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I Photograph, Therefore I Am: A Study of Tourist Behavior in Xiangshan Coastal Tourism Based on Photo Analysis Method

Yao Yao

University of Sydney, Sydney, Australia
yaoyao_2513@163.com

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Abstract: Using 3,227 photographs posted by Xiangshan tourists on Ctrip as analytical material, this study employs NVivo 11.0 software, combined with photo analysis method, grounded theory method, and kernel density analysis to examine tourist behavior in Xiangshan. The research findings reveal: In terms of travel preferences, tourists primarily travel with family (especially parent-child groups) and friends. Tourists generally exhibit a joyful mood during their travels. They show strong interest in Xiangshan's natural landscapes, such as beaches, the sea, and sunsets, as well as cultural attractions like the Hui-style architecture in Shipu Ancient Town and folk cultural events such as the China Fishing Festival. Tourists greatly enjoy and aspire to the quiet, leisurely, and comfortable slow-paced lifestyle of Xiangshan. They have a unique fondness for Xiangshan's cuisine and are enthusiastic about experiencing marine activities like sailing. Additionally, tourists display curiosity about the lives of local fishermen. Temporally, Xiangshan tourism exhibits distinct seasonality, with travel times primarily concentrated during the summer vacation period from June to August. Spatially, tourism hotspots are mainly linked by the eastern coastline, presenting an overall "dispersed yet locally clustered" uneven distribution pattern. Tourists' perception of traditional villages and other scenic areas is relatively weak. Based on these findings, this study proposes tourism development optimization strategies, including: intensifying promotional efforts through new media marketing to increase the visibility of niche attractions; enhancing the differentiated development of tourism products to promote year-round tourism and optimize temporal distribution patterns; strengthening the exploration of resources in niche scenic spots; and reinforcing joint marketing efforts with high-profile attractions.

1. Introduction

The "get off the bus to take photos, get on the bus to sleep" approach was once a classic tourism style in our country[1]. With the rapid development of social media platforms and online travel agencies, an increasing number of tourists are eager to post and share their travel photos on various online platforms (such as WeChat, QQ, Red, Mafengwo, and Ctrip). People use cameras not only to

record attractions and preserve memories of their journeys but also, more importantly, to achieve "self-narration" and "self-identification", thereby expressing their views and perspectives on the world they have come to know[2]. These photographs encompass what tourists see, hear, and feel, providing an effective means of analyzing tourist behavior during the travel process. They not only offer an open and rich data source for tourism research but also provide new research ideas and methodologies. These photos serve as mirrors, reflecting both the people, events, and objects in front of the lens and the tourists themselves behind the camera. Consequently, tourism scholars unanimously agree that focusing on tourists' photography behavior and studying the resulting photos is of significant importance[3]. To date, many international scholars have conducted various tourism studies using photographic data. Popular research topics include analyzing tourist numbers based on geotagged photos, analysis of points and areas of interest at destinations, studying spatiotemporal behavior trajectories and route patterns, and investigating destination image perception. For instance, Chalfen initially explored the role of photography in tourists' travel experiences and investigated patterns in their photographic behavior[4]. Other scholars have also attempted to explore tourists' perceptions of destinations from new perspectives, combining photo analysis with interviews[5]. Ye pointed out that 89% of overnight tourists take photos, with 41.4% of them posting these photos online[6]. By analyzing the content of travel photos, one can gain deep insights into tourists' experiences and interests at different destinations. Furthermore, Stepchenkova and Zhan conducted a statistical comparison and analysis of 500 tourist photo samples from Flickr and 530 photo samples from Peru's destination marketing organization (DMO). They discovered that tourists were more interested in the daily lives of Peruvians, while the DMO focused more on promoting Peru's distinctive culture, traditions, and arts[7]. Orsi utilized geotagged photographs from the Panoramio website to analyze and predict tourists' visiting areas and routes, providing reference material for the scientific management of the Dolomites Natural Reserve[8]. Vu et al. discovered that tourists of different nationalities exhibited variations in their Areas of Interest (AOI), travel times, and tour routes while visiting Hong Kong[9]. Domestic scholars' research applying tourist photo analysis to study tourism phenomena is still in its infancy. A search on "CNKI" (China National Knowledge Infrastructure) reveals that only a few scholars' studies involve this emerging field, with limited valuable literature available for exploration. The existing research primarily focuses on tourists' landscape preferences, travel behavior, spatiotemporal distribution characteristics, tourism image, and destination attractiveness. For instance, Xu Ming et al. studied tourists' attention characteristics in the Hangzhou Bay Sea of Flowers Scenic Area based on online photo data using ArcGIS software[10]. Yin Li et al. compared the projected image of a tourism destination with tourists' on-site perceived image by conducting content analysis of official photos and tourist-taken photos of Hainan's Qilou Old Street, discussing the impact of image differences on tourist experiences[11]. Qu Hailun et al. researched the image of tourist destinations using photos from online travel journals about Jinan City as an example, calling for more people to understand and apply the photo analysis method in various fields of tourism research[12]. Xie Guangquan et al. studied tourists' landscape preference characteristics by deconstructing and recombining elements from tourist photo data on Mafengwo and Ctrip websites, using Peach Blossom Spring Cave in Yong'an, Fujian as a case study[13]. Wu Huihui et al. explored how tourists' travel photos shared on social media influence tourism happiness through the mediating effect of existential authenticity[14]. Overall, the tourism academic community has long lacked proper academic sensitivity to "photography" as an important tourism phenomenon, with insufficient in-depth research. In particular, there are few articles analyzing tourist behavior through photos posted by tourists, which is clearly detrimental to the development of tourism practices. Therefore, this study takes Xiangshan County in Ningbo City as an example, using tourist-posted travel photos as research data. It employs methods such as content analysis, kernel density analysis, and temporal statistical analysis to study tourist behavior. The aim

is to provide references from the tourists' perspective for Xiangshan or other coastal tourism cities to optimize tourism destination products, improve tourism destination management and marketing, and enhance the quality of tourists' experiences.

2. Overview of the Research Area

Xiangshan County, under the jurisdiction of Ningbo City in Zhejiang Province, is located on the eastern coast of Zhejiang. It is surrounded by sea on three sides and embraced by two harbors. The entire Xiangshan consists of 608 islands and reefs, with a sea area of 6,618 square kilometers and a coastline of 925 kilometers. It is renowned as the "Eastern Island of Immortality, the Fairy Land of Sea and Mountain". Xiangshan boasts rich natural and cultural tourism resources, including tourist attractions such as Songlan Mountain Resort, Shipu Fishing Port Ancient Town, China Fishing Village, Xiangshan Film and Television City, Hua'ao Stone Forest, and Dongmen Island, making it a tourist destination with great development potential. According to statistics, in 2023, the main scenic areas in Xiangshan received a total of 10.837 million visitors, with ticket revenue of 207 million yuan, representing year-on-year increases of 68.3% and 84.3% respectively. Xiangshan ranked 10th in the 2024 list of Top 100 Counties for Comprehensive Tourism Strength in China, indicating that Xiangshan's tourism industry is in an ascending phase. These data directly reflect the thriving state of Xiangshan's tourism industry[15]. In summary, choosing Xiangshan County in Ningbo City as a case study for this research has certain representativeness and typicality.

3. Methodology

3.1 Data Acquisition

This study primarily collected online travel journals from tourism websites and extracted photos from the text as sample data for research. After comparing and analyzing tourism websites such as Ctrip, Fliggy, Mafengwo, Dianping, and Tongcheng, it was found that the travel journal information on Ctrip Travel was relatively complete and suitable as a research sample. Therefore, this study used Octopus software to crawl travel journals published from January 1, 2019, to December 31, 2023, on Ctrip Travel using "Xiangshan" as the keyword, resulting in a total of 94 journals. After filtering out duplicate content and data that did not meet research requirements (text-only, incomplete travel journals, blurry photos, irrelevant content, promotional material with only scenic spot introductions, predominantly portraits, and online marketing advertisements), 76 valid travel journals were finally obtained. Subsequently, 3,227 photos from these travel journals were numbered and saved in JPG format as the data source for this study.

3.2 Research Methods

3.2.1 Tourist Preferences

To explore tourists' preferences for Xiangshan, this study imported the 3,227 collected photos into NVivo 11.0 software for content analysis and interpretation of each photo. The specific steps are as follows:

First, based on the classification method of scholars Dai Guangquan and Chen Xin, the photos were categorized into four types: people, landscapes, scenes, and close-ups[16]. People-type photos refer to images with people as the main subject, including group photos and individual portraits. Landscape-type photos refer to images with scenery as the main subject, including natural landscapes and cultural attractions. Scene-type photos capture the scenes or events that the photographer saw at

the time. Close-up type photos are those where the photographer zooms in on a particular object.

Second, considering that NVivo 11.0 software has image import and coding functions, this study will use the qualitative analysis software NVivo 11.0 to code the four types of photos progressively according to grounded theory principles. This process will involve open coding, axial coding, and selective coding to gradually induce and refine concepts and categories. Specifically, this study will repeatedly compare photos, categorize those with similar content into the same free node, and then establish tree nodes based on the commonalities between free nodes. Each tree node is equivalent to a conceptual category, containing numerous free nodes.

3.2.2 Spatiotemporal Distribution Characteristics of Tourists

To explore the spatiotemporal distribution characteristics of tourists, this study first considers the time when tourists uploaded their travel journals as their visiting dates. The acquired data is placed in an Excel spreadsheet to obtain temporal data of tourists' visits to Xiangshan. Subsequently, this study uses statistical methods to obtain spatial distribution characteristics. Specifically, this study regards the locations where tourists took photos as spatial points of their presence in Xiangshan. Simultaneously, ArcGIS 10.7 software is used to visualize these photo locations and perform kernel density analysis to identify spatial concentration hotspots of tourists in Xiangshan.

4. Results

4.1 Analysis of Tourist Preferences

4.1.1 Coding Analysis of People-type Photos

This study coded people-type photos into two categories of tree nodes: one reflecting the travel companionship patterns of Xiangshan tourists, and the other reflecting their emotional states. When coding tourist travel companionship patterns, the main basis was the relationships reflected in the photos. The coding of tourists' emotional states in the photos was primarily based on facial expressions and postures, for example, a "smile" could indicate that the tourist was in a good mood at the time of the photo.

4.1.1.1 Analysis of Travel Companionship Patterns

After coding, it was found that the main travel companionship patterns were parent-child families (43.4%) and friends traveling together (39.5%), followed by couples or romantic partners (7.9%), accompanying parents (5.3%), and solo travel (3.9%). Specifically, photos with children as the main subject accounted for the largest proportion, indicating that the primary reasons for tourists choosing Xiangshan as a travel destination are to relax and enhance parent-child relationships.

4.1.1.2 Analysis of People's Emotional States

Regarding emotional states, the expressions of people in the photos were predominantly "laughing" and "smiling", indicating that tourists visiting Xiangshan were in a happy mood during their travels. Xiangshan, boasting the most beautiful coastline at 30 degrees north latitude, has always been synonymous with a slow-paced lifestyle. Its unique mountain and sea scenery provides tourists with a sense of comfort, contentment, and tranquility.

4.1.2 Coding Analysis of Landscape-type Photos

This study coded landscape-type photos into two categories of tree nodes: natural landscapes and

cultural landscapes.

4.1.2.1 Natural Landscapes

According to the data given by Table 1, the research found that among natural landscape free nodes, "beach" had the highest frequency, followed by "sea", indicating that tourists visiting Xiangshan have a particular affinity for beaches and the sea, which are among the motivations driving tourists to Xiangshan. Additionally, "sunset", "green mountains", and "blue sky and white clouds" also had relatively high frequencies in tourists' natural landscape photos, suggesting that Xiangshan tourists have a high level of interest in the natural environment. Furthermore, there were two other free nodes: "stone forest" and "terraced fields". The stone forest in the photos refers to one of the world's three major volcanic rock primary landforms, a rare "sea stone forest", while the terraced fields refer to the newly popular Qiancang Village's rapeseed flower terraces. This demonstrates that Xiangshan possesses rich natural tourism resources, attracting countless tourists with its unique natural scenery.

Table 1: The Code Frequency of Natural Landscape

Ranking	Natural Landscape	Node	Frequency (%)
1	Beach	358	32.55%
2	Sea	313	28.45%
3	Sunset	247	22.45%
4	Mountains	195	17.73%
5	Blue sky and white clouds	150	13.64%
6	Reef	94	8.55%
7	Stone Forest	65	5.91%
8	Terraced Fields	55	5.00%
9	Tree	49	4.45%
10	Flower	20	1.82%

4.1.2.2 Cultural Landscapes

Table 2 reflects the frequency of cultural landscape free nodes, from high to low, is "architecture", "folk activities", "night scenery", and "roads". Tourists show great interest in Xiangshan's architecture, which is related to the town's unique architectural charm. The Hui-style buildings built along the mountains, the ancient streets and alleys, the smooth and shiny stone-paved roads, and the weathered old shops along the streets carry over 600 years of cultural heritage. These elements allow tourists to experience the rich marine culture, fishing culture, and merchant culture, becoming the main symbols for tourist experiences and consumption. Photos related to Xiangshan's "folk activities" mainly feature the China Fishing Festival. Every September, Shipu fishermen hold folk activities such as sea worship ceremonies, boat launching ceremonies, and night tours of Mazu's patrol, which can be seen as the best exploration and inheritance of Xiangshan's unique "fishing culture genes". The coastal town of Xiangshan has gained attention due to the China Fishing Festival, opening a window to showcase Xiangshan to the world.

Judging from the frequency of "night scenery" photos, a large proportion of visitors to Xiangshan show a strong interest in the night views of Shipu Ancient Town. Moonlight blankets the sea surface, while the ancient town is adorned with neon lights. The blue bricks and black tiles of daytime are transformed into the orange-red hue of fishing lanterns, connecting the ancient town's day and night. Photos related to Xiangshan's "roads" mainly feature stone-paved paths and alleyways as the primary free nodes. The characteristics of these "roads" in the photos are primarily quiet and long, indicating tourists' pursuit of a tranquil, slow-paced lifestyle.

Table 2: The Code Frequency of Cultural Landscape

Ranking	Cultural Landscape	Node	Frequency (%)
1	Architecture	320	32.32%
2	Folk Activities	285	28.79%
3	Night Scenery	254	25.66%
4	Roads	140	14.14%
5	Fishing Lantern	122	12.32%
6	Windmill	90	9.09%
7	Plank Path	48	4.85%
8	Sign Board	32	3.23%
9	Wall Painting	28	2.83%
10	Statue	19	1.92%

4.1.3 Coding Analysis of Scene-type Photos

As is shown from the below Table 3, scene-type photos are mainly coded into four categories of tree nodes: play, accommodation, shopping, and lifestyle.

The "play" free node has a relatively high frequency. In terms of play, tourists show a keen interest in seaside activities, particularly scenes of playing in the sand, beachcombing, and experiencing water sports.

The "accommodation" free node also has a relatively high frequency. Scenes related to "accommodation" mainly depict tourists' lodging during their Xiangshan visit, ranging from low-end but cozy homestays to mid-range and high-end hotels. Tourists are especially interested in Xiangshan's seaside accommodation environments.

The frequencies of the "shopping" and "lifestyle" nodes are almost the same. "Shopping" scenes primarily involve tourists purchasing fresh seafood at local markets. The expressions on these tourists' faces show that they are very enthusiastic about and enjoy this unique life experience. Regarding "lifestyle", tourists choose to photograph scenes of local Xiangshan residents' daily lives, indicating their admiration for Xiangshan's quiet and comfortable slow-paced lifestyle.

Table 3: The Code Frequency of Scene Photos

Ranking	Scene Photos	Node	Frequency (%)
1	Play	148	25.52%
2	Accommodation	99	17.07%
3	Shopping	53	10.43%
4	lifestyle	49	9.65%

4.1.4 Coding Analysis of Close-up Photos

Table 4 displays close-up photos are categorized into two tree nodes: cuisine and boats.

"Cuisine" occupies the largest proportion in Xiangshan tourists' photos, indicating that tourists have a very strong desire to try Xiangshan's local food. Xiangshan is renowned as a "seafood kingdom" with year-round seafood supply. Specialty dishes include "wafer cones", where various seafood items are rolled into a crisp shell. Additionally, there's a seafood noodle dish that's a medley of flavors, with each noodle strand imbued with rich, savory tastes. Furthermore, the "razor clams" are known for their plump, white flesh and fresh taste, leaving a lasting impression. Food has a strong correlation with tourism products, and distinctive cuisine influences tourists' perception of travel quality.

Additionally, boats, including sailboats and fishing boats, are among the points of interest for tourists. The Xiangshan Asia Sailing Center, located in the Songlan Mountain Tourist Resort, is the venue for the sailing events of the Hangzhou Asian Games. Since the establishment of the "Ningbo No. 1" sailing team in Xiangshan, they have won 13 international sailing competitions and achieved 5 world championships. Evidently, the "Ningbo No. 1" sailing team has become a nationally and internationally renowned sailing team, hailed as the "golden business card" of Ningbo's sailing sports. More importantly, Xiangshan continues to amplify the "spillover" effect of the Asian Games, leveraging the Asian Games' momentum to fully establish its brand as a marine sports city, attracting tourists to experience marine sports in depth and enjoy sailing on the open sea. The high frequency of fishing boats in Xiangshan tourists' photos indicates that visitors are immersing themselves in the beauty of fishing villages, freely enjoying the flavor of the "sea", appreciating the unique charm of fishing culture, while also reflecting tourists' curiosity about the fishermen's lifestyle of "working at sunrise and resting at sunset".

Table 4: The Code Frequency of Feature Photos

Ranking	Feature Photos	Node	Frequency (%)
1	Cuisine	108	21.26%
2	Boats	87	17.13%
3	Handicrafts	56	11.02%
4	Animals	25	4.90%

4.2 Analysis of Tourists' Spatiotemporal Behavior

4.2.1 Analysis of Tourists' Temporal Behavior

Based on the premise that "the number of photos correlates positively with tourist flow", this study explores the temporal distribution patterns of tourists in Xiangshan. The research conducted a statistical analysis of the upload times of the 3,227 selected photos, creating annual (Figure 1) and monthly (Figure 2) distribution charts of Xiangshan tourists.

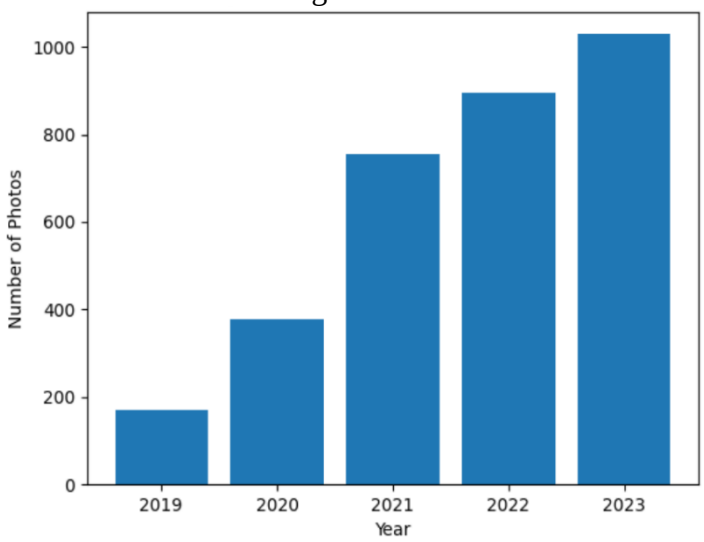

Figure 1: Annual Distribution of Visitors

Figure 1 shows that Xiangshan's tourist numbers have been growing year by year since 2019. Between 2019 and 2023, the number of tourists increased nearly tenfold, indicating that Xiangshan is gradually gaining attention. This also demonstrates Xiangshan's continuous efforts in marketing

promotion, product innovation, and service improvement, constantly consolidating and enhancing its market position. This not only highlights Xiangshan's leading position in county-level tourism but also lays a solid foundation for its future development.

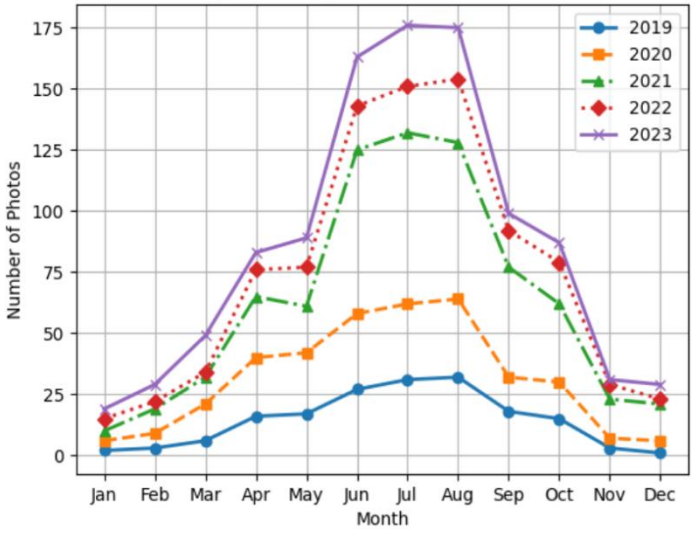

Figure 2: Monthly Distribution of Visitors

Figure 2 reveals significant seasonal differences among tourists. Looking at the travel months, the highest number of tourists visit in June, July, and August each year, markig the peak tourist season. This may be because summer vacation is a paradise for children, and despite the hot weather, travel enthusiasm remains high. The second highest number of visitors occurs in April, May, and October each year, possibly due to the pleasant climate in spring and autumn, which is suitable for outdoor activities. Additionally, holidays such as the Qingming Festival, the May Day mini-break, and the National Day Golden Week enhance the desire for family travel. Furthermore, there is a small peak in tourist numbers every September, likely due to the annual "China Fishing Festival" held in Xiangshan, which is highly attractive. In contrast, November to March each year is the off-season for tourism, with cold weather and frequent snowfall affecting winter tourism rates.

4.2.2 Analysis of Tourists' Spatial Behavior

This study identified the content of 3,227 crawled photographs, eliminating images where spatial locations could not be recognized, such as local cuisine and weather conditions. This screening process resulted in 2,899 photos that met the positioning criteria. Subsequently, the study individually plotted the shooting locations of these valid images and applied ArcGIS 10.7 software to conduct a kernel density analysis of the points of interest for photography (Figure 3). Kernel density is a commonly used method in GIS spatial analysis. In this study, the kernel density analysis extends the point information of shooting locations to a surface, thereby revealing the concentrated areas of these photographic points of interest in Xiangshan.

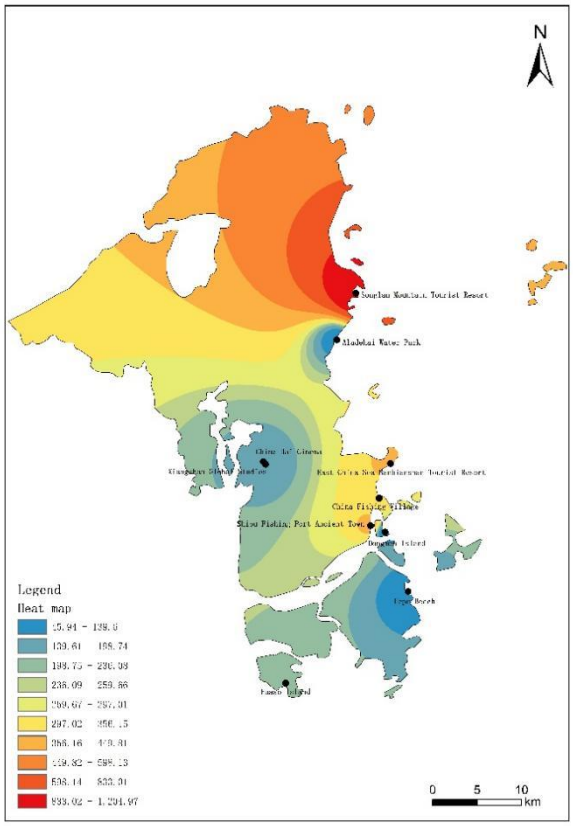

Figure 3: Nuclear Density Analysis of Tourists' Interest Points in Xiangshan

According to the heat map, there are four major hotspot areas for tourists in Xiangshan, primarily connected by the eastern coastline, exhibiting an overall "dispersed globally, clustered locally" uneven distribution pattern. The area with the highest kernel density is the Songlan Mountain Tourist Resort. This resort features a blend of mountains and sea, numerous capes, and continuous beaches, offering a complete range of coastal resources including "mountains, sea, islands, cliffs, beaches, and bays". It shares the golden 30 degrees north latitude with world-renowned wellness destinations like Florida, the Gulf of Mexico, and Hawaii. Moreover, it served as the sailing competition venue for the 19th Hangzhou Asian Games. The resort has developed into a comprehensive coastal tourism destination, featuring holiday hotels, marine sports, seafood cuisine, RV camping, hot spring wellness, and festival events. It is hailed as a dazzling pearl on the "Eastern Island of Immortality". Consequently, this attraction appears most frequently in travel journal photos as the ultimate destination for tourists visiting Xiangshan. The area with the second-highest kernel density is Shipu Town, primarily including Shipu Fishing Port Ancient Town, Donghai Banbian Mountain Scenic Area, and China Fishing Village. Shipu Fishing Port Ancient Town, praised by Mr. Yu Qiuyu as a "living ancient fishing town", is built along the mountain by the sea, showcasing a magnificent scene of "city above the port, mountain within the city". It highlights its prominent position as a "coastal defense stronghold". Here stands the "Jinshan Hotel" where Cai Chusheng, Wang Renmei, Nie Er, and over 30 others stayed while filming China's first sound film and first internationally awarded film, "Song of the Fishermen". The town boasts a 600-year-old city wall, "cliff inscriptions" left by Ming Dynasty soldiers who fought against Japanese pirates, and diverse folk activities such as fishermen's work song performances, fishing net weaving skills demonstrations, fishing village wedding custom exhibitions, and the Fishing Festival. The Donghai Banbian Mountain Scenic Area, located on the East China Sea coast in Shipu Town, boasts unique mountain and sea views, attracting popular variety

shows like "Go for Happiness", "Girls' Gathering", and "Jiakangjianianwei" for filming. China Fishing Village, situated by Shipu Port, one of China's four major fishing ports, is a leisure resort centered on marine culture, integrating fishing culture and lifestyle. Another area with high kernel density is Hua'ao Island. It features Zhejiang Province's only remaining traditional hand-made salt field - Hua'ao Salt Field, the city's only island pebble spectacle - Qingshuiao Pebble Beach, and one of the world's three major volcanic rock primary landforms formed in the Late Jurassic period - the "Sea Stone Forest". Hua'ao Island has attracted many tourists for sightseeing and photo opportunities. Xiangshan Film and Television City and China Sea Film City also show slightly higher kernel density values than other areas. As one of China's top ten film and television production bases, famous works such as "The Return of the Condor Hero", "Journey to the West", "Water Margin", "The Orphan of Zhao", "Painted Skin", and "Ten Great III of Peach Blossom" were filmed here, making it a major attraction for tourists. Areas with lower kernel density values include Dongmen Island, Hepu Big Sandy Beach, and Ala Sea Water Park, possibly due to insufficient promotion, resulting in fewer tourist visits. Moreover, many other scenic spots in Xiangshan are not reflected in the photos, such as the historic traditional Chinese villages of Qiangtou, Dongxi, Huangbu, and Ruyang. This suggests that tourists have yet to develop a deep understanding and exploration of the cultural aspects of these villages, indicating an imbalance in the development of Xiangshan's tourist attractions and a need to strengthen tourism development in these areas.

5. Discussion

Previous studies on tourist behavior have tended to analyze social media data such as reviews and travel journals posted by tourists, with fewer scholars exploring tourist behavior through photo analysis methods. This not only expands the research perspective on tourist behavior but also, to some extent, fills a research gap. Additionally, this study examines tourist behavior in a small-scale space (Xiangshan), enriching the research content of coastal tourism in places like Xiangshan, and further discusses tourists' travel preferences and spatiotemporal behavioral characteristics. However, travel photos are just one form of big data. How to integrate diverse data such as text, images, and videos, based on GIS spatiotemporal data expression, and combine it with traditional methods like surveys, tracking observations, and interviews to more deeply explore the behavior of Xiangshan tourists, remains a limitation of this study and a key focus for future research.

6. Conclusions

This study explores tourist behavior based on photo analysis methods, with the main conclusions as follows: Firstly, tourists primarily travel in parent-child family groups or with friends, and generally exhibit a joyful mood during their travels. Tourists show strong interest in Xiangshan's natural landscapes such as beaches, the sea, and sunsets. They also have a high level of interest in cultural activities like the Hui-style architecture in Shipu Ancient Town and folk events such as the China Fishing Festival. Tourists greatly enjoy and aspire to the quiet, leisurely, and comfortable slow-paced lifestyle of Xiangshan. They have a unique fondness for Xiangshan's cuisine and are enthusiastic about experiencing marine activities like sailing, while also displaying curiosity about the lives of local fishermen. Secondly, tourists' temporal behavior shows distinct seasonality, with travel times primarily concentrated during the summer vacation period from June to August, marking the peak tourist season. The second busiest periods are April-May and September-October in spring and autumn, mainly influenced by statutory holidays. The winter months from November to March see the lowest number of tourists, constituting the off-season. Thirdly, there are four major hotspot areas for tourists spatially, primarily connected by the eastern coastline, exhibiting an overall "dispersed globally, clustered locally" uneven distribution pattern. The main areas are the Songlan

Mountain Tourist Resort, Shipu Town, Hua'ao Island, Xiangshan Film and Television City, and China Sea Film City. Tourists' perception of traditional villages and other scenic areas in Xiangshan is relatively weak and not reflected in the photos. Therefore, this study further analyzes the existing problems in Xiangshan's tourism development and proposes the following suggestions: (1) Fully utilize new media marketing methods such as Douyin and Kuaishou to intensify promotional efforts and increase the visibility of niche attractions. (2) Strengthen the differentiated development of tourism products to ensure attractions are available year-round with seasonal variations, promote all-season tourism, and optimize the temporal distribution of tourist flows. (3) Strengthen the exploration of resources in niche scenic spots, enhance tourists' spatial perception and experience of these areas, and arrange special activities in conjunction with folk festivals to improve off-season tourist flow while enriching tourism routes. (4) Strengthen joint marketing efforts with high-profile attractions, linking various scenic spots for integrated development, using strong attractions to support weaker ones, actively directing tourist flow, and promoting the comprehensive development of Xiangshan's tourist attractions.

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