

## Mapping of Tourism Interests Through the Use of Digital Data

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— *Review of* —  
**Integrative  
Business &  
Economics**  
— *Research* —

### ABSTRACT

This research aims to map tourism interests in Bandung Raya using social media data. To achieve this goal, the author uses a web scraper application tool to collect data from TripAdvisor, find important information about tourist attractions in Bandung Raya and turn it into a structured database. Data were collected from 374 attractions in 3 cities (Kota Bandung, Kabupaten Bandung, and Kabupaten Bandung Barat). However, this number has decreased to 226 tourist interests. Because some search results are irrelevant, this study shows that the three most in-demand tourism categories in Bandung Raya are nature, shopping, and amusement. The analysis was carried out on the three categories by considering three indicators: the number of tourist attractions, average satisfaction at tourist destinations, and the percentage of rating evaluations. The study results show that digital data from social media can be used to map tourism interests that aim to assist the business development process of business actors and local government decision-making.

Keywords: Tourism; Mapping Tourism; Data Digital Tourism; Tripadvisor Data.

### 1. BACKGROUND

Social media plays a vital role in the availability of big data in cyberspace. Social media owns various data and can be used for multiple purposes. However, the large number and the spread of various data on social media make it difficult for data users to take advantage of it. In contrast, data on social media is relatively cheaper and easier to obtain.

One of the social media that provides data related to tourism is TripAdvisor. This data is often provided by users of social networks who review and post comments about products and services on the website website. The platform is the largest social network for exchanging information about tourist destinations worldwide. Such websites offer ideas, make choices more accessible, make the planning phase more enjoyable, and increase confidence by lowering risk and making it easier to imagine the location. (Gretzel & Yoo, 2008).

TripAdvisor provides data by evaluating tourism products and services quantitatively and qualitatively (Oliveira & Baracho, 2018). According to TripAdvisor's Review Transparency Report for 2021, TripAdvisor has received more than 26 million reviews. Despite the issue of fake reviews on Tripadvisor, TripAdvisor appears to be the

leading travel community with 350 million monthly visits available in 48 different countries (Dina, 2020), so the data can still be used as a reference for the tourism picture for a location.

The era of digitizing tourism shows how the increased search for information during travel plans has become a vital aspect of the travel experience, where users need as much information as possible to help them make informed decisions.(Xiang et al., 2015). This information collection for tourism destinations enables tourism drivers from the public and business sectors to better understand visitor profiles (Oliveira & Baracho, 2018).

Digital data related to tourism can also play a role in describing the interests and characteristics of tourist areas. Determining the factors of tourist areas further enhances the positioning of a city. Therefore, tourism stakeholders and the government need to create a positive image by positioning the right destination to become attractive (Saqib, 2019).

For example, the contribution of tourism to West Java's GDP is still below 4%. This figure is still decreasing below 2%, especially during the pandemic(Ahmad, 2020). Cities that contribute to tourism include Bandung Raya (covering Kota Bandung, Kabupaten Bandung and Kabupaten Bandung Barat), which has a variety of tourist destinations. It is necessary to evaluate the activities of travellers in tourist destinations in Bandung Raya so that tourist interest can be drawn to facilitate the positioning of Bandung Raya to be accurately described.

The study results provide an overview for tourism drivers to evaluate tourist activities in the tourism sector and then improve them based on the indicators found from the evaluation. The government can also be encouraged to carry out regular, timely and systematic monitoring according to the proper positioning. In addition, one way to implement it is to build a mapping of tourism activities that is useful for determining the appropriate action strategies for government and business actors through policy-making to facilitate decision making.

## **2. LITERATURE REVIEW**

### **2.1 Tourism in the Digital Age**

A tour's destination is identified as a country, city, island, or any other geographical region (Wulan Tresna & Nirmalasari, 2018). Travelling is still seen as a means of fulfilling social needs. For some people, tourism is also related to the need for self-esteem and self-actualization, so a close relationship between tourism and digital content describes an individual's travel journey to show his existence.

The development of the digital era has made the tourism industry shift by utilizing the Internet as a new avenue to provide services and advertisements since the 1990s(Oliveira & Baracho, 2018). This is in line with the digital behaviour of tourism, which shows the need for the presence of digital companies in the tourism and hospitality sector(Villarino & Fonts, 2015)to share information. Circulation of tourist information on digital platforms enables the exchange of information among users on social networking sites, where recommendations from foreigners who share their opinions ultimately influence users' choice of travel locations.(Gretzel & Yoo, 2008).

Digital media and social networks also affect how tourists share information. Digital platforms in tourism are then growing to have a two-way relationship between service providers and tourists. The relationship between service providers and customers

has improved over time, reaching social networks, which facilitate interactions between them and the online exchange of opinions, which attracts the attention of businesses and organizations.(Xiang et al., 2015). Generally, reviews from other users are considered a reliable source of information for tourists. Users agree that content from other users is more trustworthy and dependable than conventional tourism data sources(Aydin, 2020). Thus, online reviews of travel products on social media sites have become essential for making travel decisions(Sparks & Browning, 2011).

Websites and social media allow people to rate and review travel destinations. This site is a helpful planning tool because it provides ideas, makes decisions easier, adds fun to the planning process, and increases confidence by reducing risk and making it easier to imagine what is going on. It will happen and describe the place to be visited(Gretzel & Yoo, 2008). Simple discussion channels such as online evaluations or recommendations have become a source of actual leads and inquiries thanks to the rapidly improving web 2.0 communication channels(Cantalops & Salvi, 2014). Travellers visiting different parts of the world often seek guidance before making a reservation.

*Platforms* digital allow tourists to review tourist sites in ratings and comments. This increases the effectiveness and dissemination of data and information by word of mouth (eWOM), bringing more customers to visit(Gretzel & Yoo, 2008)and increasing competitiveness among tourism sites(Oliveira & Baracho, 2018).

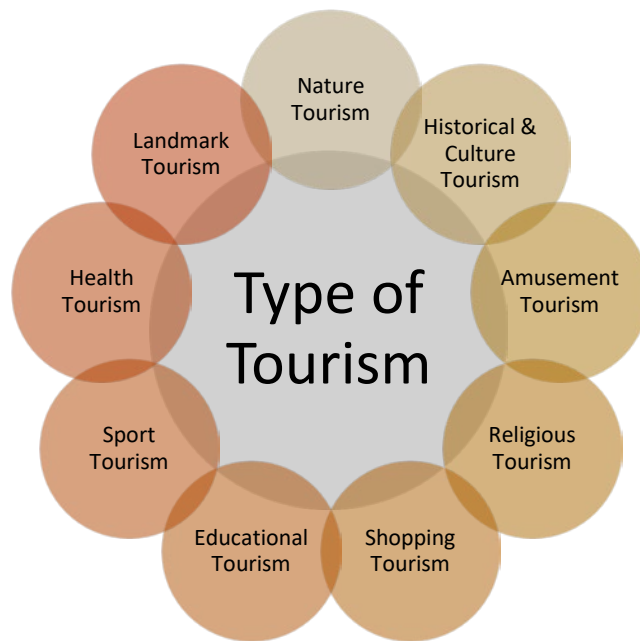
One of the digital platforms for providing user review services is TripAdvisor. TripAdvisor, an online community, makes travel information and experiences easily accessible. A comprehensive online review system has been created(Nilashi et al., 2019). Despite information circulating that around 3.6 per cent of reviews, or 1 million, are considered fake reviews, to maintain its credibility TripAdvisor takes steps to moderate reviews before they go online to protect travellers, visitors and businesses. So About 67.1 per cent of the 1 million fake reviews are removed before they appear on the site(Aprilyani, 2021) so that Tripadvisor can remain a credible website to review reviews.

## **2.2 Tourism Category**

Tourism is widely known to have many categories. Literature review shows that some studies categorize tourism based on tourist involvement, and some categorize it based on the type of attraction. Grouping tourism categories in one area helps local governments to be able to identify tourism potential and interest in their area. So that city branding can be more focused.

Business actors who develop natural tourism (Nature Tourism) run their business in the middle of commercially managed private (nature) land(Mäntymaa et al., 2021). Nature tourism is a tourist activity related to moments and experiences. Nature-based tourism mainly involves human relations with the natural aspects of their habitat and wildlife. Through direct experience, tourists are expected to appreciate the nature and wildlife they encounter and enjoy the services offered(Kularatne et al., 2021).

Examples of cultural tourism are performing arts (theatre, dance and music), visual arts and crafts, festivals, museums and cultural centres, and historical sites and interpretive centres. (FPT Ministers, 2012). Cultural tourism can be seen by understanding customs better, historical monuments, historical objects, art centres, music art festivals, theatres, folk dances, and other activities usually carried out in learning centres at related tourist sites.



**Figure 1. Type of Tourism**

*Entertainment Tourism* is tourism with entertainment or entertainment that provides access to entertainment facilities in arcades, entertainment, theme parks, and water parks (Owens, 2012). This tourist spot allows tourists to interact with objects at tourist sites to get a different experience.

Travel for religious or spiritual purposes, such as pilgrimages and visits to holy places, is referred to as Religious Tourism (religious and spiritual tourism). Religious tourism includes expeditions, sacred sites, and mission or worship trips.(Stausberg, 2011)This tour also includes conferences, seminars, and festivals about religion. Religious tourism is also a variety of spiritual sites and related services which are visited for both secular and religious reasons(Raj et al., 2015). Needs and expectations towards the religious tourism of tourists in terms of merit-making, learning about historical and cultural attractions, archaeological sites, and antiques, as well as consuming local cuisine and purchasing mementos (Anuwichanont et al., 2020).

*Shopping Tourism:* Tourism is a recent concept defined as a contemporary form of tourism undertaken by individuals to acquire goods outside their residence.(UNWTO, 2014). The potential for shopping tourism can be a tourist attraction in itself for the city to establish itself as a destination of choice and increasingly attractive to strengthen the commercial activities of the local town.(Muro-Rodríguez et al., 2020). People may have distinct motivations when deciding between daily buying and vacation purchasing. It is assumed that purchasing for pleasure is less price elastic than shopping for necessities (Putra Wibowo & Roostika, 2019)

*Educational Tourism* Educational tourism is one type of tourism and is a way to provide education and knowledge to visitors who have a purpose in learning (YESTD, 2019). According toRitchie et al., 2003), educational tourism has two key components. The first is a trip for visitors to acquire education or training as part of their travel experience. The second is tourism conducted by universities and schools, such as school tours or student exchange programs.

*Sports tourism* (Sports Tour) combines with sports (Kemenparekraf/Baparekraf RI, 2021). Currently, more and more tourists are interested in participating in sports activities while on vacation, regardless of whether the sport is the leading tourist destination. There are different destinations of sports tourism options according to (Malcolm, 2008) That is :

1. Tourists watch and participate actively;
2. Tourists travelling for sport as the primary purpose and those travelling for sport as an incidental tourism activity;
3. Tourists participate in sports tourism for competitive and recreational reasons;
4. Travellers who value various aspects of activities, people and place interactions that involve sporting activities

According to the Global Wellness Institute, Health Tourism, or Wellness Tourism, is a trip that aims to maintain or improve one's well-being (Global Wellness Tourism Economy, 2018). Wellness Tourism is a journey to maintain, manage or improve health and well-being. (Smith & Puczko, 2014) declare health tourism with travel that includes lifestyle dimensions: health of body, mind and spirit; mind and soul; self-sufficiency; physical strength; aesthetics; healthy nutrition; relaxation; meditation; mental activity; education; environmental awareness; and sensitivity to social relations.

*Tourism Landmark* or Tourism Landmarks play an essential role in enhancing the character of a city and making it more attractive and recognizable. Orientation/icon/point of reference, uniqueness/difference/contrast, symbolism, and architectural values are landmarks that can create distinctiveness because landmarks are striking objects that function as measuring points in an area. (Hussain & Ujang, 2018). Landmarks serve as place/orientation icons as long as they are distinct from their surroundings and easily accessible (Ginting et al., 2020).

### **2.3 Digital Data Extraction**

In the digital age, information, especially tourism, is widely available, easy to share, and used in electronically accessible formats. (Lau in Harib, 2016) so that the availability of data and information is relatively easier to obtain. Both government and private organizations related to the tourism development of a city can take advantage of this. The use of digital data is related to procedures for obtaining, preparing, analyzing, understanding, managing and submitting several data regularly when there is a massive accumulation of information on digital platforms. (Stanton, 2012).

Digital data extraction has become a powerful tool that supports businesses and organizations during their decision-making processes, thanks to information published on social media and the Internet (Chen et al., 2012; Devika & Surendra, 2013). In recent years, the collection and analysis of extensive data have become a significant concern (Nilashi et al., 2021). The growth of data in the tourism industry is due to tourists' increasing number of transactions on tourism platforms and the desire to share this information. As a result, the volume of data in the travel data set increases, one of the three dimensions of big data (M. Chen et al., 2014). Automatic digital data extraction, especially from websites, is becoming more and more popular (Marres & Weltevrede, 2013) because digital data can uncover user trends (Srivastava et al., 1998).

One way to utilize data in the digital era is to perform data extraction/scraping. Scraping is the process of converting unstructured web data into ready-to-use data. According to Oliveira & Baracho (2018), the scraping procedure has become indispensable for social behaviour research and is increasingly applied in the social sciences. The online scraping approach allows researchers to examine data generated by

users of digital platforms. So scraping can be used to understand user behaviour and can assist in solving various challenges faced by business actors from multiple fields.

Various types of data can be used to explore digital data. (Srivastava et al., 1998) divides the information into the following categories:

1. **Content:** The actual data on the Web page, i.e. the information the page creates to deliver to the user. Text and visuals are commonly used but are not limited to either type.
2. **Structure:** Information about how content is organized. Various HTML or XML tags within a particular page are included in the intra-page structure information. For example, Hyperlinks link one page to another.
3. **Usage:** IP addresses, page references, and access dates and times are examples of data that illustrate web page usage patterns.
4. **User Profile:** Information about the demographics of website visitors. It contains registration information as well as customer profile data.

### 3. METHOD

This research draws on digitally data on the Tourism review social media platform Tripadvisor. This research is focused on extracting information and managing data to develop quantitative indicators. The author extracts digital data by one of the methods recommended by Vargiu & Urru (2012) using a web scraper or a scraping technique. Apart from being a technique for gathering relevant information in the automated form of online data, web scrapers can contribute directly to the study of areas of knowledge not initially related to programming. (Marres & Weltevrede, 2013). The use of scrapers for data extraction and information analysis contributes to developing new monitoring methods and new sources of information in tourism (Almeida de Oliveira & Baracho, 2018).



**Figure 2. Research Process**

The research process is carried out through several stages, namely:

1. Select the required data
2. Extract the required data from Trip Advisor using a web scraper app
3. Identifying types of tourism from the data collected

4. Carry out a descriptive analysis of the collected data
5. Map out visiting activities for every kind of tourism

#### 4. DISCUSSION

The collection of tourist attraction data through the "Things to Do" menu by selecting the " attraction " type on the Tripadvisor website resulted in 374 tourist attractions collected based on tourist favourites. The number of searches is carried out to determine data on tourist objects that are genuinely relevant. The selection process is done by removing the travel tours entered in the search field. So that obtained 226 relevant tourist objects.

Tripadvisor categorizes attractions into travel categories. However, some types are not quite right. In addition, some tours are also included in the classification of tourism in more than one category. So it needs manual selection to categorize tourism in Bandung Raya. The results of the categorization are shown in the following table:

**Table 1. Data on Tourism Object Reviews by Category in Bandung Raya**

No	Type of Tourism	Number of Attractions	Number of Reviews	Average Review Percentage				
				Excellent	good	Average	poor	Terrible
1	<i>Nature Tourism</i>	46	3641	24%	45%	23%	5%	3%
2	<i>Historical &amp; Culture Tourism</i>	30	3173	40%	41%	16%	2%	1%
3	<i>Amusement Tourism</i>	33	3143	26%	39%	27%	6%	2%
4	<i>Religious Tourism</i>	9	1341	46%	40%	13%	1%	0%
5	<i>Shopping Tourism</i>	45	4646	26%	47%	21%	3%	2%
6	<i>Educational Tourism</i>	5	390	32%	46%	18%	3%	1%
7	<i>Sports Tourism</i>	14	398	41%	42%	10%	3%	4%
8	<i>Wellness Tourism</i>	27	455	58%	20%	10%	5%	7%
9	<i>Tourism Landmark</i>	17	3627	29%	45%	22%	3%	1%

Based on data collected from the Tripadvisor Website, the type of tourism that dominates in Bandung Raya is tourism related to nature (nature tourism). These results follow the image of Bandung Raya, which is known to have a calm and beautiful temperature. This finding provides a reference for the government to optimize the utilization of natural tourism objects by maintaining natural potential and initiating sustainable tourism. Further analysis was also carried out on two other tourism categories included in the top 3, namely Amusement Tourism and Shopping Tourism. The three types of tourism categories need to be observed further to determine the mapping of tourism interest in Bandung Raya based on the number and reviews of visitors.

Shopping tourism has the highest reviews *based on the judgement from* the number of reviews. Characteristics of people who have a shopping hobby usually also like to share information about what they buy. This phenomenon indicates a tourist attraction that offers services and experiences and inserts a shopping experience in it. Shopping can be an active potential for tourist destinations to differentiate from other destinations and become an increasingly attractive alternative to strengthen local commercial activities (Muro-Rodríguez et al., 2020).

The highest average rating given by visitors is Religious Tourism. The concept of tourism that involves religious aspects involves many virtues in spiritual teachings in its

management so that most visitors are satisfied with the services provided in this type of religious tourism. In addition, Wellness and Sport Tourism also have a reasonably high rating value. This is because the management of tourism for the two categories involves aspects of the health and safety of visitors, so monitoring and management need to be carried out optimally with minimal errors.

Bandung Raya also has many tourist objects related to history and culture. However, the management has not been carried out optimally because most of it is carried out independently by the local government in collaboration with residents. This tourism category can still be developed if we look at the responses and reviews given by visitors.

#### 4.1 Nature Tourism

The number of natural attractions identified on the TripAdvisor website is 46. The analysis was conducted on the ten tourist attractions with the highest reviews. Reviews indicate an increased number of visitors to the related attraction. Of these, the ten attractions with the highest reviews are as follows:

**Table 2. Tourism Objects Based on Nature Tourism Categories in Bandung Raya**

No.	Tourism Object	Number of Reviews	Rating	Review Percentage				
				Excellent	Poor	Average	Poor	Terrible
1	Sari Ater Hot Spring	601	3.5	20%	44%	27%	6%	2%
2	Ciater Hot Spring	502	3.5	19%	42%	25%	9%	5%
3	D' Ranch	383	4	20%	58%	21%	1%	1%
4	Tahura Ir. H. Juanda	379	4	23%	51%	22%	2%	2%
5	Keraton Cliff	251	4	27%	47%	22%	4%	1%
6	Cimahi Waterfall	181	4	34%	41%	21%	4%	0%
7	Tea Country, PTPN 8	159	4.5	44%	45%	9%	1%	2%
8	Bandung Zoo	151	2.5	7%	15%	39%	21%	18%
9	Punclut	131	3.5	18%	43%	37%	2%	2%
10	Keraton Palace	121	4	18%	60%	21%	1%	1%

Natural attractions formed naturally are also more numerous than artificial natural attractions. The highest tourist rating of the top 10 natural tourism attractions was obtained by the Tea Plantation, managed by PTPN 8. Although the object was not explicitly designated a tourist spot, it received a relatively high visitor rating. The balanced improvement of facilities aims to meet the wishes of tourists and create comfort for them, which will make them interested in visiting (Arif et al., 2020)

Sari Ater Hot Spring obtained the highest number of reviews in the first position and Ciater Hot Spring in the second place. The two attractions are exact but appear twice in Tripadvisor searches with slightly different names. Both have a very high number of reviews that show travellers' increased interest in visiting these attractions. The natural potential in natural hot water with different mineral contents is difficult to duplicate with artificial tourist objects. In addition, the number of tourist location points that have this potential is also minimal. So there are not many competitors in this category. So the prospect needs to be maintained with a sustainable tourism model to provide economic value in the long term and play a role in maintaining the ecosystem.

Scrapping of data is also carried out to identify the period of tourist visits and types of visitors. Discussions related to the types of visitors are needed to be able to map the profile of visitors who visit the most types of nature tourism in Greater Bandung.



**Table 3. Percentage of tourist arrivals per period on Nature Tourism Categories in Bandung Raya**

No.	Attraction Name	Percentage of tourist arrivals per period			
		Mar-May	Jun-Aug	Sep-Nov	Dec-Feb
1	Sari Ater Hot Spring	24%	24%	26%	25%
2	Ciater Hot Spring	25%	25%	23%	27%
3	De'Ranch	23%	25%	24%	28%
4	Tahura Ir. H. Juanda	25%	24%	24%	27%
5	Cliff Palace	30%	19%	24%	27%
6	Cimahi Waterfall	13%	19%	6%	63%
7	Tea Country, PTPN 8	31%	13%	24%	33%
8	Bandung Zoo	25%	21%	27%	28%
9	Punclut Ciumbuleuit	21%	26%	34%	19%
10	Cliff Palace	13%	20%	31%	36%

The visit period for Nature Tourism does not seem to have a significant difference in each period. However, the highest number of visits on average is in the period from December to January. While the most types of visitors are traveling with family.

**Tabel 4. Types of Visitors on Nature Tourism Categories in Bandung Raya**

No.	Attraction Name	Business
1.	Punclut Ciumbuleuit	10%
2.	Cimahi Waterfall	7%
3.	Ciater Hot Spring	6%
No.	Attraction Name	couple
1.	Tea Country, PTPN 8	21%
2.	Cliff Palace	20%
3.	Cimahi Waterfall	18%
No.	Attraction Name	Family
1.	De'Ranch	74%
2.	Bandung Zoo	73%
3.	Sari Ater Hot Spring	51%
No.	Attraction Name	Friends
1.	Cliff Palace	60%
2.	Tahura Ir. H. Juanda	37%
3.	Cimahi Waterfall	32%
No.	Attraction Name	Solo
1.	Punclut Ciumbuleuit	8%
2.	Cliff Palace	7%
3.	Tahura Ir.H. Juanda	6%

In this type of tourism, most business visits are made to the Punclut tourist attraction. This is because Punclut is widely known as a regional culinary tourism destination which is still relatively traditional. So that the process of business meetings which are often done while eating a meal, is mostly done in this tourist area. While the couple type of visitor spends a lot of time at Tea Country, PTPN 8. Most family type visitors are in De'Ranch and Bandung Zoo. Meanwhile, the type of visitors who came with friends most visited the Cliff Palace, which was 60%. Not many visitors go on solo trips, but if you look at the percentage, Punclut is the highest.

## 4.2 Shopping Tourism

The number of Shopping Tourism identified on the TripAdvisor web is 45. The analysis was conducted on the ten tourist attractions with the highest reviews. The ten shopping attractions with the highest reviews are as follows:

**Table 5. Tourism Objects Based on Shopping Tourism Categories in Bandung Raya**

No.	Tourism Object	Number of Reviews	Rating	Review Percentage				
				Excellent	Poor	Average	Poor	Terrible
1	Paris Van Java	1,284	4	29%	46%	20%	2%	3%
2	Factory Outlet Fashion House	1,274	4	26%	46%	22%	4%	2%
3	Cihampelas Walk	434	4	22%	61%	16%	1%	0%
4	Sudirman Street	191	4	30%	49%	17%	2%	2%
5	Cihampelas Walk Shopping Mall	183	4	20%	55%	22%	2%	1%
6	Heritage Factory Outlet	147	3.5	7%	40%	39%	7%	6%
7	Trans Studio Mall	137	4	28%	55%	15%	1%	1%
8	Paskal Shopping Center	130	4.5	45%	45%	8%	2%	0%
9	Bandung City Square	126	4	41%	42%	13%	2%	2%
10	Bandung Indah Plaza	94	3.5	13%	37%	48%	2%	0%

Results *tracing* data on the Tripadvisor website shows that the shopping attraction with the highest reviews is Paris Van Java (PVJ). Shopping tourism with the Open Mall concept with open space management with resort, sky level, and glamour level concepts makes this shopping centre easier to identify than its competitors. Managers take advantage of the location's climate in synergy with the layout of the destination so that Bandung's cool climate is facilitated by more open space.

Same as searching on attraction category *nature*, a tourist attraction in the Shopping Tourism category also brings up one tourist attraction with two different names, Cihampelas Walk, which is also written as Cihampelas Walk Shopping Mall. Both have a relatively high number of reviews.

The highest rating for *shopping tourism* is the Pascal Shopping Center. With the concept of a family & community hub, this shopping centre is a shopping mall and a place for the creation of communities in Bandung to carry out activities.(Rahmawati, 2017). The strategic location near the station makes this tourist attraction have a good level of accessibility. In addition, there is a culinary centre that is increasingly attracting tourists. This is in line with the image of Bandung, which is known as a culinary tourism location. Another tourist attraction, Jalan Sudirman, one of the culinary centres in Bandung, also has many reviews and a reasonably high rating. The image of Bandung as a culinary city has proven to have still the potential to attract visitors. So tourism business actors need to collaborate on these attractions to complement the bargaining power of tourist objects.

The results of scrapping data on the type of shopping tourism show that the highest average visit period is in December to February. While the type of visit is mostly done with family and friends

The most visited tourist attraction by the type of business traveler is Bandung City Square. This is because around Bandung City Square is a shopping and shopping center. So many business activities develop there. For the type of couple visitors, Trans studio mall is mostly chosen by 20%. As for the type of tourism with family, Cihampelas Walk and Pascal shopping center have the highest percentage compared to other tourist objects.

Visitors who do tourist activities with friends, choose Bandung Indah Plaza as their favorite destination. Not many people do activities solo in this type of destination, but the highest percentage is Bandung City Square.

**Table 6. Percentage of tourist arrivals per period on Shopping Tourism Categories in Bandung Raya**

No.	Attraction Name	Percentage of tourist arrivals per period			
		Mar-May	Jun-Aug	Sep-Nov	Dec-Feb
1	Paris Van Java	21%	24%	24%	32%
2	Factory Outlet Fashion House	22%	27%	23%	29%
3	Cihampelas Walk	25%	24%	25%	26%
4	Sudirman Street	27%	30%	18%	24%
5	Cihampelas Walk Shopping Mall	27%	26%	19%	28%
6	Heritage Factory Outlet	20%	23%	33%	23%
7	Trans Studio Mall	19%	21%	27%	34%
8	Paskal Shopping Center	29%	28%	18%	25%
9	Bandung City Square	28%	24%	24%	25%
10	Bandung Indah Plaza	13%	22%	33%	32%

**Tabel 7. Types of Visitors on Shopping Tourism Categories in Bandung Raya**

No.	Attraction Name	Business
1.	Bandung City Square	10%
2.	Heritage Factory Outlet	7%
3.	Factory Outlet Fashion House	6%
No.	Attraction Name	couple
1.	Trans Studio Mall	21%
2.	Cihampelas Walk Shopping Mall	20%
3.	Sudirman Street	16%
No.	Attraction Name	Family
1.	Cihampelas Walk	74%
2.	Paskal Shopping Center	73%
3.	Paris Van Java	51%
No.	Attraction Name	Friends
1.	Bandung Indah Plaza	60%
2.	Cihampelas Walk Shopping Mall	40%
3.	Sudirman Street	37%
No.	Attraction Name	Solo
1.	Bandung City Square	8%
2.	Bandung Indah Plaza	7%
3.	Cihampelas Walk Shopping Mall	6%

### 4.3 Amusement Tourism

The number of Amusement Tourism identified on the TripAdvisor website is 33. The ten entertainment attractions with the highest reviews are as follows:

**Table 8. Tourism Objects Based on Amusement Tourism Categories in Bandung Raya**

No.	Tourism Object	Number of Reviews	Rating	Review Percentage				
				Excellent	Poor	Average	Poor	Terrible
1	Trans Studio Bandung	2,182	4	28%	42%	24%	4%	2%
2	Elephant Village	323	3	10%	22%	44%	17%	7%
3	Sausage House	117	3	4%	23%	52%	16%	4%
4	Traffic Park	109	4	22%	45%	28%	5%	0%
5	Amazing Art World	66	4.5	50%	41%	8%	0%	2%
6	CGV Blitz Miko Mall	57	4	18%	54%	25%	2%	2%
7	Rabbit Town	52	3.5	15%	29%	40%	13%	2%
8	Bandung Movie Park	52	4	27%	46%	27%	0%	0%
9	Pandora Experience	34	5	94%	6%	0%	0%	0%
10	Upside Down World Bandung	29	4	21%	52%	21%	7%	0%

Category Amusement Tourism in Bandung Raya that gets the most reviews is Trans Studio Bandung. The absence of competitors who present an indoor concept playground in Bandung makes this tourist attraction attracts many visitors. These findings indicate that tourists in Bandung Raya also have a high interest in modern tourism with high interaction involvement in tourist objects. So, we can adopt a similar concept for other types of tourism to increase visitor interest. In second place is Elephant Village (Kampung Gajah). However, this tourist attraction is no longer operating.

*Fantastic Art Work* is a tourist attraction in the Amusement Tourism Category in Bandung Raya with the highest rating. Although this tourist attraction is relatively new, it has a concept that has never existed in Bandung Raya. Responding to the tourism market trend, which has a high interest in capturing tourist moments through photos, Amazing Art Work collaborates on artistic aspects through painting and selfie tours that are currently in demand. This finding shows the importance of managing tourist objects to be immortalized.

The theme park in Bandung Raya had attracted many visitors initially but declined along with the less-than-optimal management in the related location. So that commercialization cannot be done on these tourist objects.

Discussions related to the types of visitors are needed to be able to map the profile of visitors who visit the most types of amusement tourism in Greater Bandung. In the Amusement type of tourism, the type of visitor that dominates is a Visit with the family. Visit with friends is in second place.

Same as nature and shopping tourism, although not too significant, the highest visit period is from December to February. However, in the type of shopping tourism, the number of visits from March to June and June to August is the same.

**Table 9. Percentage of tourist arrivals per period on Amusement Tourism Categories in Bandung Raya**

No.	Attraction Name	Percentage of tourist arrivals per period			
		Mar-May	Jun-Aug	Sep-Nov	Dec-Feb
1	Trans Studio Bandung	24%	24%	26%	25%
2	Elephant Village	25%	25%	23%	27%
3	Sausage House	23%	25%	24%	28%
4	Traffic Park	25%	24%	24%	27%
5	Amazing Art World	30%	19%	24%	27%
6	CGV Blitz Miko Mall	13%	19%	6%	63%
7	Rabbit Town	31%	13%	24%	33%
8	Bandung Movie Park	25%	21%	27%	28%
9	Pandora Experience	21%	26%	34%	19%
10	Upside Down World Bandung	13%	20%	31%	36%

**Table 10. Types of Visitors on Amusement Tourism Categories in Bandung Raya**

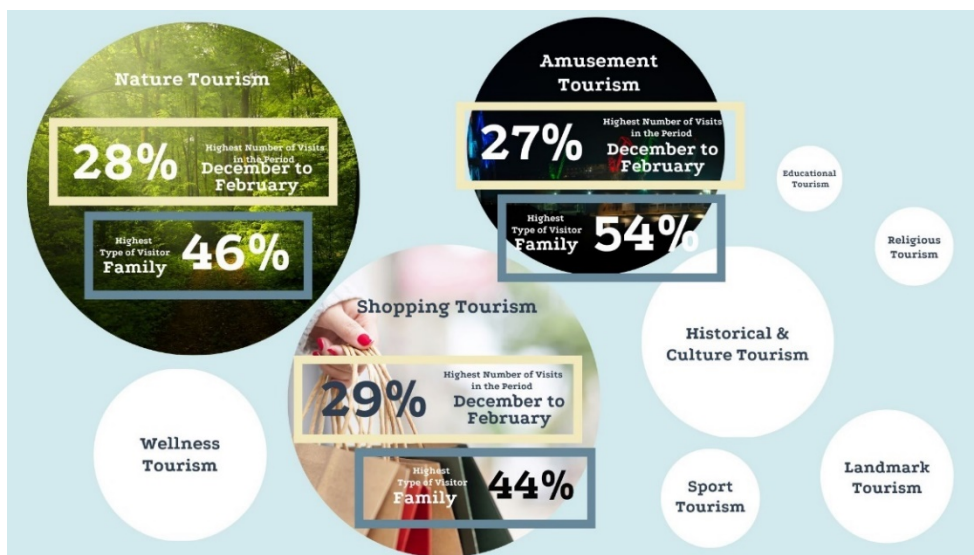
No.	Attraction Name	Business
1.	Pandora Experience	10%
2.	CGV Blitz Miko Mall	7%
3.	Elephant Village	6%
No.	Attraction Name	couple
1.	Rabbit Town	21%
2.	Amazing Art World	20%
3.	CGV Blitz Miko Mall	18%
No.	Attraction Name	Family
1.	Sausage House	74%
2.	Bandung Movie Park	73%
3.	Trans Studio Bandung	51%
No.	Attraction Name	Friends
1.	Upside Down World Bandung	60%
2.	Amazing Art World	48%
3.	Traffic Park	37%
No.	Attraction Name	Solo
1.	Pandora Experience	8%
2.	Upside Down World Bandung	7%
3.	Traffic Park	6%

Pandora experience has become a popular tourist location for business visitors. Had closed during the pandemic, this tourist location only reopened in 2022. Most visitors who go with a partner choose Rabbit Town as their tourist choice. As for visitors who go with family, the Sausage House is an option because it is known as a souvenir center that also provides a children's playground. Upside down Bandung is a tourist choice for visitors who go with friends. But unfortunately this attraction has stopped operating due to the impact of the pandemic. For solo visitors, the Pandora Experience is also the most popular tourist choice.

## Discussion

In general, of the three types of tourism with the most numbers in Greater Bandung, the data shows that the period that tourists are most interested in is between December and February. This trend is in line with the holiday season at the end of the year. Tour service providers can add promos and events to support the increase in the number of visits during this period.

**Picture 1. Mapping of Tourism in Bandung Raya**



Based on the results of reviews provided by Tripadvisor users, the type of visit that dominates is visits with family. Thus, tourism objects must provide facilities that can support the needs of all family members. Indicators to measure the quality standards of attractions in Greater Bandung can be compiled by utilizing the data that has been obtained as follows:

1. Number of Reviews

This indicator generally describes the number of visits to the related tourism object. This indicator also aims to measure the effectiveness of promotions that encourage visitors to attractions in Greater Bandung to evaluate them on TripAdvisor. Increasing the number of ratings on the platform will also increase the brand awareness of the destination compared to other destinations on the TripAdvisor website. The standard number of reviews is obtained from the average number of reviews per tourism category. So that the standard number of reviews is obtained as follows:

No	Type of Tourism	Number of Attractions	Number of Reviews	Average Review
1	Nature Tourism	46	3641	95
2	Historical & Culture Tourism	30	3173	103
3	Amusement Tourism	33	3143	83
4	Religious Tourism	9	1341	109
5	Shopping Tourism	45	4646	149
6	Educational Tourism	5	390	78
7	Sports Tourism	14	398	33
8	Wellness Tourism	27	455	17
9	Tourism Landmark	17	3627	213

This Score can be used as an indicator of the need for additional promotional programs for attractions that have below average review scores.

## 2. Visit Rating

The purpose of this indicator is to convert the ratings created by TripAdvisor users into numeric units, ranging from the lowest 1 to the highest 5. Thus, each evaluation performed as excellent is rated with 5, very good is rated as rate 4, average as rate 3, bad as rate 2 and too bad as rate 1. From there, the average score for each city is taken from the average score for each tourism category. So that the general value standards for each category of tourism in Bandung Raya are obtained as follows:

No	Type of Tourism	Average Review Percentage					Rating Average
		<i>Excellent</i>	<i>good</i>	<i>Average</i>	<i>Poor</i>	<i>Terrible</i>	
1	<i>Nature Tourism</i>	24%	45%	23%	5%	3%	3.8
2	<i>Historical &amp; Culture Tourism</i>	40%	41%	16%	2%	1%	4.2
3	<i>Amusement Tourism</i>	26%	39%	27%	6%	2%	3.8
4	<i>Religious Tourism</i>	46%	40%	13%	1%	0%	4.3
5	<i>Shopping Tourism</i>	26%	47%	21%	3%	2%	3.9
6	<i>Educational Tourism</i>	32%	46%	18%	3%	1%	4.0
7	<i>Sports Tourism</i>	41%	42%	10%	3%	4%	4.1
8	<i>Wellness Tourism</i>	58%	20%	10%	5%	7%	4.2
9	<i>Tourism Landmark</i>	29%	45%	22%	3%	1%	4.0

This value can be used as an indicator of the need to improve the quality of tourism objects for destinations that have a rating value below the average.

## 5. CONCLUSION

The results show that three categories of tourism in Bandung are most attractive to visitors based on the number of reviews received by Tripadvisor, namely Nature Tourism, Shopping Tourism, and Amusement Tourism. So it can be seen that the attractions that attract the most visitors in Bandung Raya are the three types of tourism categories. The highest tourist rating out of the top 10 tourist attractions of the Natural Tourism type was obtained by the Tea Garden managed by PTPN 8, and the highest rating was owned by Sari Ater hot spring tourism. In Shopping Tourism, the highest number of reviews was Paris Van Java, and Paskal Mall obtained the highest rating. Trans Studio Bandung received the highest number of reviews for the Amusement tourism category, while Amazing Art Work had the highest rating.

This study indicates that digital data obtained from social media can be used to map tourism interests that aim to assist the business development process of business actors and local government decision-making. This method can be an alternative to obtaining tourism information and traditional data collection methods. The subsequent development of this research is to capture qualitative data from comments submitted by tourists.

## ACKNOWLEDGMENT

This work was supported in part by a grant from Universitas Padjadjaran. We also thank Tripadvisor for providing data related to this research

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