

Leveraging QR Codes and Language Integration for Digital Tourism Promotion Systems

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Abstract—This study explores the integration of QR codes with persuasive language features for digital tourism promotion in Bangkalan, Indonesia. It focuses on the development and evaluation of a digital marketing system utilizing QR code technology, assessing its effectiveness through the EPIC (Empathy, Persuasion, Impact, Communication) model. A mixed-methods approach combines qualitative analysis of promotional language with quantitative evaluations using a survey of 327 respondents. The findings show that QR codes integrated with compelling linguistic elements significantly enhance tourism promotion, with an EPIC score of 3.89985, categorized as effective. The research contributes to the growing field of digital marketing systems by demonstrating how QR codes, as part of a digital promotion strategy, can drive user engagement. This study also suggests that the integration of QR codes with digital information systems can support more scalable and impactful marketing strategies in the tourism industry.

Keywords—Linguistics Features, QR Code, Tourism Places, Bangkalan, Promotion

I. INTRODUCTION

Language and technology have a positive impact as a medium for disseminating information to the public, one of which is as a medium for promoting tourism in Bangkalan. One study shows that publication through the media is one of the keys to disseminating information [1]. In practice, language plays a role in providing information related to the use of persuasive language that can be used to influence the public to visit tourist attractions. One of the use of persuasive language that can be used as a promotional medium is the use of directive speech [2]. The use of this persuasive language can influence the public to visit a tourist places and also develop tourism in Bangkalan [3], [4]. The language used in a promotional media has a meaning which can be understood by the reader, so it can increase the number of tourists in Bangkalan [5]. In the use of persuasive language, especially

the use of advertising language through advertising media, such as brochures, aims to influence the public to follow the opinion of the advertiser [6].

Technological developments require business actors to create new innovations by using technology to provide information to the public as an effort to introduce tourist attractions. One study showed the use of Augmented Reality as a medium for tourism promotion in Bangkalan [7]. Technological developments can be utilized in tourism promotion activities through existing marketing mixes [8]. In an effort to improve the quality of tourism promotion, the ability to create good advertising language and promotional design is needed [9], [10]. Attractive advertising language is the key to influence the public to use certain products or visit a place according to the promotional language provided [11]. The use of persuasive language in advertising can help increase public desire and can also be the right choice as a promotional medium [12], [13]. In its application, persuasive language functions as an affirmative language [14], [15]. This persuasive language functions to influence consumers [16], [17].

In its development, the integration of language and technology in the tourism industry reflects a strategic approach to technology-driven marketing communication, attracting tourists to Bangkalan. Features in disseminating tourism information abroad, domestic advertising. These studies show that linguistic features positively impact tourism communication both locally and internationally [18]. Additionally, Augmented Reality features can further enhance dissemination [19]. This study complements prior research by analyzing persuasive language in brochures integrated with QR Code technology to promote Bangkalan tourism. The goal is to support local businesses in enhancing tourism promotion through this digital innovation [20], [21].

II. LITERATURE REVIEW

This study attempts to see the linguistic features in tourist brochures in Bangkalan, Madura and the effectiveness of using QR Code technology as an application to access advertisements, brochures, and videos related to tourist attractions in Bangkalan. Several studies have emphasized the role of linguistic features in influencing tourist behavior. However, this review could be streamlined by focusing on studies directly relevant to persuasive language and QR Code integration in tourism. However, this section can be more concise by removing redundant references and focusing on recent studies directly relevant to QR code use in tourism communication [22]. Not only that, language as a promotional medium has an important role in tourism promotion. This study will focus on the use of linguistic features and the effectiveness of using QR code applications as a medium to access information related to tourism in Bangkalan, Madura. This study will use the EPIC model as an indicator. The research questions guiding this study are:

- What linguistic features are present in Bangkalan tourism brochures? [23].
- How effective is QR Code technology in promoting tourism based on EPIC model dimensions? Not only that, many studies focus on the use of advertising language as a promotional medium [24].

This research is important to be conducted as an effort to integrate IT in promotional activities as a new innovation in tourism promotion activities [25]. This research uses technology in the form of QR Codes that can be accessed via Android or mobile phones so that it has ease in accessing tourist attraction information [26]. Innovation related to technology applications is very necessary as an effort to improve tourism.

III. METHODS

This study uses a mixed-methods approach. The qualitative method explores linguistic features in brochures and the development of QR Code technology, while the quantitative method measures the effectiveness of QR Code use in promoting tourism in Bangkalan. Conducted in September-October 2024, the study involved 327 purposively selected respondents to ensure diversity in age, gender, and QR Code access. The sample size was based on social media outreach, and although randomization was limited, demographic balance helped reduce bias [27]. This technique effectively represents respondents who completed the Google Form distributed via social media [28], with data visualized clearly through engaging graphics [29], [30].

The data in the study were obtained through documentation and questionnaire techniques. The documentation technique was carried out through the use of language in 3 tourism brochures in Bangkalan. The questionnaire was created to assess the effectiveness of using the Quick Response (QR) code application as a tourism promotion media [31]. In compiling the questionnaire, the researcher used 4 EPIC indicators (Empathy, Persuasion, Impact, and Communication).

The questionnaire was created using closed questions that had been grouped according to the research indicators [32]. The researcher provided 5 answer choices using a Likert scale with the following categories, Strongly Dissagree (SD), Disagree (D), Neutral (N), Agree (A), and Strongly Agree (SA). The data collected through the questionnaire was calculated using SPSS and NVIVO for qualitative data analysis [33]. In NVIVO, brochure texts were imported and coded into thematic nodes based on categories such as word types, phrases, and directive elements. Coding frequency and word clouds were used to identify dominant persuasive features [34]. The data was then calculated with the following scale range:

- 1.00 –1.80 = Very Ineffective
- 1.80 –2.60 = Not Effective
- 2.60 –3.40 = Quite Effective
- 3.40 –4.20 = Effective
- 4.20 –5.00 = Very Effective

The final step is to determine the EPIC Rate value using the following formula.

$$\text{EPIC Rate} = \frac{X_{\text{empathy}} + X_{\text{persuasion}} + X_{\text{impact}} + X_{\text{com}}}{N}$$

In data analysis, researchers collected all data from Google forms according to the EPIC model variables [35]. The results of data processing on the questionnaire related to this QR code were able to increase tourism promotion in Bangkalan [36], [37]. In presenting the data, researchers created a picture in the form of a respondent graph and the results of the questionnaire are in the form of diagrams so that the visual results in this study can be more comprehensive regarding tourism in Bangkalan [38].

IV. RESULTS AND DISCUSSION

In making a tourist brochure for Martajasah Beach, Bangkalan, for example, the repeated use of directive phrases like “Let’s go to the beach!” was identified as highly persuasive, appearing three times across different brochure samples and coded as invitation verb phrases in NVIVO. In designing a brochure, it is essential to carefully select the words, phrases, or sentences used [39]. These linguistic elements serve as powerful promotional tools to attract tourists [40]. In general, brochures typically display information such as facilities, photos, locations, and ticket prices. Table I presents an overview of the linguistic features found in the Martajasah Beach tourist brochure, categorized based on their function and type [41]. In making brochures, what is usually displayed are facilities, photos, locations, and tickets. Here is an overview of linguistic features contained in the brochure:

TABLE I
LINGUISTIC FEATURES IN TOURISM BROCHURES (MARTAJASAH BEACH)

No.	Information Elements in Brochures	Linguistic Features
	Facility	
	Sunset	Word
	Toilet	Word

1	Gazebo	Word
	Parking area	Noun phrase
	<i>Photo spot</i>	Noun phrase
	Mangrove	Noun phrase
	Children Playground	Noun phrase
	Parking Ticket	
	Lok Usa Majer	Verb phrase
	Free HTM	Adverbial phrase
	(Only pay for parking)	Verb phrase
	Motorcycle : 2k	Noun phrase
	Car : 5k	Noun phrase
3	Directive Verbs of Invitation	
	Come on, let's go to the beach!!!	Invitation Verb Phrase
	Let's go to the beach!!!	Invitation Verb Phrase
	Let's go to the beach!!!	Invitation Verb Phrase
4	Location	
	Scan here to find our location Jl. Raya Kramat, Rice field area Martajasah, Bangkalan District, Regency, Bangkalan, East Java	Information sentences

Linguistic Features in the Labuhan Marine Tourism Park Brochure, Bangkalan. As presented in Table II. In creating a tourist brochure for Labuhan Marine Park, Bangkalan, researchers explored the choice of words that can be used to create an attractive tourist brochure. In creating a tourist brochure, it is certainly necessary to pay attention to the choice of words, phrases, or sentences contained in the brochure. The following are the choices of words, phrases, and sentences used in the brochure as a promotional medium:

TABLE II
LINGUISTIC FEATURES IN LABUHAN MARINE TOURISM PARK BROCHURE

No.	Information Elements in Brochures	Linguistic Features
1	Facility	Word
	Labuhan Marine Tourism Park	Phrase
	About Us	Phrase
	Labuhan marine tourism park in Labuhan village, Sepulu sub-district, Bangkalan, offers conservation with 30 types of mangroves, fish habitat, crabs, and birds. Visitors can enjoy the mangrove forest, white sand beaches, and camping grounds. Entrance tickets are only Rp5,000 per person, including the opportunity to plant and adopt mangroves. This tour also offers camping grounds and educational tours by planting and adopting mangroves directly in the tourist area.	Information Sentences
	Trekking 300 m in the middle of the mangrove forest area	Noun phrase
	Bird monitoring place	Noun phrase
	Mangrove education	Noun phrase
	Photo spot	Noun phrase
	Culinary spot (UMKM)	Noun phrase
	Children's play area	Noun phrase
	Tickets	Word
	Parking area (with additional parking for motorbikes RP3,000 and cars RP5,000)	Verb phrase

	Prewedding (with additional cost of IDR 150,000)	Adverbial phrase
	Mangrove planting (with seed purchase costs starting from IDR 1,000)	Verb phrase
3	Directive Verbs of Invitation	Phrase
	Enjoy your holiday at our place!	Invitation Verb Phrase
	Enjoy your holiday in our place!	Invitation Verb Phrase
	Harbor marine tourist park	Invitation Verb Phrase
	We look forward to seeing you!	Invitation Verb Phrase
	Tore lenggi tretan edentek ah yeh!	Invitation Verb Phrase
	We are waiting for your presence!	Invitation Verb Phrase
4	Location	Word
	Location: Sepulu District, Bangkalan Regency, East Java.	Phrase
5	Other Information	Phrase
	Other information	Phrase
	Other info	Phrase
	More info	Phrase
	Operating Hours: 24 Hours	Phrase

Linguistic Features in the Bangkalan Square Brochure. As Presented in Table III in making the Alun-Alun, Bangkalan tourism brochure, researchers traced the selection of words that can be used to form an attractive tourism brochure. In making a tourism brochure, of course, it is necessary to pay attention to the selection of words, phrases, or sentences contained in the brochure. The following are the choices of words, phrases, and sentences used in the brochure as a promotional medium: In making brochures, what is usually displayed are facilities, photos, locations, and tickets. Here is an overview of Linguistic features contained in the brochure design:

TABLE III
LINGUISTIC FEATURES IN BANGKALAN SQUARE BROCHURE

No.	Information elements in brochures	Linguistic Features
1	Facility	Word
	Bangkalan Square	Phrase
	Bangkalan Square is one of the destinations that you must visit and enjoy its amazing beauty.	Phrase
	Things to Do: Wandering around the green and beautiful park Feel the peace and fresh air by walking around the green and beautiful park. Perfect for relaxing and refreshing the mind.	Information Sentences
	Street vendors around the square Experience the deliciousness of local cuisine in Bangkalan square! Surrounded by street vendors, this place offers a fun and lively culinary experience.	Information Sentences
	Rock climbing Challenge your adrenaline with rock climbing at Alun Alun Bangkalan! Enjoy the thrilling experience and beautiful views. Come on, reach the top!	Information Sentences
	Hall Enjoy the relaxed atmosphere at the <i>pendopo</i> alun-alun bangkalan! An ideal place to gather, rest, and enjoy the beauty of the surroundings. With its distinctive design, this <i>pendopo</i> is the center of social and cultural activities.	Information Sentences

2	Directive Verbs of Invitation	Phrase
	Toreh ka alun alun Bangkalan tretan!	Invitation Verb Phrase
	Welcome!	Say
	Come visit	Invitation Verb Phrase
	Carve it out!	Invitation Verb Phrase
	Come here!	Invitation Verb Phrase
	Explore the local aghi keindahan bhudhaja	Invitation Verb Phrase
	Explore the beauty of local culture	Invitation Verb Phrase
3	Location	Word
	Address	Phrase
	Jl. Raya Alun-alun no 1, Bangkalan, Madura	
4	Other Information	Phrase
	Other information	Phrase
	Other info	Phrase
	More info	Phrase
	Operating hours	Phrase
	Every day, 07.00–22.00	

Procedure in Making QR Code as Media for Tourist Promotion: To create a QR Code for tourism promotion, use Linktree to create a personalized link collection. Start by registering and selecting a template that best represents the characteristics of the tourism content you're promoting. Next, add and manage your tourism promotional content to Linktree. Once finished, copy the final link that leads to the promotional material. Then, visit the online QR Code generator and select the required QR Code type. Paste the previously obtained link into the generator and download the QR Code in PNG or SVG format. After saving the file, the QR Code can be distributed digitally or physically. This QR Code allows the public to easily access tourism content with just a single scan.



Fig. 1. QR Code for Tourism in Bangkalan

The Effectiveness of QR Code as Media for Promotion. To obtain information related to the effectiveness of QR codes as a promotional media, a questionnaire was used to obtain data. As shown in Figure 1, the QR code was designed to provide easy access to tourism information. The following table shows the characteristics of respondents in this study.

TABLE IV
DEMOGRAPHICS OF RESPONDENTS

Characteristic		Total of Respondents	Percentage
Original Town	Bangkalan	140	57.2%
	Outside of Bangkalan	187	42.8%
Age	10-20 years old	285	87.2%
	21-30 years old	39	11.9%
	More than 30 years old	3	0.9%
Accessibility on using QR Code	Easily Accessed	327	100%
	Can't be Accessed	0	0%
Ability to use QR Code	Capable	327	100%
	Not Capable	0	0%

The results of data processing on the questionnaire were tested using SPSS tests through validity and reliability tests. The demographics of respondents are presented in Table IV. The results of the validity test can be seen in Table V and the results of the reliability test can be seen in Table VI.

TABLE V
Inter-Item Correlation Matrix

	E1	E2	P1	P2	I1	I2	I3	C1	C2	C3
E1	1.000	.645	.332	.409	.484	.554	.394	.538	.407	.515
E2	.645	1.000	.357	.421	.525	.527	.441	.472	.479	.503
P1	.332	.357	1.000	.649	.407	.420	.555	.394	.424	.392
P2	.409	.421	.649	1.000	.488	.503	.626	.425	.394	.464
I1	.484	.525	.407	.488	1.000	.678	.573	.470	.455	.462
I2	.554	.527	.420	.503	.678	1.000	.516	.538	.531	.567
I3	.394	.441	.555	.626	.573	.516	1.000	.435	.487	.466
C1	.538	.472	.394	.425	.470	.538	.435	1.000	.571	.665
C2	.407	.479	.424	.394	.455	.531	.487	.571	1.000	.692
C3	.515	.503	.392	.464	.462	.567	.466	.665	.692	1.000

The results of the validity test calculations show that all items are valid because the r value of all items is >0.1088 .

TABLE VI
RELIABILITY STATISTICS FOR QUESTIONNAIRE ITEMS

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.907	.907	10

The data are declared reliable as the r -value exceeds 0.1088, indicating that the instrument used in this study meets the reliability criteria. This ensures that the measurements obtained are consistent and dependable for further analysis. EPIC Rate Based on Dimension for QR Code as Media for Promotion serves as the subsequent step in evaluating the effectiveness of QR code implementation. Through the EPIC model, each dimension empathy, persuasion, impact, and communication is assessed to determine how well the QR code functions as a promotional medium for tourism in Bangkalan.

TABLE VII
EMPATHY DIMENSION

Statements	SA	A	N	D	SD	Total
I agree that the QR Code provides a good understanding of the desire to visit tourist attractions in Bangkalan.	58	212	57	0	0	327
I agree that the QR code provides the information needed by tourists to visit tourist attractions in Bangkalan.	61	221	45	0	0	327
Total Score	119	433	102	0	0	654

The results of the tabulation of the empathy dimensions are calculated using the following formula:

$$EPIC \text{ Rate empathy dimension} = \frac{(5.119) + (4.433) + (3.102)}{654}$$

$$EPIC \text{ Rate empathy dimension} = \frac{(595) + (1732) + (306)}{654}$$

$$EPIC \text{ Rate empathy dimension} = \frac{2633}{654} = 4.02599$$

The EPIC ratio value for the empathy dimension shown in the formula above is 4.02599. This result indicates that the EPIC ratio value has an effective value. This result proves that the QR code application can be categorized as effective in providing empathy to the public to visit tourist attractions in Bangkalan.

TABLE VIII
PERSUASION DIMENSION

Statements	SA	A	N	D	SD	Total
I am interested in visiting tourist places in Bangkalan after accessing the QR code.	34	192	101	0	0	327
I got the motivation or encouragement to visit tourist places in Bangkalan after accessing the QR code.	35	185	107	0	0	327
Total score	69	377	208	0	0	654

The results of the tabulation of the persuasion dimensions are calculated using the following formula:

$$EPIC \text{ Rate persuasion dimension} : \frac{(5.69) + (4.377) + (3.208)}{654}$$

$$EPIC \text{ Rate persuasion dimension} : \frac{(345) + (1508) + (624)}{654}$$

$$EPIC \text{ Rate persuasion dimension} : \frac{2477}{654} = 3.78746$$

The EPIC ratio value for the persuasion dimension shown in the formula above at 3.78746. This result indicates that the EPIC ratio value for the persuasion dimension shows an effective value and proves that the QR code application

TABLE IX
IMPACT DIMENSION

Statements	SA	A	N	D	SD	Total
I got benefits related to tourist places in Bangkalan after accessing the QR code.	46	213	68	0	0	327
I got clear information regarding tourist places in Bangkalan after accessing the QR code.	52	214	61	0	0	327
I got the influence to go to a tourist spot in Bangkalan after accessing the QR code.	22	191	114	0	0	327
Total Score	120	618	243	0	0	981

can be categorized as effective in influencing people to visit Bangkalan, Madura.

$$EPIC \text{ Rate Impact Dimension} = \frac{(5.120) + (4.618) + (3.243)}{981}$$

$$EPIC \text{ Rate impact dimension} = \frac{(600) + (2472) + (729)}{981}$$

$$EPIC \text{ Rate impact dimension} = \frac{3801}{981} = 3.87462$$

The EPIC rate value for the impact dimension shown in the formula above is 3.87462. This result shows that the EPIC rate value based on the impact dimension shows an effective value. This result proves that the QR Code application can be categorized as effective in providing an impact in influencing people to visit Bangkalan, Madura.

TABLE X
DIMENSION OF COMMUNICATION

Statements	SA	A	N	D	SD	Total
I agree that the delivery of information via QR code is clear and interesting.	48	210	69	0	0	327
I agree that the language used in the QR code is easy to understand	40	205	82	0	0	327
I agree that the QR code can communicate the message well.	46	211	70	0	0	327
Total score	134	626	221	0	0	981

The results of the impact dimension tabulation are calculated using the following formula:

$$EPIC \text{ Rate:} \frac{(5.134) + (4.626) + (3.221)}{981}$$

$$EPIC \text{ Rate dimensions communication:} \frac{(670) + (2504) + (663)}{981}$$

$$EPIC \text{ Rate dimension communication:} \frac{3837}{981} = 3.91131$$

The EPIC rate value for the communication dimension shown in the formula above of 3.91131. This result shows that

the EPIC rate value in the communication dimension shows an effective value. This result proves that the QR Code application can be categorized as effective in providing information related to tourism in Bangkalan.

The calculation results to determine the EPIC rate value for all dimensions can be seen in the following formula:

EPIC Rate:

$$\frac{X_{empathy} + X_{persuasion} + X_{impact} + X_{com}}{N}$$

EPIC rate:

$$\frac{(4.02599) + (3.78746) + (3.87462) + (3.91131)}{4}$$

EPIC rate:

$$\frac{15.59938}{4} = 3.89985$$

The EPIC rate results for all dimensions shown in the formula above of 3.89985. This result shows that the QR Code application can be categorized as effective as a medium for disseminating information related to tourism in Bangkalan, Madura [42].

The results of the study show that the use of QR Code technology can help in efforts to improve tourism promotion in Bangkalan. Technology plays an important role in tourism promotion as an effort to increase the number of tourists visiting a tourist attraction [19]. One of the objectives of utilizing technology such as the use of QR Codes is to help tourism managers and local governments to provide information on tourist attractions in Bangkalan. From the results of the study, it can be seen that the use of QR Codes contains information on tourist attractions in Bangkalan which aims to provide information and attract tourists to visit Bangkalan, Madura. Not only that, the application created also makes it easier to find tourist locations in Bangkalan, Madura. This is in line with the results of community which aims to help the government introduce tourist attractions through the use of QR Codes [43].

The results of this study provide an overview of the use of QR codes as an educational information media for the public to visit tourist attractions in Bangkalan, Madura. The integration of the use of good, communicative, and persuasive language is one effort to provide education to the public regarding tourist attractions in Bangkalan. This is in line with the results of community service activities carried related to the integration of educational QR codes in tourism introduction efforts. Not only that, the integration of language and QR code technology is also used to introduce tourist attractions in Bangkalan, Madura. This is in line with the community service which utilize QR codes as tourist attraction information.

In the use of QR Code, there is a brochure that contains information about tourist locations in the form of QR Codes that can be accessed by the public to determine tourist locations. The use of QR Codes to track tourist locations is very helpful for tourists in checking tourist locations. Effective and accurate information can be a medium for tourism promotion. Therefore, it can be concluded that the use of language and QR

Code applications is very effective as a medium for tourism promotion in Bangkalan. Not only that, the development of QR Code applications as a promotional medium also needs to be developed so that tourism continues to grow.

V. CONCLUSION

The results of the study indicate that the integration of language and QR Code technology can have a positive impact on the dissemination of tourist information in Bangkalan, Madura. Several linguistic features found in the use of advertising language in tourist brochures can be found in the selection of linguistic features in the form of words, phrases, clauses, and sentences. The results of the study indicate that the linguistic features used in advertising language are focused on the use of persuasive language that functions to influence people to visit Madura. The results of the study using the EPIC model to see the effectiveness of the use of QR codes as a technology to disseminate information related to tourist brochures show that there are 4 indicators used, namely Empathy, Persuasion, Impact, and Communication. The results of the study show that the use of the EPIC rate model of 3.89985 indicates an effective category. These results indicate that the use of QR Code technology as a medium for disseminating tourist information in Bangkalan is good.

The integration of language and QR Code technology has a positive impact on the dissemination of tourism information in Bangkalan. Future research can use a combination of QR codes with Augmented Reality (AR) to see the impact of implementing technology in an effort to increase the number of tourists in Bangkalan, Madura through tourism promotion media. This study has limitations on the use of one type of promotional media, namely tourism brochures that are distributed through the use of QR Codes. Future practice could include the development of government-supported QR installations at tourist sites and training for tourism operators to integrate persuasive messaging. Policy support for infrastructure and digital literacy is also essential with persuasive language on signage and digital kiosks. Policymakers should also consider subsidizing QR-based promotional campaigns in rural tourism areas. Further research can use the QR Code application as a technology to access tourism using information through brochures or videos.

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REFERENCES

- [1] M. Yanis, M. Zainal, R. A. Putra, and A. Y. Paembonan, "Integration of qr-code and web-based applications for developing digital tourism in iboi village, indonesia as a lesson learned media on the volcanic island," *Geojournal of Tourism and Geosites*, vol. 47, no. 2, pp. 499–507, 2023.
- [2] T. Pujiati, "Command speech acts on health services: A sociopragmatics study," *Ummul Qura Jurnal Institut Pesantren Sunan Drajat (INSUD) Lamongan*, vol. 19, no. 1, pp. 9–26, 2024.
- [3] L. T. Putri, T. Pujiati, and M. Z. Alfisuma, "Politeness strategies of directive speech at digital tourism poster in bangkalan, madura," *Journal of Social, Culture, and Language*, vol. 2, no. 1, pp. 24–32, 2023.

- [4] S. N. A. Arigama, T. Pujiati, and M. Z. Alfisuma, "Illocutionary speech acts on digital tourism posters to develop tourism in bangkalan, madura," *Journal of Social, Culture, and Language*, vol. 2, no. 1, pp. 1–9, 2023.
- [5] D. Khampusaen, B. Naiyanit, and T. Chanprasopchai, "Transforming rural landscapes: Unleashing agro-tourism potential through digital media interconnectivity," *Journal of Ecohumanism*, vol. 3, no. 7, pp. 2054–2063, 2024.
- [6] V. P. Gupta, "Leveraging digital transformation in marketing of home-stay businesses to promote tourism in the hospitality industry," in *Technology and luxury hospitality*. Routledge, 2024, pp. 93–115.
- [7] T. Pujiati, M. Z. Alfisuma, B. Agustian, R. Rachmatika, D. Julianingsih *et al.*, "Integrating augmented reality with social media for interactive tourism experiences," in *2024 3rd International Conference on Creative Communication and Innovative Technology (ICCICT)*. IEEE, 2024, pp. 1–7.
- [8] S. B. Juma, M. L. Mushi *et al.*, "Elevating tanzania's tourism: Integrating gis, ar and ai for immersive exploration and promotion," *ABUAD Journal of Engineering Research and Development (AJERD)*, vol. 7, no. 2, pp. 104–114, 2024.
- [9] G. Cloete, J. Ndlovu, and R. Devi, "Leveraging entrepreneurship and digital innovation in higher education to revitalise namibia's hospitality & tourism sector post-covid-19 era," *International Journal of Academic Research in Progressive Education and Development*, vol. 12, no. 4, 2023.
- [10] E. Kastenholz and W. Gronau, "Enhancing competences for co-creating appealing and meaningful cultural heritage experiences in tourism," *Journal of Hospitality & Tourism Research*, vol. 46, no. 8, pp. 1519–1544, 2022.
- [11] T. Krabokoukis, "Bridging neuromarketing and data analytics in tourism: An adaptive digital marketing framework for hotels and destinations," *Tourism and Hospitality*, vol. 6, no. 1, p. 12, 2025.
- [12] T. Floričić, I. Šker, and H. M. Benassi, "Enhancing digital promotion of cultural attractions: Assessing websites, online marketing tools and smart technologies," *Business Systems Research: International journal of the Society for Advancing Innovation and Research in Economy*, vol. 14, no. 1, pp. 72–92, 2023.
- [13] M. Morady Moghaddam and F. Esmailpour, "Persuasive language in elt-related ads on social media," *Journal of Psycholinguistic Research*, vol. 52, no. 4, pp. 1263–1288, 2023.
- [14] M. Martutik, A. R. A. Rani, B. Prastio, S. Thampu, and M. Muhtadin, "What are persuasive languages and strategies for advertorial advertising in indonesia? critical discourse analysis (apa bahasa dan strategi persuasif untuk periklanan advertorial di indonesia? analisis wacana kritis)," *Jurnal Gramatika: Jurnal Penelitian Pendidikan Bahasa dan Sastra Indonesia*, vol. 9, no. 1, pp. 15–37, 2023.
- [15] B. Onyekwelu, G. O. Alo, F. K. Echefu, M. Aderale, I. O. Adetula, and J. C. Onyekwelu, "Development of a qr code system for tree species identification," *International Journal of Web Research*, vol. 6, no. 1, pp. 59–67, 2023.
- [16] A. Baan, "The persuasive speech in business advertorial discourse," *Jurnal Onoma: Pendidikan*, vol. 2, no. 8, 2022.
- [17] N. Huseynova, B. Amani, and I. Taghiyev, "The critical discourse analysis in the persuasive language of hotel and fast-food restaurant advertisements," 2022.
- [18] T. Pujiati, M. Z. Alfisuma, and A. Arjulayana, "Sociopragmatic study on instagram captions as a media for tourism promotion in bangkalan," *Jurnal Pamator: Jurnal Ilmiah Universitas Trunojoyo*, vol. 17, no. 2, 2024.
- [19] S. H. Ramadhan, "Augmented reality empowered responsible tourism: Leveraging social media applications for generation z tourists in the yogyakarta," *International Journal of Green Tourism Research and Applications*, vol. 6, no. 1, pp. 1–7, 2024.
- [20] C. Sriliasta and V. Meilinda, "Overview of life cycle assessment of current emerging technologies," *International Transactions on Artificial Intelligence*, vol. 1, no. 2, pp. 175–181, 2023.
- [21] F. T. Rosemary, "Leveraging artificial intelligence and data analytics for enhancing museum experiences: exploring historical narratives, visitor engagement, and digital transformation in the age of innovation," *Int. Res. J. Mod. Eng. Technol. Sci.*, vol. 7, pp. 4221–4236, 2025.
- [22] M. L. Santos and A. Mukminin, "Persuasiveness used in selected philippines' and thailand's tourism brochures," *Studies in English language and education*, vol. 9, no. 3, pp. 1201–1220, 2022.
- [23] A. Wisetsa, N. Eviana, and R. Achmadi, "Effectiveness of promotional media using epic model (a case study in al qadri umrah and hajj bureau in jakarta)," *International Journal of Sciences: Basic and Applied Research*, vol. 56, no. 1, pp. 322–334, 2021.
- [24] D. S. S. Wuisan, R. A. Sunardjo, Q. Aini, N. A. Yusuf, and U. Rahardja, "Integrating artificial intelligence in human resource management: A smartpls approach for entrepreneurial success," *Aptisi Transactions on Technopreneurship (ATT)*, vol. 5, no. 3, pp. 334–345, 2023.
- [25] R. Leung, "Development of information and communication technology: from e-tourism to smart tourism," *Handbook of e-Tourism*, pp. 1–33, 2022.
- [26] D. P. Lazirkha, J. Hom, and V. Melinda, "Quality analysis of digital business services in improving customer satisfaction," *Startuppreneur Business Digital (SABDA Journal)*, vol. 1, no. 2, pp. 156–166, 2022.
- [27] M. R. Anwar and L. D. Sakti, "Integrating artificial intelligence and environmental science for sustainable urban planning," *IAIC Transactions on Sustainable Digital Innovation (ITSIDI)*, vol. 5, no. 2, pp. 179–191, 2024.
- [28] M. Ahli, M. F. Hilmi, and A. Abudaqa, "Ethical sales behavior influencing trust, loyalty, green experience, and satisfaction in uae public entrepreneur firms," *Aptisi Transactions on Technopreneurship (ATT)*, vol. 6, no. 2, pp. 149–168, 2024.
- [29] S. Singhal, B. T. Sayed, F. Kodirova, H. J. Mohammed, Q. K. Kadhim, Z. T. Sahi, U. Rahardja, R. Sivaraman, and Y. F. Mustafa, "Application of variable neighborhood search algorithm for time dependent school service routing problem," *Industrial Engineering & Management Systems*, vol. 21, no. 3, pp. 526–537, 2022.
- [30] Z. Maharani, A. Saputra *et al.*, "Strategic management of public health risks: Correlation between water quality and aedes sp. in south jakarta," *APTISI Transactions on Management*, vol. 8, no. 1, pp. 66–70, 2024.
- [31] I. Maria *et al.*, "Unlocking success: Human resource management for startuppreneur," *Startuppreneur Business Digital (SABDA Journal)*, vol. 3, no. 1, pp. 89–97, 2024.
- [32] R. Widayanti, M. H. R. Chakim, C. Lukita, U. Rahardja, and N. Lutfiani, "Improving recommender systems using hybrid techniques of collaborative filtering and content-based filtering," *Journal of Applied Data Sciences*, vol. 4, no. 3, pp. 289–302, 2023.
- [33] V. H. Fernández-Bedoya, M. A. Ruiz-Palacios, M. E. Meneses-La-Riva, and J. A. Suyo-Vega, "Tourism entrepreneurship in latin america: A systematic review of challenges, strategies, and post-covid-19 perspectives," *Sustainability*, vol. 17, no. 3, p. 989, 2025.
- [34] N. A. Wahab and N. Jamil, "A web-based travel package management system integrated with qr code," *Journal of Computing Research and Innovation*, vol. 9, no. 2, pp. 130–139, 2024.
- [35] L. K. Choi, K. B. Rii, and H. W. Park, "K-means and j48 algorithms to categorize student research abstracts," *International Journal of Cyber and IT Service Management*, vol. 3, no. 1, pp. 61–64, 2023.
- [36] T. P. S. Rosetio *et al.*, "Optimizing the use of the madurese language in the development of religion tourism at syaikhona kholil, bangkalan-optimizing the use of the madurese language in the development of religion tourism at syaikhona kholil, bangkalan," *Journal of Social, Culture, and Language*, vol. 3, no. 2, pp. 24–30, 2025.
- [37] L. Florido-Benítez and B. del Alcázar Martínez, "How artificial intelligence (ai) is powering new tourism marketing and the future agenda for smart tourist destinations," *Electronics*, vol. 13, no. 21, p. 4151, 2024.
- [38] Z. Maxwell-Smith, M. Kohler, and H. Suominen, "Scoping natural language processing in indonesian and malay for education applications," in *Proceedings of the 60th Annual Meeting of the Association for Computational Linguistics: Student Research Workshop*, 2022, pp. 171–228.
- [39] S. Ignacio Cerrato, "Optics and processing of qr codes through chromatic encryption in distributed system," 2025.
- [40] A. S. A. Azmadi, M. A. Hamid, M. H. Hanafiah, D. Hariani, and N. S. M. Shariffuddin, "Measuring tourist preferences and behavior toward smart tourism destination planning," *Planning Malaysia*, vol. 21, 2023.
- [41] N. H. Tien, D. Van Trai, and N. X. Quyet, "The impact of digital transformation on tourism sustainable development: a case of smes in vietnam," *Int. J. Entrepreneurship and Small Business*, 2023.
- [42] S. Parrinello and F. Picchio, "Digital strategies to enhance cultural heritage routes: from integrated survey to digital twins of different european architectural scenarios," *Drones*, vol. 7, no. 9, p. 576, 2023.
- [43] I. Amsyar, E. Cristhopher, U. Rahardja, N. Lutfiani, and A. Rizky, "Application of building workers services in facing industrial revolution 4.0," *Aptisi Transactions on Technopreneurship (ATT)*, vol. 3, no. 1, pp. 32–41, 2021.