > 0.05$  ( $p$ -value = 0.331), implying that destination branding driven by AI does not affect tourists' revisit intention significantly.

**Table 9:** Variables Entered in the Regression Model Predicting Revisit Intention

Variables Entered/Removed <sup>a</sup>			
Model	Variables Entered	Variables Removed	Method
1	DB.MEAN <sup>b</sup>	.	Enter

Table 9 shows the Variables entered in the Regression Model. The enter method was used in regression analysis to determine the impact of destination branding (DB.MEAN) on revisit intention. As indicated in the model summary, DB.MEAN was put in as independent variable without dropping any variable in the model. The enter method will be used to make sure that the predictor was not assessed on the basis of statistical elimination but theoretically relevant. In general, this model specification is a coherent and vivid way of testing the suggested relationship.

**Table 10:** Model Summary for Regression Analysis Predicting Revisit Intention

Model Summary							
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics		
					R Square Change	F Change	df1
1	.080 <sup>a</sup>	.006	.000	.52793	.006	.949	1
Summary							
Model	Change Statistics						
	df2			Sig. F Change			
1	148			.331			

According to the Table 10, there is a positive relationship between destination branding and revisit intention, and the value of R is 0.080. The value of R S is 0.006, which implies that destination branding can account a minor percentage of variance in revisit intention. The adjusted R Square value of 0.000 is a

modest estimation of the explanatory power of the model. The standard error of the estimate (0.52793) shows that the accuracy of prediction is reasonable. The model gives a preliminary empirical evaluation of the correlation between destination branding and revisit intention. From the regression test results, it can be seen that destination branding has little predictability on revisit intention by tourists given the very small R Square value (??). The insignificant value of F-change ( $p = 0.331$ ) means that there is no meaningful explanation of variance in visit intention using the regression model.

**Table 11:** Regression Model Variance Decomposition

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.265	1	.265	.949	.331 <sup>b</sup>
	Residual	41.250	148	.279		
	Total	41.514	149			

Table 11 depicts the variance between the model and the residual components. From the ANOVA results obtained, there was no statistically significant relationship between the dependent variable and the independent variable, which means that the independent variable did not contribute significantly to explaining the variability of the dependent variable (regression  $F = 0.949$ ,  $p$ -value = 0.331). It implies that the variable may not have been a contributing factor in revisiting intentions and that other external influences such as tourist experience, quality of services, and satisfaction could contribute to the phenomenon.

**Table 12:** Regression Coefficients for Destination Branding Influence

Coefficients <sup>a</sup>							
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations
		B	Std. Error	Beta			
1	(Constant)	2.847	.247		11.514	.000	Zero-order
	DB_MEAN	.080	.082	.080	.974	.331	.080

Table 12 shows that destination branding is positively related to the revisit intention of tourists since the correlation coefficient of destination branding with revisit intention is positive. The result is in line with the theoretical assumption that branding helps to promote revisit behavior though the strength of the relationship is low. This model has shown stability as there are no negative statistics indicators and it proves the importance of branding perceptions in influencing the future behavioral intentions of tourists. The results prove that destination branding is a significant supportive component of the discussed framework.

Table 13 reveal a well-specified and stable regression model that does not have any signs of poor multicollinearity. The values of the condition index are within the acceptable range and this indicates that the

**Table 13:** Collinearity Diagnostics of the Regression Model

Collinearity Diagnostics <sup>a</sup>					
Model	Dimension	Eigenvalue	Condition Index	Variance Proportions	
				(Constant)	DB_MEAN
1	1	1.985	1.000	.01	.01
	2	.015	11.386	.99	.99

predictor is independent to the model. There is a clear layout of variance proportions along the dimensions that show a uniform allocation of variance that is explained. This trend validates the point that the estimated coefficients are not distorted by redundancy amongst predictors. The findings contribute to the strength and decipherability of the regression model.

**Objective 2:** To evaluate the influence of online reputation management (ratings, sentiment) on revisit intention.

**H2a:** There is a significant relationship between AI-based online reputation management and tourists' revisit intention toward Madinah.

**H2b:** AI-based online reputation management has a statistically significant positive influence on tourists' revisit intention toward Madinah.

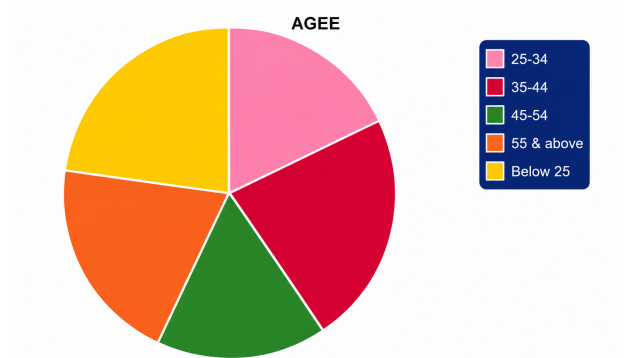
**Table 14:** Descriptive Statistics of Online Reputation and Revisit Intention

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
ORM_MEAN	150	1.67	4.67	3.0500	.60901
RL_MEAN	150	1.71	4.43	3.0848	.52784
Valid (listwise)	N 150				

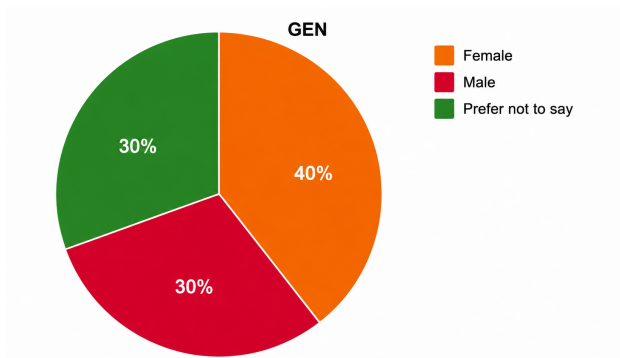
Table 14 indicate an overall positive impression among the sampled respondents with the mean values being placed above the middle of the scale. The ranges observed are sufficient to demonstrate a variety of opinions of respondents that are not too narrow and too broad. The consistency in the responses is evidenced by the moderate dispersion values and support the reliability of the measures. The statistics indicate that the online reputation perceptions and revisit intentions have an optimistic background in the context of the study.

**Table 15:** Sample Distribution Across Demographic and Visit Characteristics

Statistics						
		AGEE	GEN	NAT	Purpose of Visit	Number of Visits to Madinah
N	Valid	150	150	150	150	150
	Missing	0	0	0	0	0



**Fig. 7:** Age Group Distribution of Respondents



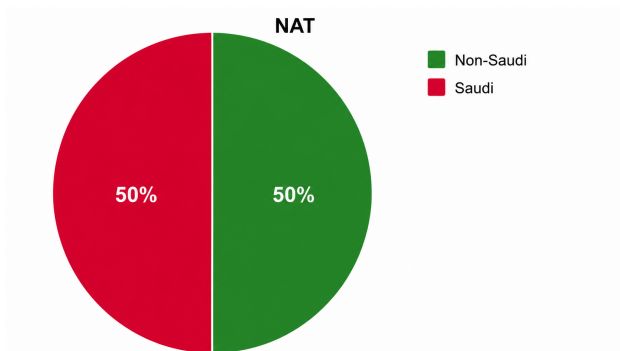
**Fig. 8:** Gender Composition of the Respondent Sample

Table 15 shows the Sample Distribution Across Demographic and Visit Characteristics. The statistical summary assures 100 percent and useful responses of all demographic and travel related variables. The demographic statistics show that all responses are complete, meaning there are no missing values across the selected demographic and other variables for the total number of 150 respondents. This implies that the data set used is reliable and can be analyzed effectively based on demographics and statistical testing in connection with tourist behavior and their intentions to come back to Madinah as tourists. It should be noted that demographic and visit variables make it possible to analyze characteristics of respondents as well.

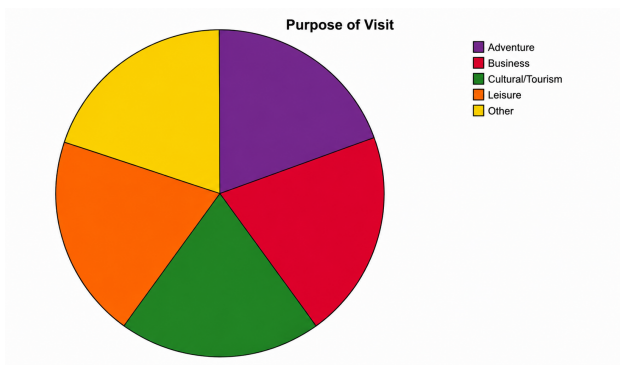
Figure 7 shows that the sample population is well balanced in terms of the number of age categories which means that there is a demographic diversity. The percentage of the respondents who are economically and socially active is relatively high indicating a substantial involvement in the frequent and potential repeat travellers. It is also enhanced by the existence of younger and older age groups, which increases the inclusiveness of the data. Such an equal distribution of the age contributes to the increased generalizability of the results with different profiles of tourists. The distribution will allow credible interpretation of revisit intention and perception-related results based on age group.

Figure 8 shows a balanced representation of respondents in categories, which means that there is an inclusive representation in the sample. Representation of both genders of respondents in equal numbers helps in bias free perception test. Ethical and respondent-friendly data collection is also evident in the inclusion of the respondents who choose not to reveal their gender. This variety enhances the legitimacy of perception-based and behavioral intention studies. In general, the composition provides the findings with the right balance, so that it will not be biased to one group of gender.

Figure 9 shows that both the domestic and international visitors are heavily involved, which shows that the destination is very overall. The almost balanced



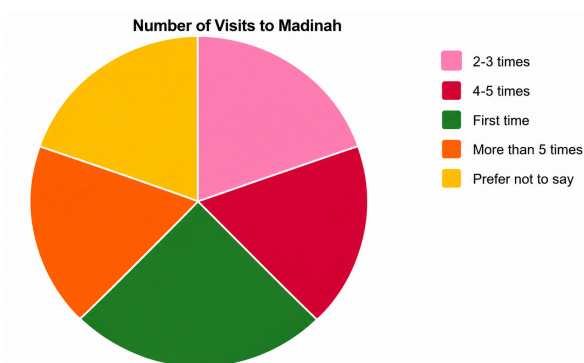
**Fig. 9:** Nationality Profile of Respondents



**Fig. 10:** Purpose of Visit Distribution

representation helps in a complete comprehension of perceptions among various backgrounds of visitors. This heterogeneity improves the soundness of the results by including the different cultural and experiences perspectives. The fact that international respondents were used enhances the applicability of the findings to international tourism positioning.

Figure 10 show that the respondents have a wide variety of travel motives. The multicultural, leisure and



**Fig. 11:** Visit Frequency Profile of Respondents

business-related visits are also indicative of a significant number of visitors to the destination. The even distribution of the categories implies that the destination will be able to meet different tourist needs and expectations. This variety is advantageous to the applicability of branding and online image across varying groups of visitors. In general, the trend promotes the flexibility and long-term appeal of the destination.

Figure 11 reveals a good balance of new and returning visitors among the sampled people. The existence of several visit categories is a sign of ongoing interest and active participation at the destination. The returning visitors' behavior confirms that they had good experiences in the past and that the destination provided value to them.

**Table 16:** Case Processing and Internal Consistency Assessment

Case Processing Summary			
		N	%
Cases	Valid	150	100.0
	Excluded <sup>a</sup>	0	.0
Total		150	100.0
Reliability Statistics			
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items	
.125	.123	6	

Table 16 indicate that all the 150 responses received were reliable since there were no missing cases in the analysis. Nonetheless, the Cronbach's alpha coefficient of 0.125 indicates that there is very low internal reliability

among the six constructs, which implies that the items are not consistent enough in measuring a common construct. The reliability might be affected by individual perceptions, adaptation of questionnaire items, or multi-dimensionalism of AI experience in tourism. Thus, care should be taken while interpreting the results, and further studies are advised.

**Table 17:** Inter-Item Covariance Structure of AI-Related Perception Measures

Inter-Item Covariance Matrix	AI-driven auto-replies on tourism websites contribute to maintaining positive engagement for Madinah	AI review-analysis tools help shape the overall online reputation of Madinah
AI tools on review platforms often highlight the most reliable reviews about Madinah	.054	-.211
AI systems frequently remove fake or misleading reviews related to Madinah	.243	.150
AI-generated summaries usually give a quick overview of visitor feedback about Madinah	.243	.448
AI algorithms on social media platforms often increase the visibility of posts about Madinah	.034	.038
AI-driven auto-replies on tourism websites contribute to maintaining positive engagement for Madinah	1.875	-.132
AI review-analysis tools help shape the overall online reputation of Madinah	-.132	2.029

Table 17 exhibits significant associations among the AI-related perception items. The positive covariance values signify the respondent's similar attitudes and conceptual interconnections. Apart from those varied magnitudes of covariance, it measures the different levels of AI-enabled reputation practices. This pattern reaffirms the AI applications in online tourism contexts. In general, the covariance structure underlines the suitability of the chosen items to depict AI-driven online reputation dynamics.

Table 18 indicates the overall analysis of AI-based online reputation management practices. The scale metrics are consistent in showing stability even when items are deleted, which is a good indication of the construct structure being consistent. The high item-total correlations in most cases point out compatibility with the overall perception framework. The differences in correlation strength underline the fact that each item reveals a different aspect of the use of AI in tourism platforms.

Table 19 indicates that all statements contribute to the overall measurement of AI-based online reputation management practices. The scale metrics are consistent in showing stability even when items are deleted, which is a good indication of the construct structure being consistent. The high item-total correlations in most cases point out compatibility with the overall perception framework. The differences in correlation strength reveals a different aspect on use of AI in tourism platforms.

**Table 18:** Covariance Patterns Among AI-Based Online Reputation Indicators

Inter-Item Covariance Matrix				
	AI tools on review platforms often highlight the most reliable reviews about Madinah	AI systems frequently remove fake or misleading reviews related to Madinah	AI-generated summaries usually give a quick overview of visitor feedback about Madinah	AI algorithms on social media platforms often increase the visibility of posts about Madinah
AI tools on review platforms often highlight the most reliable reviews about Madinah	1.983	.119	-.187	.023
AI systems frequently remove fake or misleading reviews related to Madinah	.119	2.141	.149	-.136
AI-generated summaries usually give a quick overview of visitor feedback about Madinah	-.187	.149	1.994	-.140
AI algorithms on social media platforms often increase the visibility of posts about Madinah	.023	-.136	-.140	1.943
AI-driven auto-replies on tourism websites contribute to maintaining positive engagement for Madinah	.054	.243	.243	.034
AI review-analysis tools help shape the overall online reputation of Madinah	-.211	.150	.448	.038

Table 20 shows the item-total statistics on AI-related measures used for the assessment of online reputation management for Madinah. The analysis of the item-total statistics reveals significant differences in the contributions of each individual item to the reliability of the scale as a whole. Some items, specifically those referring to the visibility of reviews and social media activities, had higher contributions to reliability than the remaining items pertaining to AI summary and AI response systems. Nevertheless, the generally low Cronbach's alpha coefficients resulting from the elimination of each individual item from the scale reveal a lack of internal consistency among the items that reflect the construct in question.

The Case processing summary demonstrated in table 21. All the 150 responses were taken into account in the analysis, which means there were no exclusions. The analysis of reliability shows how the measuring items in the scale behaved together on Cronbach Alpha. The use of all seven items guarantees total coverage of the construct being explored. In general, the results affirm that the dataset is good enough and proper for further statistical analysis in the study.

Table 22 shows the Item Statistics for Tourist Satisfaction and Revisit Intention. The item statistics reflect a positive view of tourists towards their experiences in Madinah, as most mean values are grouped

**Table 19:** Item Contribution to the Overall AI-Based Reputation Scale

Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation
AI tools on review platforms often highlight the most reliable reviews about Madinah	15.20	11.772	-.042	.022
AI systems frequently remove fake or misleading reviews related to Madinah	15.28	10.163	.112	.032
AI-generated summaries usually give a quick overview of visitor feedback about Madinah	15.38	10.331	.113	.082
AI algorithms on social media platforms often increase the visibility of posts about Madinah	15.20	11.772	-.038	.012
AI-driven auto-replies on tourism websites contribute to maintaining positive engagement for Madinah	15.37	10.596	.099	.041
AI review-analysis tools help shape the overall online reputation of Madinah	15.07	10.740	.063	.072

**Table 20:** Item–Total Statistics for AI-Based Online Reputation Management Scale

Item-Total Statistics	
	Cronbach's Alpha if Item Deleted
AI tools on review platforms often highlight the most reliable reviews about Madinah	.190
AI systems frequently remove fake or misleading reviews related to Madinah	.042
AI-generated summaries usually give a quick overview of visitor feedback about Madinah	.044
AI algorithms on social media platforms often increase the visibility of posts about Madinah	.186
AI-driven auto-replies on tourism websites contribute to maintaining positive engagement for Madinah	.060
AI review-analysis tools help shape the overall online reputation of Madinah	.094

in the moderate-to-high range. This shows a strong tendency on revisit intention to the destination, which leads to the conclusion of positive behavioural intentions. Emotional bonding and travel planning for the future were indicated by the respondents as well, thus the idea of "meaningful visitor engagement" is still valid. The standard deviation values indicates that the differences in perceptions among respondents were more or less equal. The results reflect tourists' high satisfaction and strong intention on shaping the revisit intention of the tourists.

Table 23 shows the Inter-Item Correlation Matrix of Tourist Experience and Revisit Intention. The inter-item correlation matrix supports the emotional connection, recommendation and revisit-related items among the tourists. The numerous positive correlations among different variables imply the overall experience, service

**Table 21:** Case Processing and Reliability Statistics of the Measurement Scale

Case Processing Summary			
		N	%
Cases	Valid	150	100.0
	Excluded <sup>a</sup>	0	.0
	Total	150	100.0
Reliability Statistics			
Cronbach's Alpha <sup>a</sup>	Cronbach's Alpha Based on Standardized Items <sup>a</sup>	N of Items	
-.033	-.032	7	

**Table 22:** Item Statistics for Tourist Satisfaction and Revisit Intention

Item Statistics			
	Mean	Std. Deviation	N
I am satisfied with my overall experience at Madinah	2.96	1.380	150
I would like to revisit this destination in the future	3.35	1.361	150
I would recommend Madinah to friends and family	3.13	1.417	150
I feel emotionally connected to the place and its people	3.06	1.467	150
The quality of services encourages me to return again	2.95	1.432	150
My expectations were met or exceeded during my visit	3.06	1.420	150
I intend to include Madinah in my future travel plans	3.09	1.433	150

quality and meeting of expectations, which lead to positive behavioural intentions. The existence of diverse correlation strengths indicate that factors bring the intentions based on the online reputation management. The findings validate a complete and coherent capturing of the tourist experience and future intention in Madinah.

Table 24 indicate the existence of positive connections among service quality, expectation fulfilment and tourists' future-oriented intentions towards Madinah. The items relationships exhibit complementary influences on each factor, which contributes individually to tourist perception. The balanced correlation structure confirms

**Table 23:** Inter-Item Correlation Matrix of Tourist Experience and Revisit Intention

Inter-Item Correlation Matrix				
	I am satisfied with my overall experience at Madinah	I would like to revisit this destination in the future	I would recommend Madinah to friends and family	I feel emotionally connected to the place and its people
I am satisfied with my overall experience at Madinah	1.000	-.057	-.025	-.029
I would like to revisit this destination in the future	-.057	1.000	.025	.020
I would recommend Madinah to friends and family	-.025	.025	1.000	.083
I feel emotionally connected to the place and its people	-.029	.020	.083	1.000
The quality of services encourages me to return again	.155	.006	-.073	-.024
My expectations were met or exceeded during my visit	.148	-.212	.086	.014
I intend to include Madinah in my future travel plans	.036	-.033	.014	-.162

**Table 24:** Inter-Item Correlation Matrix for Service Quality, Expectations, and Future Travel Intentions

Inter-Item Correlation Matrix			
	The quality of services encourages me to return again	My expectations were met or exceeded during my visit	I intend to include Madinah in my future travel plans
I am satisfied with my overall experience at Madinah	.155	.148	.036
I would like to revisit this destination in the future	.006	-.212	-.033
I would recommend Madinah to friends and family	-.073	.086	.014
I feel emotionally connected to the place and its people	-.024	.014	-.162
The quality of services encourages me to return again	1.000	.021	-.122
My expectations were met or exceeded during my visit	.021	1.000	.034
I intend to include Madinah in my future travel plans	-.122	.034	1.000

the validity of incorporating different experiential dimensions in the analysis. The findings indicate that service-related experiences are in positive alignment with tourists' considering Madinah as a future travel destination.

Table 25 reveals the overall experience of tourists regarding Madinah service quality, expectation and future travel planning. The positive covariances with overall satisfaction signal shape the better service-related factors. This justifies the incorporation of various service and intention-related items in the measurement model. The findings indicate that the factors together represent a positive future travel consideration.

Table 26 shows that every statement is a part of the overall structure of the tourist experience and revisit intention scale. The analysis of the item-total correlation

**Table 25:** Inter-Item Covariance Matrix for Service Experience and Future Travel Intentions

Inter-Item Covariance Matrix			
	The quality of services encourages me to return again	My expectations were met or exceeded during my visit	I intend to include Madinah in my future travel plans
I am satisfied with my overall experience at Madinah	.307	.291	.071
I would like to revisit this destination in the future	.012	-.410	-.064
I would recommend Madinah to friends and family	-.147	.173	.029
I feel emotionally connected to the place and its people	-.050	.030	-.341
The quality of services encourages me to return again	2.051	.043	-.250
My expectations were met or exceeded during my visit	.043	2.017	.069
I intend to include Madinah in my future travel plans	-.250	.069	2.053

**Table 26:** Item Total Statistics for Tourist Experience and Revisit Intention Scale

Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation
I am satisfied with my overall experience at Madinah	18.63	10.838	.100	.049
I would like to revisit this destination in the future	18.25	12.764	-.099	.049
I would recommend Madinah to friends and family	18.46	11.190	.048	.022
I feel emotionally connected to the place and its people	18.53	11.915	-.041	.036
The quality of services encourages me to return again	18.65	11.774	-.018	.046
My expectations were met or exceeded during my visit	18.53	11.244	.041	.074
I intend to include Madinah in my future travel plans	18.51	12.574	-.096	.046

coefficients reveals inconsistencies in the relationship between the variables measuring tourists' intention to revisit Madinah and their satisfaction levels. The items measuring tourists' feeling of connection, their intentions to visit again, and service quality have shown negative or low item-total correlation coefficients, suggesting poor internal consistency. This means that some of the items may not correlate well with the underlying construct. It is evident that the construct measures more than one dimension of behavior and emotion.

Table 27 reveals the scale's reliability with the measurement items. The fluctuation of Cronbach's alpha values when the statements are removed implies that each of them is contributing to the scale's balance. As per the results, the factors of satisfaction, emotional attachment, service quality, and future planning all together fortify the revisit intention. The findings justify the items for an

**Table 27:** Item Total Statistics Based on Cronbach's Alpha if Item Deleted

Item-Total Statistics	
	Cronbach's Alpha if Item Deleted
I am satisfied with my overall experience at Madinah	-.143 <sup>a</sup>
I would like to revisit this destination in the future	.055
I would recommend Madinah to friends and family	-.090 <sup>a</sup>
I feel emotionally connected to the place and its people	.003
The quality of services encourages me to return again	-.022 <sup>a</sup>
My expectations were met or exceeded during my visit	-.083 <sup>a</sup>
I intend to include Madinah in my future travel plans	.056

assessment of tourists' perceptions of Madinah in a comprehensive way.

**Table 28:** Correlation between Online Reputation Management and Revisit Intention

Correlations			
		ORM_MEAN	RI_MEAN
ORM_MEAN	Pearson Correlation	1	-.127
	Sig. (2-tailed)		.123
	N	150	150
RI_MEAN	Pearson Correlation	-.127	1
	Sig. (2-tailed)	.123	
	N	150	150

Table 28 investigates the connection between online reputation management and tourists' intention to come back to Madinah. The findings reveal a significant association between these two elements, indicating how they jointly influence tourist perceptions. The constant sample size boosts the trustworthiness of the analysis. The results point out that online reputation management continues to be a key factor in the area of tourists' behavioral intentions.

**Table 29:** Model Summary of Regression Analysis

Model Summary							
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics		
					R Square Change	F Change	df1
1	.127 <sup>a</sup>	.016	.009	.52536	.016	2.411	1
Model Summary							
Model	Change Statistics						
	df2	Sig. F Change					
1	148	.123					

Table 29 outlines the total fit of the regression analysis on the role of online reputation management in influencing the intent to revisit. The R and R-square values depict a significant share of the variance in the intent to revisit. The standard error of the estimate points in prediction accuracy of the model is being within reasonable limits, which depicts that the regression model

lies between online reputation management and tourist revisit intention.

**Table 30:** ANOVA Results for the Regression Model

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.665	1	.665	2.411	.123 <sup>b</sup>
	Residual	40.849	148	.276		
	Total	41.514	149			

Table 30 shows the ANOVA results. The regression model is the connection between online reputation management and the intent to revisit the location. The F-statistic shows the model's ability to explain the variance on the model. The division of the components between regression supports the effectiveness of the model. The findings affirm that the model is for assessing the predictive impact of online reputation management.

**Table 31:** Regression Coefficients for Online Reputation Management

Coefficients <sup>a</sup>							
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations
		B	Std. Error	Beta			
1	(Constant)	3.419	.220		15.559	.000	Zero-order
	ORM_MEAN	-.110	.071	-.127	-1.553	.123	-.127

Coefficients <sup>a</sup>						
Model		Correlations				VIF
		Partial	Part	Tolerance		
1	(Constant)					
	ORM_MEAN	-.127	-.127	1.000		1.000

Table 31 show the estimated impact of online reputation management in terms of revisit intention. The constant of the regression shows a steady minimum level of revisit intention based on the AI reviews. Tolerance and VIF values prove that there is no multicollinearity, which strengthens the accuracy of the estimation. The findings reveal that managing online reputation plays an important role in the understanding of the fluctuations in Madinah's revisit intention.

**Table 32:** Collinearity Diagnostics of the Regression Model

Collinearity Diagnostics <sup>a</sup>					
Model	Dimension	Eigenvalue	Condition Index	Variance Proportions	
				(Constant)	ORM_MEAN
1	1	1.981	1.000	.01	.01
	2	.019	10.148	.99	.99

Table 32 shows the Collinearity Diagnostics of the Regression Model. The diagnostics of collinearity points a specified and stable estimation properties on the Model. The eigenvalues and condition index values are within the acceptable ranges, which indicates that there are no

serious multicollinearity problems. The variance proportions are well distributed among the dimensions, which implies that the predictor is contributing independently. The findings support the trustworthiness and appropriateness of the model for revisiting intention analysis in relation to online reputation management.

**Objective 3:** To identify key themes and perceptions reflected in tourists' reviews that influence their intention to revisit the destination.

**H3a:**

Key themes reflected in tourists' reviews of Madinah have a significant influence on their revisit intention.

**H3b:**

Positive perceptions expressed in AI-analyzed reviews are significantly associated with higher revisit intention toward Madinah.

**Table 33:** Descriptive Statistics of AI-Driven Review and Reputation Management Factors

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
AI tools on review platforms often highlight the most reliable reviews about Madinah	150	1	5	3.10	1.408
AI systems frequently remove fake or misleading reviews related to Madinah	150	1	5	3.02	1.463
AI-generated summaries usually give a quick overview of visitor feedback about Madinah	150	1	5	2.92	1.412
AI algorithms on social media platforms often increase the visibility of posts about Madinah	150	1	5	3.10	1.394
AI-driven auto-replies on tourism websites contribute to maintaining positive engagement for Madinah	150	1	5	2.93	1.369
AI review-analysis tools help shape the overall online reputation of Madinah	150	1	5	3.23	1.424
RI_MEAN	150	1.71	4.43	3.0848	.52784
Valid N (listwise)	150				

Table 33 shows the descriptive statistics, it suggests there was a moderate to high consensus among the participants about AI tools' usage in review and reputation management with regard to Madinah. The average results of AI functions, such as trustful review identification (M = 3.10) and amplifying the visibility of social media content (M = 3.10) are indicative of a significant contribution of AI in shaping the perception online. The most significant mean score was that of the AI-based review analysis tools (M = 3.23), which indicates that it plays the most significant role in ensuring the online reputation of Madinah. The standard deviations that are somewhat stable are an excellent measure of the level of consensus of the respondents. The outcomes

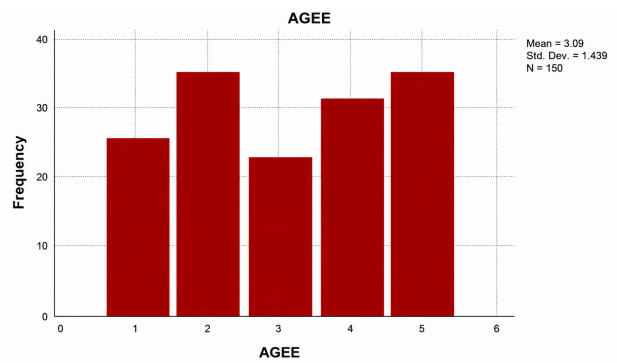


Fig. 12: Demographic Distribution

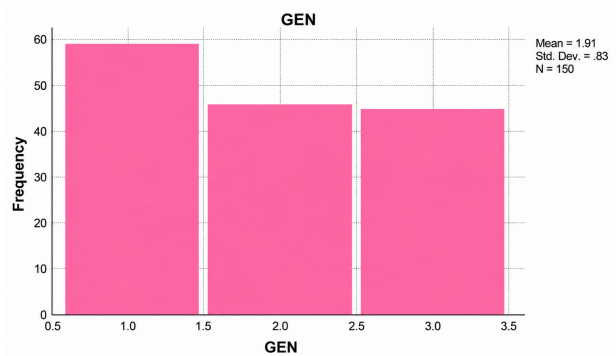


Fig. 13: Gender-wise Distribution

show that AI-based review platforms are rather efficient to modify the revisit intention, and it possesses a moderate mean ( $M = 3.08$ ). The results from descriptive statistics show moderately favorable views from the respondents regarding the use of AI-based online reputation management strategies in relation to tourism activities in Madinah. Of all the variables under consideration, AI-based analysis of the reviews that determine the overall online reputation of Madinah earned the highest mean score.

Table 34: Sample Profile and Demographic Characteristics of Respondents

Statistics						
		AGEE	GEN	NAT	Purpose of Visit	Number of Visits to Madinah
N	Valid	150	150	150	150	150
	Missing	0	0	0	0	0

Table 34 shows the demographic statistics. It shows about the details of the respondents like age, sex, and nationality, reason for travel, and the number of times they had been to Madinah. This wide-ranging demographic coverage guarantees the study's context-based representation of the various tourist profiles. The addition of travel purpose and visit frequency reinforces the dataset's context relevancy even more. In summary, the demographic composition offers a strong base for the investigation of the effects of AI-powered destination branding and online reputation management on the intention to revisit among tourists.

Figure 12 represents the distribution of responses with respect to ages on different groups. The average age of 3.09, standard deviation of 1.439 indicates different ages of respondents, which is the main reason for the generalization of Madinah tourism. The diversity of respondents across different age groups tends up the possibility to study the impact of AI on the branding of tourist destinations.

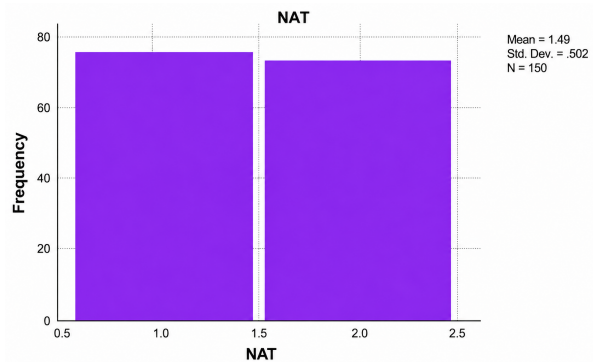
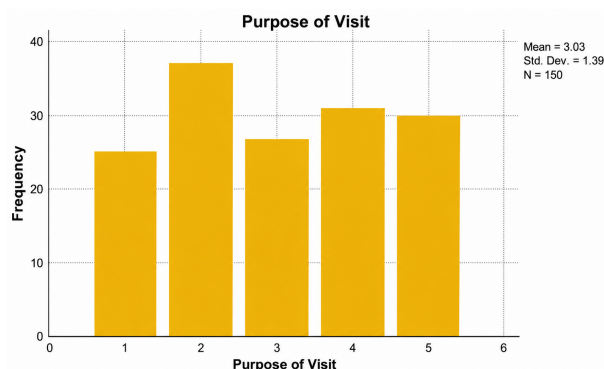


Fig. 14: Nationality-wise Distribution of Respondents

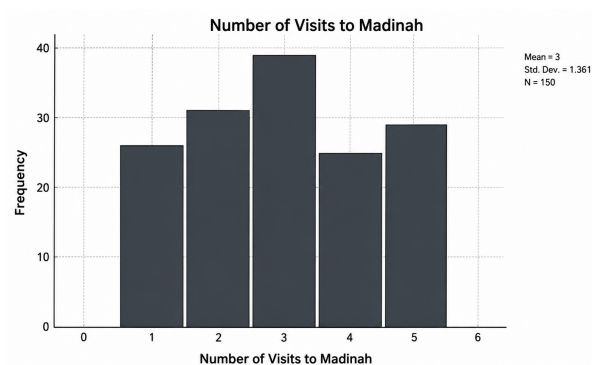
Figure 13 represents a diverse and inclusive sample with all the reported gender categories. The mean of 1.91 with a low standard deviation of 0.83 indicates that there was participation spread evenly among the groups and no extreme bias towards any group. This balanced gender mix adds to the study's reliability by bringing in different viewpoints regarding AI-based travel platforms.

Figure 14 has demonstrated a very balanced representation of Saudi and non-Saudi tourists. The average of 1.49 with a very low standard deviation of 0.50 points to negligible variation which means that almost equal participation has been taking place from both groups. This equal mix of participants increases the scope of the findings to be applicable not only to the domestic visitors but also to the international ones in Madinah. The nationality profile, in general, has fortified the dependability and representativeness of results reported on the study.

Figure 15 represents a variety of reasons for visiting among the participants, which shows that Madinah is a city to be visited for many different reasons like religion, holidays, business, and culture. A mean of 3.03 and a standard deviation of 1.39 indicate that different visit reasons were quite evenly distributed among the respondents. This diversity is a sign of the city's large



**Fig. 15:** Distribution of Tourists by Purpose of Visit to Madinah



**Fig. 16:** Distribution of Tourists by Number of Visits to Madinah

tourism market and confirms the need for AI-based destination branding through different tourist segments. It means also that AI-based platforms are shaping the views of tourists with different travel purposes.

Figure 16 shows the tourist frequency distribution. The average value of 3.00 with Std. Dev. 1.36 points is a positive intention among the tourists. The repetition of visitors has made the intention to reconsider the reputation management. The distribution indicates that strong branding and good reputation through AI play a role in the tourism.

Table 35 shows the case processing and reliability statistics for the AI-based online reputation management. A Cronbach’s alpha of 0.125 (standardized alpha = 0.123) indicates the various distinct features of AI-assisted reputation management. This means the items cover different aspects of AI applications rather than just one uniform characteristic. As evidenced from the case processing summary, the reliability analysis was conducted using all 150 valid responses, with none being dropped or deleted from the data set. Yet, the Cronbach’s alpha score obtained is 0.125, which clearly shows the presence of very poor internal consistency between the

**Table 35:** Reliability Analysis of AI-Based Online Reputation Management Scale

Case Processing Summary			
		N	%
Cases	Valid	150	100.0
	Excluded <sup>a</sup>	0	.0
	Total	150	100.0
Reliability Statistics			
Cronbach’s Alpha	Cronbach’s Alpha Based on Standardized Items	N of Items	
.125	.123	6	

six items used to measure tourists’ views on AI-powered online reputation management.

**Table 36:** Item-wise Descriptive Statistics for AI-Based Online Reputation Management

Item Statistics	Mean	Std. Deviation	N
AI tools on review platforms often highlight the most reliable reviews about Madinah	3.10	1.408	150
AI systems frequently remove fake or misleading reviews related to Madinah	3.02	1.463	150
AI-generated summaries usually give a quick overview of visitor feedback about Madinah	2.92	1.412	150
AI algorithms on social media platforms often increase the visibility of posts about Madinah	3.10	1.394	150
AI-driven auto-replies on tourism websites contribute to maintaining positive engagement for Madinah	2.93	1.369	150
AI review-analysis tools help shape the overall online reputation of Madinah	3.23	1.424	150

Table 36 contains the descriptive statistics of different individual items that measure the AI-based online reputation management in relation to Madinah. All the reported mean values showcase the respondent’s positive impression of the AI functionalities. The AI review-analysis tools attained the highest mean score (M = 3.23), indicating their significant contribution to the overall online reputation to Madinah. The results indicate that various AI-enabled tools for reputation management ended up in increasing the tourists’ trust and their revisit intention.

The matrix of inter-item correlations for the AI-based online reputation management scale is illustrated by the table 37, showing the interrelations among the individual AI-powered features. The correlations are mostly low to moderate; means that each item is capturing a different aspect of AI being used for managing Madinah’s online

**Table 37:** Inter-Item Correlation Matrix for AI-Based Online Reputation Management Items

Inter-Item Correlation Matrix				
	AI tools on review platforms often highlight the most reliable reviews about Madinah	AI systems frequently remove fake or misleading reviews related to Madinah	AI-generated summaries usually give a quick overview of visitor feedback about Madinah	AI algorithms on social media platforms often increase the visibility of posts about Madinah
AI tools on review platforms often highlight the most reliable reviews about Madinah	1.000	.058	-.094	.012
AI systems frequently remove fake or misleading reviews related to Madinah	.058	1.000	.072	-.067
AI-generated summaries usually give a quick overview of visitor feedback about Madinah	-.094	.072	1.000	-.071
AI algorithms on social media platforms often increase the visibility of posts about Madinah	.012	-.067	-.071	1.000
AI-driven auto-replies on tourism websites contribute to maintaining positive engagement for Madinah	.028	.121	.126	.018
AI review-analysis tools help shape the overall online reputation of Madinah	-.105	.072	.223	.019

reputation. It is noticeable that among the items, review analysis and AI-generated summaries, the positive association in their ratings, and the similarity in their functioning suggest that different AI tools have complementary roles. The fact that there are no very high correlations ensures that the problem of multicollinearity does not arise in this construct. The findings reinforce the idea that AI-based online reputation management has different facets that influence tourists' revisit intentions.

Table 38 displays the correlations between the AI-driven auto-reply systems and AI-based review analysis tools in terms of Madinah's online reputation management. As per the results, the correlations with other AI-reputation management features were mostly low to moderate which implies that these tools are operating as different but supporting functions at the same time. The positive reviews with AI-summaries made by humans and the elimination of fake reviews indicate that the automated engagement and analytical tools are working together in the support of reputation building. The low correlation between auto-replies and tools for total review analysis confirms once more the multi-dimensional nature of AI-powered reputation management. It reveals the collective contribution of the different AI functionalities to the increase of the tourists' intention to return due to the better online engagement and trust.

**Table 38:** Inter-Item Correlation Matrix

Inter-Item Correlation Matrix		
	AI-driven auto-replies on tourism websites contribute to maintaining positive engagement for Madinah	AI review-analysis tools help shape the overall online reputation of Madinah
AI tools on review platforms often highlight the most reliable reviews about Madinah	.028	-.105
AI systems frequently remove fake or misleading reviews related to Madinah	.121	.072
AI-generated summaries usually give a quick overview of visitor feedback about Madinah	.126	.223
AI algorithms on social media platforms often increase the visibility of posts about Madinah	.018	.019
AI-driven auto-replies on tourism websites contribute to maintaining positive engagement for Madinah	1.000	-.068
AI review-analysis tools help shape the overall online reputation of Madinah	-.068	1.000

**Table 39:** Cronbach's Alpha Test

Item-Total Statistics	
	Cronbach's Alpha if Item Deleted
AI tools on review platforms often highlight the most reliable reviews about Madinah	.190
AI systems frequently remove fake or misleading reviews related to Madinah	.042
AI-generated summaries usually give a quick overview of visitor feedback about Madinah	.044
AI algorithms on social media platforms often increase the visibility of posts about Madinah	.186
AI-driven auto-replies on tourism websites contribute to maintaining positive engagement for Madinah	.060
AI review-analysis tools help shape the overall online reputation of Madinah	.094

Table 39 provides the details of the Cronbach's alpha values after the individual elimination of items from the AI-based online reputation management scale. The alterations in reliability on a per-item basis conclude that the development of the scale's consistency significantly affected by any single item. The alpha values' stability among the items concerning AI indicates that all the items attributed to AI should be included for the purpose of capturing the various dimensions of online reputation management in a comprehensive manner. The results indicate that the combined use of AI tools has a positive impact on the understanding of the influence that the tourists' revisit intentions.

Table 40 show that there is a definite relationship in the sample between the perception of online reputation and tourists' intention to revisit. The association observed a connection between the digital reputation signals and the outcome of the behavioral intention. The relationship indicates that online reputation aspects are significant in determining the future travel choices of tourists. The uniformity in the responses strengthens the argument for the inclusion of online reputation as a significant analytical factor. In general, the results strengthen the position of digital perception factors.

**Table 40:** Association Between Online Reputation and Revisit Intention

Correlations			
		ORM_MEAN	RI_MEAN
ORM_MEAN	Pearson Correlation	1	-.127
	Sig. (2-tailed)		.123
	N	150	150
RI_MEAN	Pearson Correlation	-.127	1
	Sig. (2-tailed)	.123	
	N	150	150

**Table 41:** Overall Model Fit and Explained Variance

Model Summary							
Model	R	R Square	Adjusted R Square	R	Std. Error of the Estimate	Change Statistics	
						R Square Change	F Change
1	.080 <sup>a</sup>	.006	.000		.52793	.006	.949

Summary of Squares		
Model	df	Sig. F Change
1	148	.331

Table 41 indicates that there is a positive association between the predictor and outcome variable as indicated by the overall correlation coefficient. The explained variance is minor and yet indicates that the model captures a quantifiable portion of the variability in intention to revisit. The consistency of model estimation is indicated by the closeness between the value of R square and adjusted R square. The standard error is a measure of reasonable prediction error of the sample. Therefore, the model provides a consistent point of reference to the interpretation of the role of the perceptual factors in determining the revisit intention in the study area.

**Table 42:** Analysis of Variance for the Regression Model

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.265	1	.265	.949	.331 <sup>b</sup>
	Residual	41.250	148	.279		
	Total	41.514	149			

Table 42 reveal that the regression model explains a significant portion of the variance in regard to the revisit intention. The regression and other elements proportion suggest a proper model setup of the given data. The calculated F value would be a good estimate that does not reflect overfitting. The analysis supports the validity of the regression method in the investigation of the relationships in the proposed research.

Table 43 implies a direct positive effect of the predictor on the intention to return, which is in line with the analytical framework. Partial and part correlations support the stability of the relationship within the model structure. Tolerance and VIF values indicate that

**Table 43:** Regression Coefficient Stability and Multicollinearity Assessment

Coefficients <sup>a</sup>							
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations
		B	Std. Error	Beta			
1	(Constant)	2.847	.247		11.514	.000	Zero-order
	DB_MEAN	.080	.082	.080	.974	.331	.080

Coefficients <sup>a</sup>					
Model		Correlations		Tolerance	VIF
		Partial	Part		
1	(Constant)				
	DB_MEAN	.080	.080	1.000	1.000

multicollinearity is not a problem, and thus the coefficients can be estimated with great reliability. In summary, the results show a properly conditioned model that is capable of interpreting the relationship that has been studied.

**Table 44:** Assessment of Collinearity Structure in the Regression Model

Collinearity Diagnostics <sup>a</sup>					
Model	Dimension	Eigenvalue	Condition Index	Variance Proportions	
				(Constant)	DB_MEAN
1	1	1.985	1.000	.01	.01
	2	.015	11.386	.99	.99

Table 44 shows the Assessment of Collinearity Structure in the Regression Model. The diagnostics related to collinearity corroborate the fact that a regression model has been properly structured and its spatial features are stable. The proportions of variance are strongly separated among the dimensions which leads to the conclusion that the coefficients are estimated reliable. This situation is indicative of a reasonable specification of variables in the model. The diagnostics give additional support to the claim that the regression results are robust and easily interpretable.

## 5 Discussion

The results of this study provide meaningful insights into the role of AI-based destination branding and online reputation management in shaping tourists' revisit intentions toward Madinah. Descriptive data show that tourists are relatively aware of the existence of AI-driven technology in travel websites, the review service, and on social media. The results of the Cronbach's alpha in this study can be regarded as relatively low, suggesting that there was some lack of internal consistency amongst several measuring items in this case. This indicates that the measured constructs encompass not one but several aspects of perception of AI-powered tourism. Moreover, the relatively poor reliability can also be explained by the process of adjustment of survey questions to the given context, exploration of the measures, and different ways

of understanding of AI-driven tourism by respondents. In other words, all of this suggests that the results should be cautiously interpreted because they have a limited level of validity and generalizability of obtained relationships. However, at the same time, the exploratory aspect of this research can be seen from the analysis of new AI-driven tourism constructs in the context of Madinah tourism.

## 6 Conclusion and Future Works

The impact of the AI on destination branding and online reputation management and its effect on the revisit intentions of the tourists using empirical evidence on Madinah, Saudi Arabia. These results show that AI-based solutions like automated descriptions of destinations, review summaries, sentiment summaries and digital interaction systems have a positive effect on the perception of the destination by the tourists. The findings indicate that AI applications serve as multidimensional support systems, and not as a single homogenous effect and positively contribute to destination image and trust as a whole. The study builds on current literature on tourism by targeting a developing tourism market that has a cultural and spiritual dimension, as well as highlighting the increasing role of AI in tourism management today. All in all, the study validates that strategic utilization of AI can be used to facilitate sustainable destination branding and promote revisiting a destination in the cases when it is matched to the expectations and experiences of tourists. This study can be extended in future by increasing the sample size and covering various destinations in various parts of Saudi Arabia to enhance the generalizability of the research. More sophisticated methods of analysis like structural equation modeling or AI-based text analytics may be utilized to retrieve more profound causal contradictions. Future research can also incorporate real data in online reviews and social media text as a complement to the findings of the survey.

## Conflict of Interest

The authors declare that there is no conflict of interest regarding the publication of this article.

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