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Table Of Contents

Journal Cover	1
Author[s] Statement	3
Editorial Team.....	4
Article information	5
Check this article update (crossmark)	5
Check this article impact.....	5
Cite this article.....	5
Title page.....	6
Article Title.....	6
Author information	6
Abstract	6
Article content.....	6

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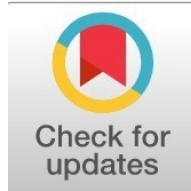
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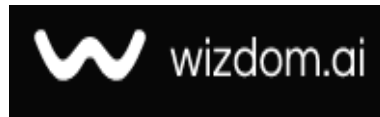
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Optimizing Big Data for Human Resource Development in Madura's Halal Tourism

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Abstract

General Background: Halal tourism has emerged as a strategic sector for enhancing regional competitiveness, particularly in Madura, where religious and cultural values form a strong foundation. **Specific Background:** Despite its potential, the development of halal destinations in Madura faces challenges related to the limited digital literacy and managerial capacity of local human resources. **Knowledge Gap:** Previous studies on the use of big data in tourism have mainly focused on digital business contexts, leaving a gap in understanding its role in strengthening human resources within halal tourism, especially in localized settings. **Aims:** This study aims to formulate strategies for improving the quality of halal tourism human resources through big data utilization using SWOT analysis. **Results:** Findings show that big data enhances the capacity of destination managers by enabling trend identification, targeted training, and data-driven decision-making. The analysis produced four strategies—aggressive, diversification, defensive, and survival—focusing on service innovation, capacity building, data security, and collaboration. **Novelty:** This research offers an integrative model linking digital technology and religious-cultural values for halal tourism management. **Implications:** The study contributes to academic discourse on digital-based destination management and provides practical insights for policymakers and stakeholders to strengthen Madura's competitiveness in sustainable halal tourism.

Highlights:

- Strengthens HR quality through big data-driven strategies. Instagram fosters active,
- Integrates digital innovation with local religious values.
- Enhances Madura's competitiveness in halal tourism development.

Keywords: Big Data, Human Resources, Halal Tourism, SWOT Analysis

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Introduction

Halal tourism has become an important phenomenon in the development of the global tourism industry, especially in countries with a Muslim majority population such as Indonesia [1], [2]. Madura, as one

of the regions in East Java, has great potential to be developed as a halal tourism destination due to the socio-cultural characteristics of its religious people and the presence of a number of Islamic-themed tourist attractions [3], [4]. However, this potential has not been optimally utilized. One of the main obstacles lies in the quality of the human resources (HR) managing this sector [5], [6]. Many tourism managers do not yet have adequate skills in utilizing digital technology, especially big data, to understand the increasingly diverse needs of Muslim tourists [7], [8], [9], [10]. In fact, the proper use of digital data can map tourist trends, improve service quality, and strengthen competitiveness [11], [12], [13]. This condition indicates a large gap between the potential and reality of halal tourism management in Madura, so it is important to conduct research on big data strategies to build the quality of human resources in this sector [14].

The importance of this research can be seen from its strategic position in the big map of tourism and digital economy studies [15], [16]. Academically, research on the integration of big data in the development of halal tourism is still limited, so this study can broaden the theoretical perspective on how digital technology supports the management of destinations based on Islamic values [17], [18]. Practically, this issue is highly relevant to regional needs in increasing the competitiveness of the tourism sector [19], [20]. Amidst increasing competition for halal destinations, data-based management is a necessity to ensure more personalized, effective, and internationally-standardized tourism services [21], [22], [23]. Madura, which is currently striving to improve the regional economy, can make this strategy a real step to strengthen the leading sectors [24], [25], [26]. Therefore, this research contributes not only to academic literature but also to the practice of regional development policy. By linking technological, social, and religious aspects, this research holds a crucial position in addressing contemporary scientific needs and practical challenges in the field.

To maintain the focus of the study, this research limits the scope of the problem to the implementation of big data in halal tourism management in Madura. The research locations were two main destinations: Lobuk Beach in Bangkalan and Lon Malang Beach in Sampang, which are considered representative of the condition of the halal tourism sector in Madura. The research focuses on how SDI (tourism managers) utilize big data technology to improve service quality, identify tourist needs, and formulate development strategies [27], [28]. The aspects studied do not cover all dimensions of halal tourism in Madura, such as overall physical infrastructure or macro-level government policies, but rather emphasize the role of humans as managers and the use of digital data as an instrument for increasing capacity [21], [29], [30]. With these limitations, research is expected to be more focused and produce applicable findings, without being trapped in a scope that is too broad and difficult to measure empirically.

Previous studies have shown several relevant general patterns. Several studies have found that the use of big data plays a significant role in supporting digital business innovation because it can quickly detect market trends and consumer preferences [31]. Furthermore, big data is considered crucial in decision support systems, both at the managerial and operational levels, as it enables real-time data-driven decision-making

[32]. The integration of big data with artificial intelligence (AI) has been proven to improve the performance of organizational management information systems, thereby creating higher efficiency and competitiveness [33]. However, previous studies have generally been limited to the context of digital business or general organizational management, with not many focusing on halal tourism, especially in a local context such as Madura. This opens up space for new research to fill this gap by presenting a different, more specific and contextual perspective.

This research is aimed at formulating a strategy for utilizing big data in developing the quality of human resources (HR) for halal tourism in Madura [34], [35], [36]. The main focus of the study is to understand how data technology can be integrated into halal destination management, while simultaneously developing relevant strategies to strengthen the capacity of managers. [37], [38]. Through a SWOT analysis approach, this study assesses the internal and external conditions that influence Madura's halal tourism sector, with the ultimate goal of producing an applicable strategic framework [39], [40]. The main argument underlying this research is that the more optimal the utilization of big data, the higher the capability and professionalism of SDI in providing adaptive, innovative, and Sharia-compliant halal services. Big data is believed to not only be able to more accurately understand tourist needs but also support the development of data-driven training and strategic decision-making [41], [42]. By examining the relationship between digital technology and local religious values, this research is expected to enrich the academic literature and provide practical guidance for the government, academics, and business actors in strengthening the competitiveness of sustainable halal tourism.

Method

The quality of human resources (HR) involved in managing halal tourism in Madura This research focuses on two destinations: Lobuk Beach in Bangkalan Regency and Lon Malang Beach in Sampang Regency. These locations were chosen based on the consideration that both represent strong halal tourism potential, while also demonstrating limitations in the use of digital technology [43], [44]. Thus, this research is directed not only at describing the halal tourism phenomenon in general, but more specifically at how big data can be utilized to strengthen the capacity of SDI in service, management, and destination strategy development.

This research uses a descriptive qualitative approach to understand social phenomena in a real context and explores in more depth the practices, experiences, and strategies of halal tourism managers in facing the digital era [45]. The focus of the research was not directed at quantitative measurements, but rather on interpreting data obtained from the field to formulate relevant and applicable strategies. With this approach, the research was able to explore how big data is understood, accessed, and used by managers to improve the capacity of human resources in these halal destinations.

The research data was sourced from primary and secondary sources. Primary data was collected through in-depth interviews with destination managers, tourism officials, community leaders, and tourists.

Field observations were also conducted to directly observe service conditions, visitor interactions, and halal management practices [46]. Secondary data was obtained from academic literature, official government documents, and digital data from online platforms such as Google Trends, Instagram, TikTok, and YouTube, which are used to track tourist trends. The combination of these two types of data allows the study to obtain a more comprehensive picture of the implementation of big data in halal tourism in Madura [47].

Data collection was conducted using three main techniques: observation, interviews, and documentation. Direct observations were conducted at Lobuk Beach and Lon Malang Beach to record halal management and service activities. Semi-structured interviews with managers, government officials, and tourists were used to explore experiences, obstacles, and implemented strategies [48]. Documentation includes archives, official reports, field photographs, and digital data from social media related to halal tourism activities. The entire data collection process was conducted repeatedly to maintain consistency and reinforced with triangulation to ensure the validity of the findings [49].

Data analysis was conducted using a qualitative descriptive approach combined with the SWOT technique. Data from observations, interviews, and documentation were first reduced, then grouped into internal factors (strengths and weaknesses) and external factors (opportunities and threats). Each factor was weighted and rated using the Internal Factor Analysis Summary (IFAS) and External Factor Analysis Summary (EFAS) matrices to assess its significance. The results were then mapped onto a SWOT diagram to formulate strategies for strengthening human resources [48]. In this way, the research not only produces an in-depth description of field conditions but also provides applicable strategic recommendations for the development of big data-based halal tourism in Madura.

Result and Discussion

This Data analysis revealed the dynamics of Madura's halal tourism management, influenced by a combination of socio-cultural factors and limited digital capacity. A SWOT analysis combined with the Internal Factor Analysis Summary (IFAS) and External Factor Analysis Summary (EFAS) matrices was used to identify relevant strengths, weaknesses, opportunities, and threats. Initial results indicate that the community's religiosity and commitment are quite strong, but data technology has not yet been fully integrated into managerial practices.

These findings were then interpreted through dialogue with halal tourism management theory and previous research. This approach yielded an understanding that big data is not merely a technological instrument but also a strategic element in shaping human resource capacity and destination competitiveness. The contribution of this research lies in the formulation of a strategy grounded in empirical conditions while also anchored in a broader academic framework. In this way, the analysis provides practical, applicable recommendations for the development of halal tourism in Madura, while also adding to the literature on the integration of digital technology and local value-based tourism.

1. Destination Profile and Socio-Cultural Context

Before further elaborating on the internal and external factors influencing halal tourism management in Madura, a preliminary understanding of the characteristics of the research destination and the socio-cultural context of the local community is necessary. The destination description provides a description of its natural potential and tourist attractions, while the socio-cultural context emphasizes how community religious values can serve as both capital and constraints in halal tourism development. This initial framework serves as an important foundation for assessing human resource (HR) capacity and the opportunities for implementing big data-based strategies in management practices.

a. Characteristics of Halal Tourism Destinations in Madura

Madura Island boasts numerous tourist destinations with the potential to be developed within the framework of halal tourism. Its geographical characteristics, including a long coastline with numerous pristine beaches, make Madura a unique attraction, especially for tourists seeking a pristine, unspoiled atmosphere. Of the many options, this study focused on two destinations: Lobuk Beach in Bangkalan and Lon Malang Beach in Sampang. These two destinations were chosen because they are quite popular among local residents, have relatively stable visitor numbers, and reflect the overall state of halal tourism management in Madura.

Lobuk Beach is known for its relatively well-preserved natural beauty. Its long coastline, white sand, and fishing village atmosphere make it attractive not only for nature tourism but also for experiencing local culture. This potential significantly supports its halal image, as the local community is known for upholding values of politeness in social interactions. Meanwhile, Lon Beach in Malang offers the attraction of family-friendly waves, plus the presence of local food stalls, most of which serve halal menus tailored to local tastes. However, despite their significant potential, both destinations are still managed traditionally. Tourism promotion is limited to the personal social media platforms of the managers or the community, with no system for recording visitor data or analyzing tourist trends. This situation highlights a clear gap between the natural potential of the area and modern, technology-based management.

b. Socio-Cultural Dynamics of Society in Supporting Halal Tourism

One of Madura's main strengths as a halal destination is the religious character of its people. Social life in Madura is heavily influenced by Islamic values, from daily practices and etiquette to forms of entertainment. This provides a strong foundation for the development of halal tourism, as Sharia principles have become part of the community's customs and behavior. This support is evident, for example, in the availability of places of worship near tourist attractions, the assurance of halal food for sale, and the relatively family-friendly atmosphere. These factors provide a distinct advantage over tourist destinations that must first adapt to halal standards.

Local communities also demonstrate their participation in destination management, both individually and through small groups such as tourism awareness groups. This participation typically takes the form of maintaining beach cleanliness, helping provide basic facilities for tourists, or managing simple activities like boat rentals and food stalls. This involvement demonstrates a social concern for destination development. However, existing participation patterns remain more traditional and less data-driven. For example, managers are not yet accustomed to documenting visit numbers, recording visitor profiles, or utilizing data from digital platforms to tailor services. As a result, the community's significant contribution has not been directed toward improving the destination's competitiveness in the digital age.

c. Existing Conditions of SDI-Based Management

The current state of halal tourism management in Madura relies heavily on limited local human resources. The majority of managers are local residents who rely on personal experience to carry out tourism activities. Their relatively low level of formal education limits their digital literacy. Destination promotion is carried out simply by uploading photos or information to social media platforms like Facebook, Instagram, or WhatsApp. Unfortunately, these activities are carried out without a clear strategy, let alone analysis of visitor data. As a result, despite efforts to utilize technology, the results have not been able to significantly increase tourist appeal.

Furthermore, there is no formal system for managing tourism data, whether in the form of visitor records, service preferences, or market trends. This information is crucial for designing development strategies based on the real needs of tourists. This situation highlights a serious gap: on the one hand, Madura has a religious community and natural destinations with significant potential for halal tourism; on the other hand, the limited capacity of the Human Resources (SDI) in terms of digitalization means that management remains far from modern standards. Without interventions such as training, mentoring, and the application of big data, this potential is feared to be underdeveloped. Therefore, this existing picture serves as an important basis for research to formulate strategies for strengthening the SDI based on digital data.

2. Analysis of Internal and External Factors in Halal Tourism Management

After gaining an understanding of the destination profile and the socio-cultural conditions of the Madurese community, the analysis phase focused on identifying internal and external factors influencing halal tourism management. This step is crucial because it allows for mapping the inherent strengths and weaknesses of local human resources (HR), while simultaneously highlighting the opportunities and threats arising from external dynamics. This approach allows for a more objective description of potential and constraints, providing a strong foundation for formulating contextual development strategies.

Internal factors encompass aspects within the management framework, such as human resource capacity, management commitment, and limitations in digital infrastructure. Conversely, external factors include government support for digital transformation, global trends in halal tourism, and the challenges of competition with other destinations. This analysis goes beyond the identification stage but also emphasizes

the interconnectedness of internal and external factors, allowing for a clearer mapping of Madura's halal tourism strategic position. The results of this mapping then serve as the basis for developing the IFAS and EFAS matrices in the subsequent stages.

a. Strengths and Weaknesses of SDI in the Context of Digitalization

The quality of human resources (HR) is one of the most crucial factors in managing halal tourism in Madura. Research findings reveal both strengths and weaknesses that influence the use of big data to support destination development. From a strength perspective, big data has significant potential to help managers understand tourist trends and needs, enabling more targeted services. Digital data also enables improvements in HR quality through targeted training tailored to real needs. Furthermore, the Madurese community's religious culture provides important social capital, as implementing halal principles is relatively easier with the support of deeply rooted religious values. Big data can also strengthen strategic decision-making in halal tourism management, while managers demonstrate a commitment to adapting to digital services, despite limited resources.

Meanwhile, significant weaknesses were also identified. Limited digital capabilities among managers have prevented optimal use of big data. Unequal distribution of technology, particularly in tourist areas far from city centers, further hinders real-time data processing. Lack of collaboration among stakeholders also prevents data from being managed collectively. Furthermore, managers' data analysis skills remain low, hindering the development of innovative halal services. Funding also exacerbates the situation, as insufficient budgets for servers, software, and regular training hinder the acceleration of digitalization in halal tourism.

Table 1. Internal Factor Analysis (Strengths & Weaknesses) of Madura Halal Tourism Management.

No.	STRENGTHS	WEAKNESSES
	Information	Information
1.	The limited digital capabilities of Madura tourism managers hamper the use of <i>big data</i> .	The limited digital capabilities of Madura tourism managers hamper the use of <i>big data</i> .
2.	Uneven distribution of technology makes data utilization in tourism less than optimal.	Uneven distribution of technology makes data utilization in tourism less than optimal.
3.	Lack of cooperation means that data has not been optimally utilized.	Lack of cooperation means that data has not been optimally utilized.
4.	Tourism managers lack skills in data analysis, resulting in less innovative halal services.	Tourism managers lack skills in data analysis, resulting in less innovative halal services.
5.	funding for servers, <i>software</i> , and training for halal tourism managers.	funding for servers, <i>software</i> , and training for halal tourism managers.

The analysis in the table above shows that Madura's halal tourism strength relies heavily on social capital and deeply ingrained religious values within the community. This strength is further enhanced by the potential for leveraging big data, which, if used appropriately, can significantly improve service quality and the capacity of the Human Resources Development Agency (SDI). However, the identified weaknesses cannot be ignored. Low digital literacy, limited infrastructure, weak collaboration, and limited funding have hindered the optimal use of big data. This highlights the significant gap between potential and reality, ultimately necessitating intervention strategies based on increasing the digital capacity of the SDI to transform existing strengths into competitive advantages for Madura's halal tourism.

b. Opportunities and Threats to the Halal Tourism Ecosystem

The external analysis reveals several opportunities that can be leveraged to strengthen the development of halal tourism in Madura, as well as threats that need to be anticipated. In terms of opportunities, the growing trend of halal tourism at both the global and national levels is driving the need for more qualified and competitive tourism managers. Government support for digital transformation also opens up significant opportunities for increasing the capacity of human resources (HR) based on big data. Furthermore, opportunities for collaboration with academics and digital platforms can support modern training programs that are more relevant to field needs. The trend of experience-based tourism is also highly suited to the use of big data, as data can help managers tailor services to tourist preferences. Finally, big data serves not only as an analytical tool but also as a means to create unique and competitive halal services.

On the other hand, emerging threats cannot be ignored. Competition with other halal destinations such as Lombok, Aceh, Malaysia, and Brunei increasingly demands that Madura's SDI be more adaptive and innovative. Weaknesses in data security also pose a serious threat, as if not managed properly, they can undermine tourist confidence. Reliance on foreign technology, whether in the form of hardware, software, or servers, has the potential to undermine the independence of local SDI. Rapid changes in halal tourist behavior also require managers to be able to adapt continuously with the support of data analysis. Furthermore, external macro factors such as economic crises, natural disasters, and socio-political conditions can impact the stability of tourist visits.

Table 2. Analysis of External Factors of Madura Halal Tourism.

No.	OPPORTUNITIES	THREATS
	Information	Information
1.	The growing trend of halal tourism increases the need for qualified managers.	Competition with other halal destinations demands that SDI Madura be more adaptive and innovative.
2.	Government support for digital transformation opens up opportunities for	Weak data security can reduce tourist confidence.

	<i>big data-based</i>	<i>human resource</i>
	<i>development.</i>	
3.	Collaboration with academics and digital platforms supports modern SDI training.	Dependence on external technology can weaken the independence of local SDI.
4.	based tourism fits well with <i>big data</i> to customize services.	The rapid changes in halal tourism demand that SDI is ready to adapt to the data.
5.	<i>Big data</i> helps SDI training to be on target and create unique and competitive halal services.	Global economy, disasters and socio-political conditions affect tourist visits.

The above analysis shows that opportunities for halal tourism development in Madura are wide open, particularly with the support of global trends, digital transformation, and cross-stakeholder collaboration. However, these opportunities can only be exploited if threats can be strategically anticipated. Competition with other destinations demands a clear identity for halal tourism in Madura, while issues of data security and dependence on external technology require strengthening the digital capacity of local human resources (HR). Therefore, development strategies need to be directed at strengthening the independence of big data-based HR to ensure sustainable competition amidst uncertain external dynamics.

c. Initial Synthesis of Internal–External Factor Relationships

Analysis of internal and external factors shows that Madura's halal tourism is in a unique position. On the one hand, this destination possesses strengths in the form of community religious values, management commitment, and the potential to utilize big data to support service quality. However, on the other hand, it faces significant weaknesses such as limited digital literacy, inadequate infrastructure, a lack of cross-stakeholder collaboration, and limited funding. These internal conditions then interact with external dynamics filled with both opportunities and threats. The greatest opportunities lie in the growth of the global halal tourism trend, government support for digitalization, and collaboration with academics and digital platforms. However, these opportunities face serious threats such as destination competition, data security risks, and dependence on foreign technology.

Initial analysis indicates a gap between socio-cultural strengths and the demands of digitalization. Although the community and management are committed, they require strategic support to capitalize on external opportunities. If internal weaknesses are not addressed promptly, external threats could become a major obstacle to the development of halal tourism in Madura. In other words, successful development depends not only on social and cultural capital but also on the extent to which SDI can effectively integrate big data technology.

Table 3. Synthesis of Internal and External Factors of Halal Tourism in Madura.

Internal Factors	External Factors	Implications
Strengths: management commitment, religious cultural support, big data potential for services.	Opportunities: increasing halal tourism trend, government support, academic collaboration & digital platforms.	Leveraging big data to improve the quality of halal services and strengthen Madura's competitiveness.
Weaknesses: low digital literacy, limited infrastructure, minimal funding.	Threats: competition with other destinations, weak data security, dependence on external technology.	It requires a digital SDI strengthening strategy so as not to be left behind in regional and global competition.

Based on the above analysis, it can be seen that Madura's internal strengths align with available external opportunities, particularly in terms of halal tourism trends and digitalization. However, internal weaknesses have the potential to magnify the impact of external threats, such as limited human resources (HR), which can exacerbate the risk of competition and dependence on external technology. Therefore, Madura's halal tourism development strategy must be directed at utilizing big data as a key instrument, capable of not only addressing opportunities but also providing solutions to overcome internal weaknesses and mitigate external threats.

3. IFAS and EFAS Calculation Results in Assessing Strategic Position

To assess the strategic position of halal tourism in Madura, an analysis was conducted using the Internal Factor Analysis Summary (IFAS) and External Factor Analysis Summary (EFAS) matrices. Each factor was weighted according to its level of importance (0.0–1.0), then assigned a score (1–4) based on field conditions, with a score of 1 indicating a significant weakness or threat and a score of 4 indicating a significant strength or opportunity. The weighted score was multiplied by the rating value to produce a total score.

a. IFAS (Internal Factor Analysis Summary) Calculation Results

The IFAS analysis was conducted to assess the extent to which internal strengths and weaknesses contribute to Madura's strategic position in halal tourism. Strengths scored higher than weaknesses, indicating that internal potential can be a key asset for development. The final IFAS score of 2.34 indicates a moderate internal position, with strengths tending to outweigh weaknesses.

Table 4. Madura Halal Tourism IFAS Matrix.

STRENGTHS				
No.	Information	Rating	Weight	Score
1.	<i>Big data</i> helps to see the trends and needs of tourists, so that tourism managers can provide appropriate services.	0.21	4.0	0.85

2.	Digital data helps tourism managers improve quality through training as needed.	0.21	4.0	0.85
3.	The religious culture of society supports the implementation of data-based halal services.	0.17	3.0	0.52
4.	<i>Big data</i> helps strategic decisions to improve the quality of halal tourism management.	0.21	4.0	0.85
5.	Tourism managers are committed to improving digital services for the best visitor experience.	0.19	3.5	0.67
SUB-TOTAL		1.00		3.73
WEAKNESSES				
No.	Information	Rating	Weight	Score
1.	The limited digital capabilities of Madura tourism managers hamper the use of <i>big data</i> .	0.20	0.29	0.29
2.	Uneven distribution of technology makes data utilization in tourism less than optimal.	0.20	0.29	0.29
3.	Lack of cooperation means that data has not been optimally utilized.	0.20	0.29	0.29
4.	Tourism managers lack skills in data analysis, resulting in less innovative halal services.	0.20	0.29	0.29
5.	Funding for servers, <i>software</i> , and training for halal tourism managers.	0.21	0.21	0.21
SUB-TOTAL		1.00		1.39
TOTAL				2.34

The results above indicate that the strengths factor (3.73) significantly outweighs the weaknesses factor (1.39). This means that social capital, religious culture, and the potential for big data utilization can serve as the basis for development strategies. However, the total score of 2.34 still indicates serious challenges in digital literacy, technological infrastructure, and funding. Therefore, the appropriate strategy is to strengthen SDI's digital capacity to ensure that existing strengths can effectively address weaknesses.

b. EFAS (External Factor Analysis Summary) Calculation Results

The EFAS analysis was conducted to determine the extent of influence of external factors, including opportunities and threats, on halal tourism management in Madura. The calculation results show that the opportunities significantly outweigh the threats, indicating that the external environment provides positive support for halal tourism development. The total EFAS score of 2.11 places Madura's external position in the moderate category, where opportunities can be exploited but threats still require serious attention.

Table 5. Madura Halal Tourism EFAS Matrix.

OPPORTUNITIES				
No.	Information	Rating	Weight	Score
1.	The growing trend of halal tourism increases the need for qualified managers.	0.18	0.54	0.54
2.	Government support for digital transformation opens up opportunities for <i>big data-based human resource development</i> .	0.22	0.88	0.88
3.	Collaboration with academics and digital platforms supports modern SDI training.	0.22	0.88	0.88
4.	Based tourism fits well with <i>big data</i> to customize services .	0.18	0.54	0.54
5.	<i>Big data</i> helps SDI training to be on target and create unique and competitive halal services.	0.20	0.70	0.70
SUB-TOTAL		1.00		3.54
THREATS				
No.	Information	Rating	Weight	Score
1.	The limited digital capabilities of Madura tourism managers hamper the use of <i>big data</i> .	0.20	1.5	0.31
2.	Uneven distribution of technology makes data utilization in tourism less than optimal.	0.18	1	0.18
3.	Lack of cooperation means that data has not been optimally utilized.	0.18	1	0.18
4.	Tourism managers lack skills in data analysis, resulting in less innovative halal services.	0.20	1.5	0.31
5.	Funding for servers, <i>software</i> , and training for halal tourism managers.	0.22	2	0.45
SUB-TOTAL		1.00		1.43
TOTAL				2.11

The EFAS results show that opportunities (3.54) significantly outweigh threats (1.43). This indicates that Madura has strong potential to develop halal tourism, particularly with the support of global trends, government policies, and collaboration with academics and digital platforms. However, threats such as competition between halal destinations, weak data security, and dependence on external technology remain inhibiting factors that must be addressed. With a total score of 2.11, it can be concluded that the external

environment provides room for growth, but threat mitigation strategies are essential to optimally utilize existing opportunities.

c. Implications of IFAS and EFAS Results on Halal Tourism Competitiveness

The IFAS and EFAS calculations indicate that Madura's halal tourism is in the moderate category, with an IFAS score of 2.34 and an EFAS score of 2.11. These scores indicate that internal strengths are relatively more dominant than weaknesses, while external opportunities still outweigh threats. Given these conditions, Madura is at a strategic point that allows for the development of big data-based halal tourism, although it requires serious intervention to improve the quality of human resources (HR).

The implication of these results is that Madura needs to implement an internal turnaround strategy to increase its competitiveness. This means that while halal tourism opportunities are significant at the national and global levels, internal weaknesses such as low digital literacy, limited infrastructure, and minimal multi-stakeholder collaboration prevent this potential from being fully utilized. Therefore, the main strategies that must be pursued are:

- a. Improving SDI digital literacy through big data-based training, so that managers are able to read tourist trends and respond with innovative services.
- b. Strengthening technological infrastructure in halal tourism destinations, such as providing stable internet access, analytical software, and tourist data management systems.
- c. Increased multi-stakeholder collaboration, involving government, academics, and digital communities to support technology transfer and ongoing mentoring.
- d. Creative funding management, for example through CSR schemes, public-private partnerships, or digital tourism incubation programs to finance technology needs.

By implementing this strategy, Madura can minimize internal weaknesses and be better prepared to capitalize on external opportunities. The immediate implication is increased competitiveness in halal tourism at the regional and national levels, enabling Madura to emerge as a halal destination that relies not only on socio-cultural capital but also on modern, globally competitive digital management.

4. Formulating a Big Data-Based Halal Tourism Human Resource Development Strategy

Based on the results of the IFAS and EFAS analyses, a strategy for developing Madura's halal tourism human resources (HR) can be formulated using a SWOT matrix approach. This strategy integrates strengths, weaknesses, opportunities, and threats to generate realistic tactical steps relevant to the needs of the halal tourism industry. Thus, the formulated strategy is not only normative but also operational and can be implemented systematically by stakeholders.

a. SWOT Matrix Visualization and Position Quadrant

The mapping results of the IFAS value of 2.34 (X-axis) and EFAS of 2.11 (Y-axis) indicate that Madura's halal tourism is at coordinates (2.34; 2.11). This position places Madura in Quadrant I, namely the

Strengths–Opportunities (SO) quadrant. This condition illustrates that Madura's halal tourism destination has quite significant internal strengths, especially in aspects of religious culture, management commitment, and potential use of big data, and is supported by external opportunities in the form of global halal trends, government support for digitalization, and multi-party cooperation.

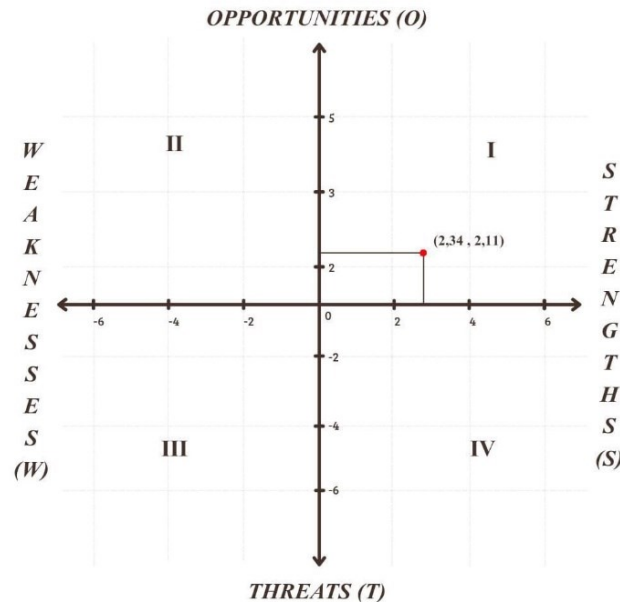


Figure 1. SWOT Cartesian Diagram of Madura Halal Tourism.

A position in this quadrant implies that Madura's best strategy is to take aggressive action, maximizing existing internal strengths to maximize external opportunities. With this strategy, Madura's halal tourism has the potential to increase competitiveness, strengthen the quality of big data-based human resources (HRD), and create superior and competitive halal service differentiation.

b. Formulating a Big Data-Based Halal Tourism Human Resource Development Strategy

Based on the results of the SWOT analysis, the strategic position of halal tourism management in Madura falls within the Strengths–Opportunities (S–O) quadrant. This position indicates that the halal tourism sector possesses significant internal strengths and extensive external opportunities, thus warranting an aggressive development strategy. The use of big data is a key tool for optimizing human resource potential, strengthening competitiveness, and expanding the reach of digital-based halal tourism services.

Key strengths include big data capabilities in analyzing tourist trends and needs, management's commitment to improving digital services, and support for the community's religious values, which form the foundation of ethical halal tourism services. External opportunities arise from government policy support for digital transformation, the global growth trend of halal tourism, and potential collaborations with academics and digital platforms. By combining these strengths, Madura's halal tourism development is directed toward a proactive and innovative strategy.

Table 6. SWOT Strategy Analysis of Madura Halal Tourism.

STRENGTHS (S)/ WEAKNESSES (W) OPPORTUNITIES (O) THREATS (T)	STRENGTHS (S)	WEAKNESSES (W)
	1. <i>Big data</i> helps to see the trends and needs of tourists, so that tourism managers can provide appropriate services. 2. Digital data helps tourism managers improve quality through training as needed. 3. The religious culture of society supports the implementation of data-based halal services. 4. <i>Big data</i> helps strategic decisions to improve the quality of halal tourism management. 5. Tourism managers are committed to improving digital services for the best visitor experience.	1. The limited digital capabilities of Madura tourism managers hamper the use of <i>big data</i>. 2. Uneven distribution of technology makes data utilization in tourism less than optimal. 3. Lack of cooperation means that data has not been optimally utilized. 4. Tourism managers lack skills in data analysis, resulting in less innovative halal services. 5. funding for servers, <i>software</i> , and training for halal tourism managers.
OPPORTUNITIES (O) 1. The growing trend of halal tourism increases the need for qualified managers. 2. Government support for digital transformation opens up opportunities for <i>big data-based human resource development</i>. 3. Collaboration with academics and digital platforms supports modern SDI training.	SO Strategy 1. Big data and digital technology improve the quality of halal tourism management through trend analysis, targeted training, and strategic decisions for more innovative and competitive services. 2. Religious culture, government support, and collaboration with academics and digital platforms strengthen halal	WO Strategy 1. Increasing the capacity of SDI through big data-based training with the support of the government, academics, and digital platforms so that Madura halal tourism managers are able to analyze data and create innovative services. 2. Strengthening technological infrastructure through government digital transformation to expand data access at tourist destinations, so

4. based tourism fits well with <i>big data</i> to customize services. 5. <i>Big data</i> helps SDI training to be on target and create unique and competitive halal services.	tourism to provide the best experience and meet the needs of the global market.	that big data can be utilized to meet global halal tourism trends with personalized and competitive services.
THREATS (T) 1. The limited digital capabilities of Madura tourism managers hamper the use of <i>big data</i>. 2. Uneven distribution of technology makes data utilization in tourism less than optimal. 3. Lack of cooperation means that data has not been optimally utilized. 4. Tourism managers lack skills in data analysis, resulting in less innovative halal services. 5. funding for servers, <i>software</i> , and training for halal tourism managers.	ST Strategy 1. Optimizing Big Data and Security by utilizing <i>big data</i>, religious culture, and the commitment of tourism actors to strengthen data security and analyze tourist trends so that SDI can quickly adapt and maintain trust. 2. Innovation and Independence of Local SDI through data-based decisions and digital promotion to create unique halal services, technologically independent, and able to compete and survive in facing global challenges.	WT Strategy 1. Strengthening Digital Capacity and Technological Independence through training, mentoring, and infrastructure so that tourism SDI is technologically independent, able to maintain data security, and adaptive to trends and competition. 2. Collaboration and Sustainable Financing with cooperation between the government, business actors, and financial institutions to expand funding, strengthen infrastructure, and integrate data to maintain tourist confidence amidst uncertainty.

Strengths–Opportunities strategy emphasizes that Madura's halal tourism development must focus on leveraging internal strengths to optimally respond to external opportunities. Big data integration serves not only as a decision-support tool but also as a catalyst for strengthening human resource capacity and creating innovative services based on tourist needs. This approach makes Madura more adaptable to global digital trends while maintaining its distinctive religious identity and local values. Through this strategic direction, Madura's halal tourism has the potential to grow as a model for sustainable, inclusive, and competitive data-driven destination development at the national level.

Conclusion

This research stems from the urgency of strengthening the quality of human resources in Madura's halal tourism sector through the use of big data. Using a qualitative approach based on SWOT analysis, this study successfully mapped the internal and external dynamics influencing halal tourism management. The analysis demonstrates that big data is not only a technological tool but also a strategic foundation for designing policies, increasing human resource capacity, and providing halal services that are more responsive to tourist needs.

Internally, Madura boasts strengths in the form of a religious culture, committed management, and the potential for digital technology adoption, although it also faces weaknesses such as limited digital literacy, minimal infrastructure, and inadequate data analysis capabilities. Externally, global halal tourism opportunities, government support for digital transformation, and partnerships with academics and technology platforms offer ample scope for development. However, competition with other halal destinations, data security issues, dependence on external technology, and global socio-political and economic conditions remain serious threats that must be addressed.

The resulting strategy synthesis shows that strengthening Madura's halal tourism cannot be separated from four main directions: an aggressive strategy to leverage big data for service innovation, a diversification strategy to address limited human resources and infrastructure, a defensive strategy to maintain security and independence, and a survival strategy through multi-stakeholder collaboration and sustainable financing. These four strategies emphasize the importance of an integrated approach that combines cultural, technological, and governance aspects in developing a halal tourism ecosystem.

Thus, this research makes two main contributions. First, academically, the results enrich the literature on big data integration in the development of halal tourism SDI in the local context, which has previously been relatively limited. Second, practically, these findings offer a strategic framework that can be used by the government, tourism managers, academics, and business actors to strengthen the competitiveness of Madura's halal tourism. If these strategies can be implemented consistently, Madura has the potential to become a leading halal destination that is not only responsive to changing global tourism trends but also sustainable in the long term.

References

- [1] M. Fadhlan and G. E. Subakti, "Perkembangan Industri Wisata Halal di Indonesia dan Dunia," *Indonesian Journal of Halal Studies*, vol. 5, no. 1, pp. 77–85, 2020.
- [2] I. U. Nizar, M. Muhammad, and R. T. Ratnasari, *Mengembangkan Pariwisata Halal di Indonesia*. Pasuruan: Yayasan Pesantren Kontemporer Al-Hilmu, 2023.

- [3] N. Nasrulloh, E. M. Adiba, and M. N. Efendi, "Pengembangan Potensi Pariwisata Halal Pesisir Bangkalan Madura: Identifikasi Peranan Bank Syariah," *Muslim Heritage Journal*, vol. 8, no. 1, pp. 82–90, 2023, doi: 10.21154/muslimheritage.v8i1.4989.
- [4] A. D. Anugerah, S. Arifin, and D. F. Putra, "Arah Baru Pembangunan Pariwisata Madura," *Public Corner*, vol. 19, no. 1, pp. 32–41, 2024, doi: 10.24929/fisip.v19i1.3534.
- [5] M. A. Adlah and F. Ardyansyah, "Analisis Kinerja Pengelolaan Wisata Halal Pantai Talang Siring Pamekasan dalam Perspektif Ekonomi Islam," *Jurnal Manajemen dan Akuntansi (JMA)*, vol. 2, no. 10, pp. 1–10, 2024.
- [6] M. R. O. Ar Razy and D. Mahzuni, "Sosial Ekonomi Masyarakat Madura Abad 19–20: Sebuah Kajian Ekologi Sejarah," *Jurnal Siginjai: Ilmu Sosial dan Humaniora*, vol. 1, no. 2, pp. 66–75, 2021, doi: 10.22437/js.v1i2.16241.
- [7] E. I. Venger and A. Akhtoian, "The Role of Big Data in the Implementation of Digital-Marketing Strategies," *Proceedings of Scientific Works of Cherkasy State Technological University, Series: Economic Sciences*, vol. 63, no. 1, pp. 61–68, 2021, doi: 10.24025/2306-4420.63.2021.248464.
- [8] G. A. Rosyid and N. A. Khotamin, "Analisa Kualitas Sumber Daya Insani dalam Peningkatan Kinerja Karyawan di BMT Mitra Mandiri Sejahtera Lampung Tahun 2020," *Srikandi: Jurnal Ekonomi dan Bisnis Islam*, vol. 2, no. 2, pp. 58–67, 2023.
- [9] A. Saputra, M. Y. Ramadhan, F. Wibowo, and R. S. Putri, "Big Data," *Karimah Tauhid: Jurnal Ekonomi dan Teknologi Islam*, vol. 1, no. 6, pp. 885–892, 2022.
- [10] M. Fadli, M. Prasetyo, I. Sanjaya, and R. Firmansyah, "Peran Big Data dalam Inovasi Bisnis Digital: Pendekatan Tinjauan Literatur Sistematis," *Jurnal Ilmiah Teknologi Informasi dan Komunikasi*, vol. 4, no. 1, pp. 45–53, 2025.
- [11] M. R. Sawu, "Strategi Promosi Pariwisata Berbasis Digital: Daya Tarik Wisata Sendang Seruni di Kabupaten Banyuwangi," *Jurnal Pariwisata PaRAMA*, vol. 4, no. 2, pp. 113–122, 2023, doi: 10.36417/jpp.v4i2.633.
- [12] M. K. Fatha, S. F. A. Wati, B. S. Dewa, and K. E. Prasetyo, "Peran Big Data pada Intelijen Bisnis sebagai Sistem Pendukung Keputusan (Systematic Literature Review)," *Prosiding Seminar Nasional Teknologi dan Sistem Informasi (SITASI)*, vol. 3, no. 1, pp. 318–326, 2023, doi: 10.33005/sitasi.v3i1.612.
- [13] B. Maryanto, "Big Data dan Pemanfaatannya dalam Berbagai Sektor," *Media Informatika*, vol. 16, no. 2, pp. 14–22, 2017.
- [14] N. Febrianti and M. Hipni, "Dinamika Pengembangan Pariwisata Halal di Madura Perspektif Sosio-Legal," *Jurnal Social and Community Studies*, vol. 6, no. 2, pp. 4–11, 2021.
- [15] Iskandar, Waridin, and D. D. Iskandar, "The Potential of Muslim Friendly Hospitality in the Tourism Industry in Central Java," *Indonesian Journal of Islam and Muslim Societies*, vol. 13, no. 1, pp. 169–197, 2023, doi: 10.18326/ijims.v13i1.169-197.

- [16] W. Oktaviani, D. Safira, and N. Naja, "Predictive Analysis in Islamic Accounting: Understanding Financial Trends Through Advanced Technology," *Al-Mal Journal of Islamic Accounting and Finance*, vol. 5, no. 2, pp. 130–139, 2024.
- [17] A. I. of Research and Community Empowerment, "3V: Tiga Karakteristik Utama Big Data," *LPPM Tazkia*, 2023.
- [18] Z. Hasibuan and M. I. P. Nasution, "Peran Big Data dan Artificial Intelligence dalam Mengoptimalkan Sistem Informasi Manajemen Organisasi," *Jurnal Ilmiah Nusantara (JINU)*, vol. 2, no. 5, pp. 104–108, 2025.
- [19] L. N. Qomariyah, R. Hermawan, and A. A. Rosyidah, "Analisis Penerapan Smart Tourism sebagai Strategi Pengembangan Pariwisata Halal Berkelanjutan di Pantai Lon Malang Kabupaten Sampang," *Journal of Management, Accounting, and Administration*, vol. 1, no. 2, pp. 114–121, 2024, doi: 10.52620/jomaa.v1i2.99.
- [20] Badan Pusat Statistik, "Jumlah Wisatawan Nusantara Menurut Kabupaten/Kota Asal di Jawa Timur (Perjalanan)," BPS Provinsi Jawa Timur, 2025.
- [21] S. H. Bariah, D. Rahadian, and D. Darmawan, "Smart Content Learning dengan Menggunakan Metode Big Data Analysis pada Mata Kuliah Media Pembelajaran Ilmu Komputer," *Jurnal Teknologi Pendidikan dan Pembelajaran*, vol. 2, no. 3, pp. 226–233, 2017.
- [22] J. Abidin, R. F. Faqiha, M. R. Ilahi, and A. Damayanti, "Strategi Pengembangan Promosi Berbasis Digital: Studi Kasus Curug Cijalu Kabupaten Subang," *Gemawisata: Jurnal Ilmiah Pariwisata*, vol. 21, no. 2, pp. 304–320, 2025, doi: 10.56910/gemawisata.v21i2.697.
- [23] F. R. Widyasti, "Strategi Promosi Wisata pada Dinas Kebudayaan, Pariwisata, Pemuda dan Olahraga Kabupaten Temanggung," *Jurnal Ilmu Pariwisata dan Kebudayaan*, vol. 13, no. 3, pp. 1–111, 2013.
- [24] U. Rosyidah, L. Hanifah, and L. Suaibah, "Strategi Pengembangan Pantai Sembilan Pulau Gili Genting Sumenep sebagai Ikon Pariwisata Halal di Madura," *Jurnal Ilmiah Hospitality*, vol. 10, no. 2, pp. 157–165, 2021.
- [25] H. Simarmata, "Strategi Pengembangan SDM di Sektor Pariwisata: Menganalisis Potensi dan Tantangan di Daerah Berkembang," *Economic Professional Action Journal*, vol. 6, no. 2, pp. 175–184, 2024, doi: 10.37278/eprofit.v6i2.951.
- [26] M. S. Arifin, "Perancangan Video Promosi Wisata Alam Goa Lebar di Kabupaten Sampang Madura sebagai Upaya Meningkatkan Pengunjung," *Jurnal Desain Komunikasi Visual dan Multimedia*, vol. 3, no. 5, pp. 14–22, 2021.
- [27] A. B. Syamsi and A. Adiyono, "Model Partisipasi Masyarakat dalam Penentuan Kebijakan Pariwisata Halal di Madura Berbasis Nilai Keislaman dan Hukum Positif," *Istinbath: Jurnal Hukum Islam*, vol. 19, no. 2, pp. 221–237, 2021, doi: 10.20414/ijhi.v19i02.267.

- [28] Y. Boari, "Analisis Strategi Promosi dan Pelayanan Pariwisata dalam Meningkatkan Jumlah Pengunjung Wisata di Indonesia," *Edunomika: Jurnal Ekonomi dan Pendidikan*, vol. 8, no. 2, pp. 4–12, 2024.
- [29] J. D. Anjelina, R. Salsabila, D. A. Fitriyanti, and K. N. D. Lestari, "Analisa Perkembangan Manajemen Sumber Daya Insani dalam Mewujudkan Perekonomian yang Stabil," *Izdihar: Jurnal Ekonomi Syariah*, vol. 1, no. 1, pp. 121–130, 2021.
- [30] S. Yaka et al., "Analisis Kesiapan Sport Tourism Pantai Senggigi Lombok Barat pada Era Kenormalan Baru," *SPRINTER: Jurnal Ilmu Olahraga*, vol. 4, no. 1, pp. 9–18, 2023.
- [31] K. Murniati, M. Riantini, and A. V. Windyata, "Evaluating Tourism Performance Through Tourist Perceptions: A Case Study of Petengoran Mangrove Tourism in Lampung, Indonesia," *Jurnal Sylva Lestari*, vol. 13, no. 1, pp. 1–10, 2025, doi: 10.23960/jsl.v13i1.976.
- [32] A. Ihsan, A. B. Kusuma, and M. A. Hatbah, "Strategi Alternatif Pembangunan Manusia melalui Pariwisata Halal di Indonesia Pasca Covid-19," *Jurnal Magister Ekonomi Syariah*, vol. 1, no. 1, pp. 1–9, 2022, doi: 10.14421/jmes.2022.011-01.
- [33] Hairani, M. Innuddin, D. F. Rachman, A. Fathoni, and S. Hadi, "Sosialisasi Internet Sehat, Cerdas, Kreatif, dan Produktif pada Masyarakat Kalijaga Baru," *Valid: Jurnal Pengabdian Masyarakat*, vol. 1, no. 3, pp. 3–10, 2023.
- [34] S. Suryani and N. Bustamam, "Potensi Pengembangan Pariwisata Halal dan Dampaknya terhadap Pembangunan Ekonomi Daerah Provinsi Riau," *Jurnal Ekonomi Kiat*, vol. 32, no. 2, pp. 150–161, 2022, doi: 10.25299/kiat.2021.vol32(2).8839.
- [35] S. N. Salsabila, M. I. Anshori, A. Kamil, and N. Jamilati, "Strategi Inovatif Pengembangan Sumber Daya Manusia dalam Industri Pariwisata di Bangkalan," *Jurnal Bintang Manajemen*, vol. 2, no. 1, pp. 177–187, 2024, doi: 10.55606/jubima.v2i1.2721.
- [36] R. A. Mokoginta, R. J. Poluan, and R. M. Lakat, "Pengembangan Kawasan Wisata Bahari (Studi: Kecamatan Nuangan Kabupaten Bolaang Mongondow Timur)," *Spasial: Jurnal Perencanaan Wilayah dan Kota*, vol. 7, no. 3, pp. 326–336, 2020.
- [37] N. Pratiwi, "Penggunaan Media Video Call dalam Teknologi Komunikasi," *Jurnal Ilmiah Dinamika Sosial*, vol. 1, pp. 212–219, 2017.
- [38] N. Nurdewi, "Implementasi Personal Branding Smart ASN: Perwujudan Bangga Melayani di Provinsi Maluku Utara," *SENTRI: Jurnal Riset Ilmiah*, vol. 1, no. 2, pp. 300–309, 2022.
- [39] R. Arviyanda, E. Fernandito, and P. Landung, "Analisis Pengaruh Perbedaan Bahasa dalam Komunikasi Antarmahasiswa," *Jurnal Harmoni Nusa Bangsa*, vol. 1, no. 1, pp. 67–74, 2023.
- [40] I. M. Inadjo, B. J. Moku, and N. Kandowanko, "Adaptasi Sosial SDN 1 Pineleg Menghadapi Dampak Covid-19 di Desa Pineleng 1 Kecamatan Pineleng Kabupaten Minahasa," *Jurnal Ilmiah Sosial*, vol. 3, no. 1, pp. 2–8, 2023.

- [41] M. Sayuti, “Indonesia Peringkat Pertama Destinasi Wisata Halal Terbaik Dunia,” Komite Nasional Ekonomi dan Keuangan Syariah (KNEKS), 2025.
- [42] Badan Data dan Statistik Informasi, “Statistik Perjalanan Wisatawan Nusantara Bulan April Tahun 2025,” Kementerian Pariwisata dan Ekonomi Kreatif Republik Indonesia, 2025.
- [43] S. A. Rahman and T. Setiyarini, “Pengembangan Pariwisata Berbasis Kearifan Lokal di Pantai Lon Malang Kabupaten Sampang,” JURSIMA: Jurnal Riset Manajemen dan Akuntansi, vol. 10, no. 3, pp. 457–465, 2022.
- [44] T. Setiyarini and Y. Chrismardani, “Analisis Kelayakan Obyek dan Daya Tarik Wisata Alam (ODTWA) Pantai Lon Malang Kabupaten Sampang,” in Prosiding Seminar Nasional Manajemen, pp. 45–54, 2022.
- [45] Rahmadi, Pengantar Metodologi Penelitian. Jakarta: Bumi Aksara, 2011.
- [46] S. Romdana, S. S. Junista, and A. Gunawan, “Teknik Pengumpulan Data: Observasi, Wawancara dan Kuesioner,” JISOSEPOL: Jurnal Ilmu Sosial, Ekonomi dan Politik, vol. 3, no. 1, pp. 42–49, 2023.
- [47] N. Nurhaswinda, L. Fauziah, R. Widodo, and A. Pratama, “Penyajian Data,” LANCAH: Jurnal Inovasi dan Tren, vol. 3, no. 1, pp. 63–70, 2025, doi: 10.35870/ljit.v3i1.3709.
- [48] A. Rahmawati, N. Halimah, Karmawan, and A. A. Setiawan, “Optimalisasi Teknik Wawancara dalam Penelitian Field Research melalui Pelatihan Berbasis Participatory Action Research pada Mahasiswa Lapas Pemuda Kelas IIA Tangerang,” Jurnal Abdimas Prakasa Dakara, vol. 2, no. 1, pp. 136–142, 2024.
- [49] Y. Rifa’i, “Analisis Metodologi Pengumpulan Data di Penelitian Ilmiah,” Cendekia: Inovatif dan Berbudaya, vol. 1, no. 1, pp. 33–40, 2023.