

## Utilizing the Use of Google Trends to Discover The Architectural Attractiveness of a Place in Indonesia

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### ABSTRACT

A person's memory of the image of a place is powerful which is influenced by a uniqueness supported by continuity of information. Every visitor's image will be very subjectively evaluated through the internet information media. The challenge lies in subjective perception through internet media information which only sometimes leads to real quality due to perceptions formed from the continuity of information received. A shift in meaning allegedly led to a phenomenon of similar motivation between video game users and traveling for healing purposes. From the perspective of a Google search, the word "traveling" refers to buildings and places with ecological and natural concepts. Meanwhile, video games also offer a natural concept but are more competitive. Using Google Trends, this study attempts to formulate city popularity data using the keyword "traveling." Natural Ecology is the highest choice for social media users, and "healing" is the primary motivation. The value of natural architectural instruments can be a focus to support a sustainable development process for a place based on the popularity of today's needs.

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## 1. INTRODUCTION

Community participation in forming a perception can be seen in the topics widely discussed on social media. Social media is the best channel for conveying information and messages to the broader community [1]. Through social media, a person's behavior can be supported by data to identify the characteristics of a place. Sentiment Analysis Techniques, for example, a person's behavior, the frequency of user information browsing, to the intended information can be collected and analyzed to identify a place [2]. Because the nature of internet-based social media can form social attachments between users and can become a medium for information channels quickly and efficiently compared to conventional information channels, social media has become a "good friend" for marketers in conveying information for profit-making purposes [3]. In addition, there is an algorithm setting in the form of filter bubbles which in information technology systems allows social media users to find information according to their habits, such as, for example, what photos are liked, what pages have been and or are often visited, what products have been viewed and purchased, which locations have been visited. Visited from the activity of using the internet social media, Dahlgren [4] in his critical study, called the filter bubble "Daily Me," which has the potential to direct information to become more personal and even lead someone to a moral panic [4].

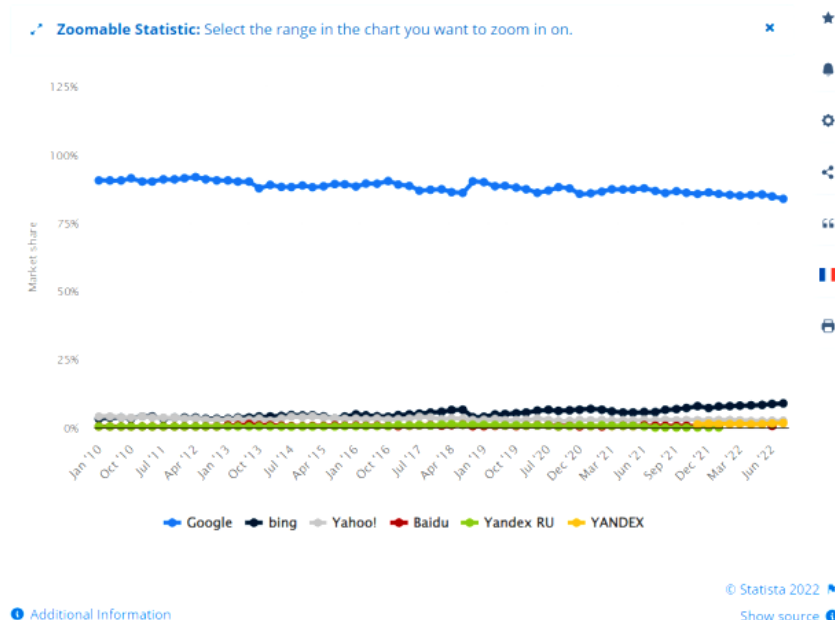
The sophistication of social media today can be seen from the information content, which is filled with solicitations that attract the attention of its users so that it has the potential to develop user loyalty. [3]. In addition, currently, social media users are visitors who come to mediate a representation of a place [5].

They may first have a virtual visit experience and then experience a change in experience when directly visiting a site. Kirby, in his research on architecture as a brand [6], describes the mediation model of representing a place for branding purposes in the form of Business Collaboration or Franchise, Celebrities, or currently more widely known as influencers, and architecture. The three mediation models have a relationship that could bring someone closer to experiencing architectural experience.

Sanitha revealed that the presence of influencers could create connectivity between people (in her research, Instagram users) with a building and a place they have never been to before [7]. According to Sanitha, Influencers are also mediators whose role is to shape other people's perceptions of a place; it's just that this has the potential to create different meanings for a place due to the personal nature of perceptions of social media users and information from influencers who have different aims and objectives [8]. The global market, which has an impact on the world of the marketing economy, also influences the perceptions of architects or building owners, especially commercial buildings, to adapt to market needs, so it is not uncommon for this to bring out the similarity of building models that will appear to be monotonous [9].

On the other hand, the formation of perceptions of internet media users is also influenced by technological advances that impact changes in electronic media. In other words, electronic media changes affect its users' behavior, and this behavior also influences perceptions. The phenomenon of changing desktops to laptops, cables to wireless, and cellphones to tablets has caused a change in the user's position, which previously was only in a room or an office, now it can be easily and freely accessed when they are outside the office or even in recreational facilities [10]. The interchange records user access traces marked from the access location to the page location accessed. In addition, there are also demands accompanied by different usage needs, so electronic media and internet social media experience many innovations to suit the various needs of their consumers' lifestyle is fast-paced, wants to be practical, does not want to be bothered by the fatigue of arranging and looking for vehicle parking positions, so that it is uncomfortable to be in a noisy space to form a product consumption model. Information is more convenient to access online [11], this is what marketing activists also capture.

The process of deciding to access the Internet will be closely related to needs, finances, and humans as users, and this can be found in a search engine [12], and Google is one of the popular search engines with a considerable market share [13].



**Figure 6.** Market Share of Leading Search Engines For The Period January 2010- July 2022. [14]

Figure 1 above shows the search engine from Google leading search information for the global market by 83% as of July 2022 [14]. With a search focus that lies on customer insight, Google introduced its application in the form of Google Trends in 2006 [10] to provide information about popular things based on the search engine and then because the additional application was quite successful and valuable, Google then

launches other tools in the form of Google Insights which focus on visual search from the point of view of its users as well as suggestions for directions in finding marketing segments that fit our needs [15]. Google Trends (GT) can find the favorite locations you will visit by writing some of the right keywords. Keywords related to a place can be the location of the place you want to see, weather forecasts, accessibility, transportation, lodging, and online shopping pages accessed via the Google search engine [16]. With the availability of abundant information coupled with the needs of marketers who are targeting the market for profit, there is a tendency:

- 1) The similarity of the form [9] can lead to differences in the meaning of the shape of the building and its place compared to the presentation provided on the Internet
- 2) A building and its place have the potential to be popular based on branding techniques relying on the popularity of the mediator [6]
- 3) The mismatch between the meaning of a building and its place due to the popularity of information provided by social media [8]
- 4) But also, the presence of GT can be an opportunity to find popular and unpopular locations to be considered for the construction of a place [17]

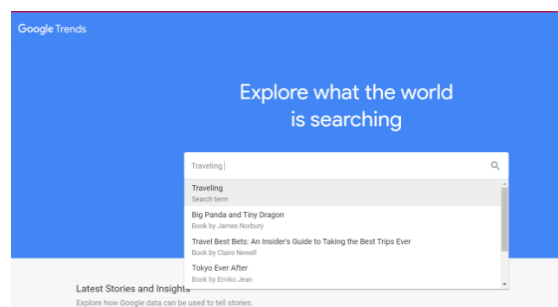
Through this, this research will look at the potential of Google Trends (GT) to find the popularity of a building and its place while at the same time identifying the instrumental values that underlie this popularity from an architectural aspect so that it can be a value to be considered for building a place from a trend's perspective.

## 2. RESEARCH METHOD

Using several keywords that are pretty popular in the Google search engine [16], such as lodging with popular keywords in the form of staycation, then transportation with popular keywords in the form of Traveling and healing [18]. The focus of the search is on the Travel and Hobby category. This Hobby category is selected based on the interest in visiting a place [19]. In contrast, the Travel category was chosen as the visitor's roaming activity in fulfilling their visiting needs, including traveling, staycation, and healing. The location will be focused on cities in Indonesia. All of this data is collected from Google Trends and then analyzed using data interpretation techniques provided by Google Trends [20] with five stages, namely: (1) Reading trends, (2) Searching for the Most Popular Topics, (3) Most popular Data Classification, (4) Reading search history related to predetermined keywords, then (5) Performing the final filter to eliminate data that are not directly related to the keywords that have been determined.

## 3. RESULTS AND DISCUSSION

The results of data collection through Google Trends with the keyword traveling using five stages in the previous method will be broken down into two parts, namely the first is to identify the city with the most people looking for information about traveling. The second is identifying the city many Google search engine users choose. However, suppose we carry out a more specific classification down to the city area. In that case, it is interesting because the first place is not a city in North Kalimantan, as shown in Figure 3, but North Kuta (Figure 4). Next is to look at the most popular topics discussed based on the most popular city categories (Figure 4).



**Figure 7.** Explore The Keyword "Traveling" on Google Trends

3.1 User Identification

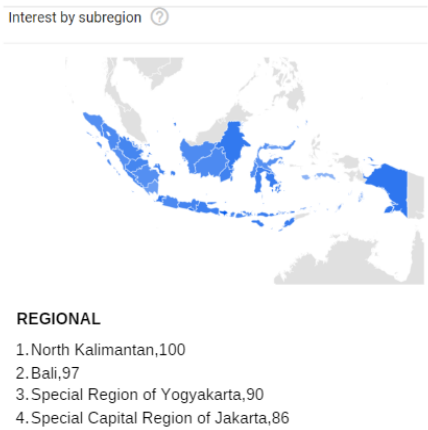


Figure 8. Exploration Results for The Keyword "Traveling" in The Indonesian Region

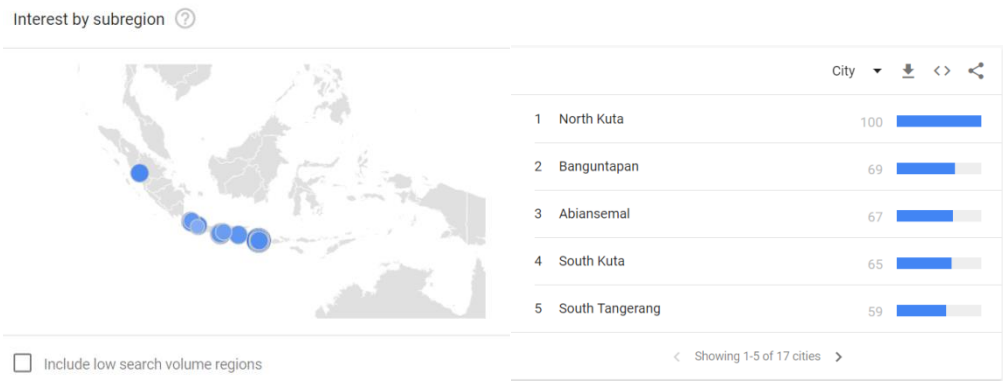


Figure 9. Exploration results for the keyword "Traveling" for cities in Indonesia.

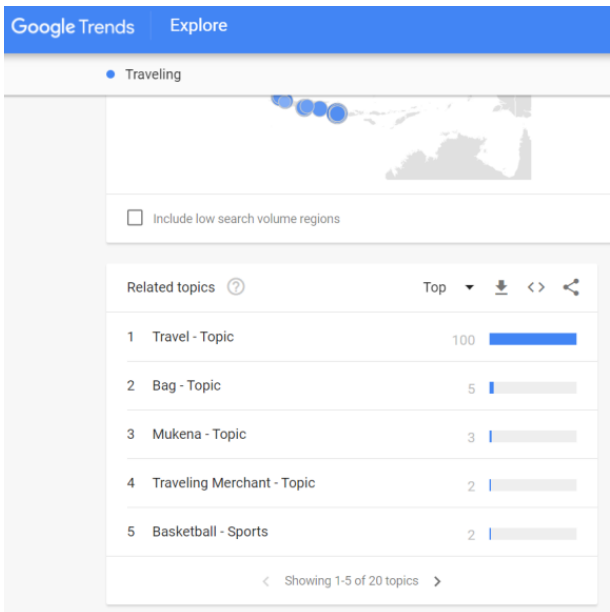
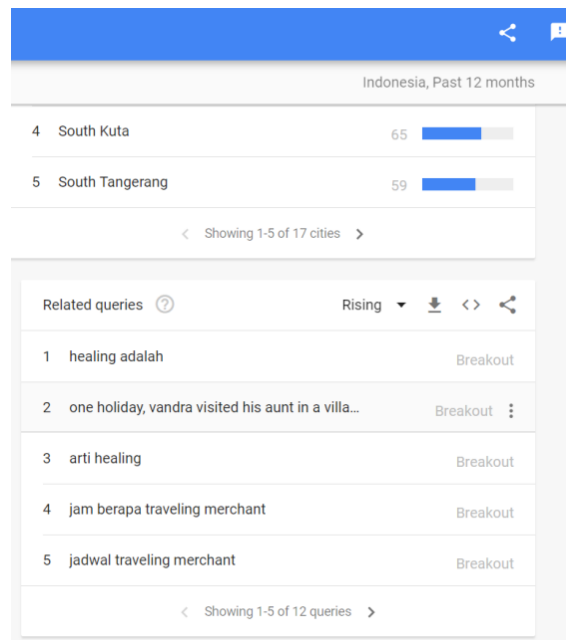


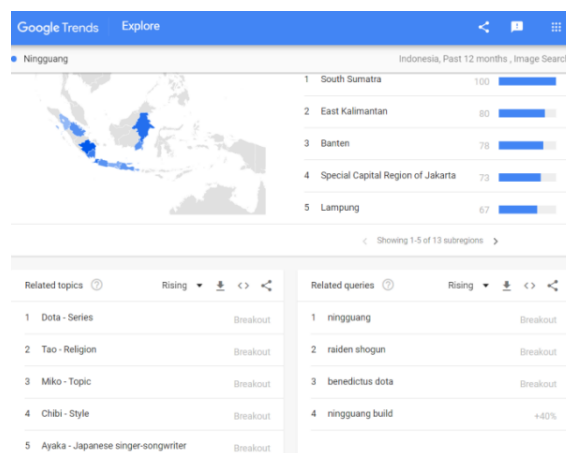
Figure 10. Trending topics based on the city you are traveling to.

Figure 5 shows the topics that are currently popular based on the order of the city. In contrast, Figure 6 shows the recent popular searches indicated by selecting calculations using the Rising – Queries button, which shows that there has been a significant increase in frequency in recent times (the most recent calculations were carried out on December 27, 2022).

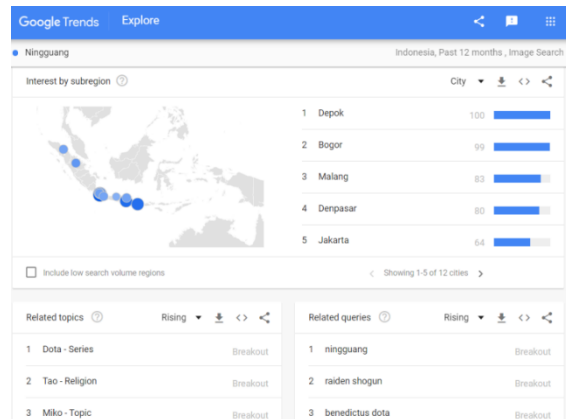


**Figure 11.** The largest search frequency through Google Trends

As discussed earlier, healing is a topic with high search frequency (Figure 6 includes it in the first top search through the Google search engine). However, after the healing topic is explained in more detail, it closely relates to gameplay activities via computers and smartphones (Figure 7). Boldi [21] in his research also revealed how human life patterns began to transform due to the phenomenon of the Covid-19 Pandemic, which made many people enjoy playing video games during the lockdown period to form a sense of time and space that protects a person from feeling dissatisfied in the real world and from moving for a while from fear of the effects of the Coronavirus. In his research, Klein also revealed how a game can stimulate behavior and direct one's emotions. In addition to feeling happy, using the Clay Slap Game can be more relaxing and encourage feelings of regression.



**Figure 12.** Report description of quests related to healing.

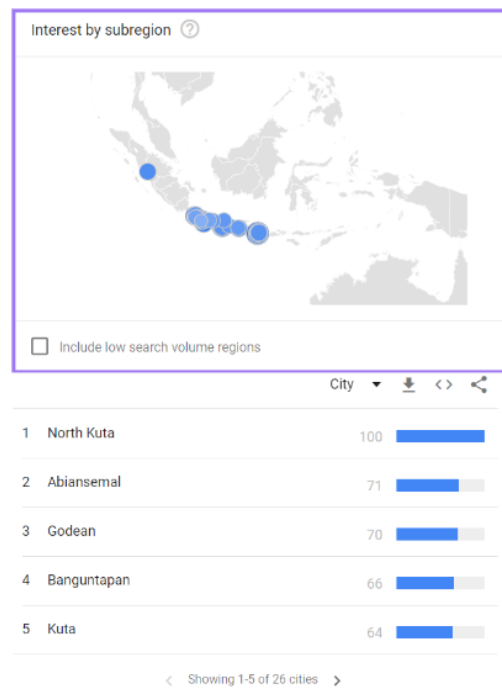


**Figure 13** A city that accesses healing and video game keywords.

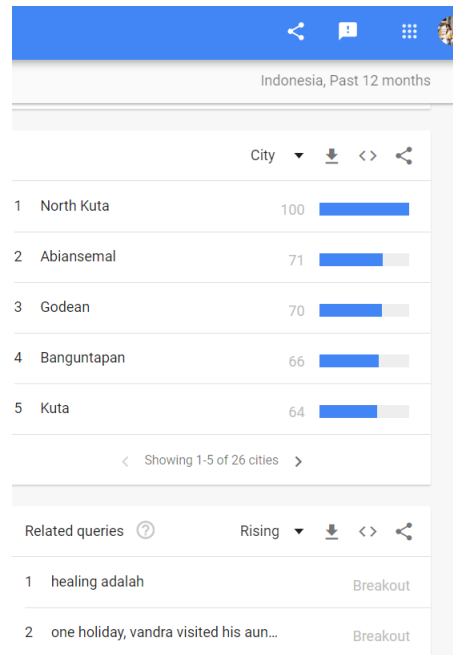
Games can stimulate a person's motion sensors, habitual behavior, to emotional control [22]. With a game/game, a person can gain confidence, improve mood, and feel firm in making decisions [22]. This emotional feeling is reasonable when the keywords traveling-healing-video game have a connecting thread. With the current human condition being quite comfortable "in place" by doing a million activities, healing through video games is the most popular choice.

### 3.2 Identification of Traveling Destination Cities

After previously identifying cities with internet media users who needed traveling activities, we have now re-identified towns that have recently been popular enough to be searched for on search pages for traveling. In the video game keyword, the city where users are located is a developed city with complete facilities with various visiting destinations (see Figure 8). Figure 9 shows Indonesia's five highest cities chosen by Google search engine users. In addition, the words that are relevant that appear together with the data (figure 9) are also the word "healing" (see Figure 10). From this data, big cities have internet media users who most need healing activities in the form of traveling.



**Figure 14.** Popular Cities for Traveling searches.



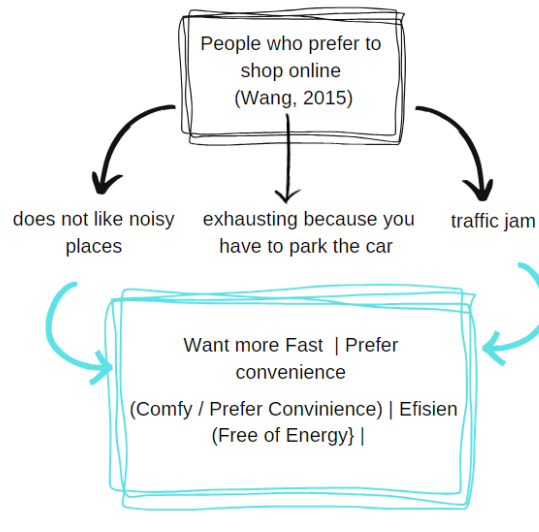
**Figure 15.** Appearance of the keyword "healing" on Google trends related to "traveling."

When examined further by sorting through the image media in each city, several images related to the natural world appear. For example, North Kuta with its beach, Abiansemal with its Waterfall, Godean with its Traditional Market, and Banguntapan with views of the highlands, beaches, and historical buildings around it (Sleman - Jogja). Does traveling for the Indonesian people (internet media users) mostly return to seeing natural nuances as the most desirable travel choice? Nature tourism as a traveling option is in line with research conducted by Bhalla, which revealed that nature-based tourism is the choice of most people to improve spiritual and physical healing, as well as mental after the Covid-19 Pandemic a natural location with a natural atmosphere also leads a person to an awareness of the surrounding environment, including controlling emotions by accepting differences from the realities of life around them. Stankov revealed how the issue of full awareness or mindfulness is a factor that will affect the world of tourism because this awareness-based approach is a relatively cheap and easy solution to maintain the continuity of the tourism industry [24]. In addition, Bhalla added that sentimental assessment of life circumstances and emotions is a factor that makes a person maintain their mental health through nature-based travel choices [23], especially after experiencing the phase of staying at home due to the C19 pandemic. In this second description, the provisional conclusion is that the cities where the trips are made are nature-based and natural with mental health goals, which Google Trends refers to as healing.

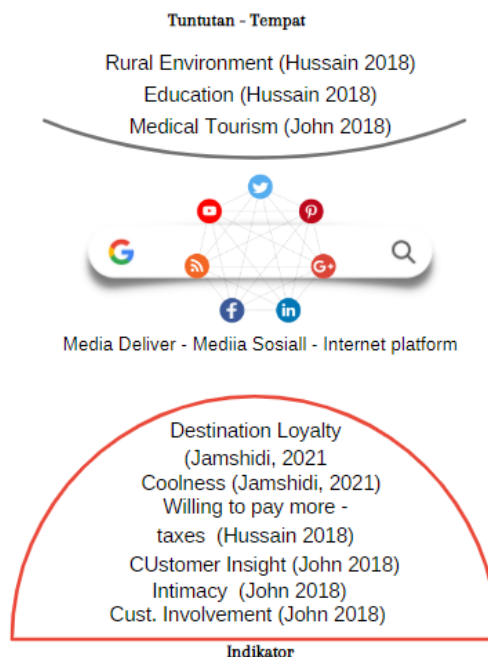
### 3.3 Traveling, Healing, and Architecture: Nature-Based Tourism

The "point-to-point" trick, explained by Wang, is a technique for meeting the needs of internet users by service providers of goods, services, and information [11]. The lifestyle that "everything wants to be fast" is young people's focus on obtaining information. There is a novelty motivation of feeling comfortable and free of energy to the lifestyle of these young people. Figure 11 shows how a conventional need is replaced by smart technology – smartphone/tablet.

Internet-based social media is an opportunity to build social relationships between users (service providers - customers - customers). By linking the information dimension of a commercial place with social media, visitors will have the opportunity to obtain an aesthetic perception of a place. This aesthetic perception will form a memorable experience that creates destination loyalty. Jamshidi calls it coolness and destination loyalty [25]. The forms of traveling for healing purposes are quite diverse. Rustic and mountainous nuances make visitors willing to pay more [25] to be part of education while traveling. Even more advanced, healing as a medical need is also developing in the world of tourism with the form of medical tourism, which is the mainstay of today's social media platforms.



**Figure 16.** One's basic needs in terms of today's shopping malls



**Figure 17.** Needs and Indicators in Traveling and Healing

Figure 12 shows the relationship between the availability of a place and the impact indicators resulting from information received via the Internet on the Google search engine. The phenomenon of health needs, for example, starting from standard check-ups (medical check-ups), plastic surgery, and dental care to complex operations, makes a person no longer stay in one place of treatment but tries to get the best medicine (objectively) in various areas, cities, and country [26]. The need for quality health impacts forming an industrial market in health tourism that captures opportunities for consumers who need health improvement [27]. Health tourism is attached to health service providers and places, locations, cities, and countries so that the perception of its visitors also influences the image of a place [28]. The formation of information to meet the needs of medical tourism can form intimacy [27] between users and service providers generated from internet social media information.



### 3.4 Video Games and Architecture: Effortless Healer

Suppose we return to the results of Google Trends relating to video games as a traveling and healing medium. In that case, it is based because a game can stimulate a way of thinking without feeling pressured. The game can make its users survive and enjoy life [29], even in stressful situations. Apart from making the game an escape [21], which can have a harmful impact when exceeding the usage limit, through the game, the user will feel that the burden of the mind is being diverted from feeling bored, stressed, depressed, lonely, to other disturbing demands [30]. The next challenge will be behavior changes, addiction, feelings of anxiety, and feeling lonely again when the use of video games becomes excessive [31].

Then what is the relationship between video games and architecture? Is nothing new for Architecture developing in the virtual realm? By creating a virtual visual space, architecture is here to provide a spatial experience that, even though you cannot physically feel, in the experience of playing video games, architecture offers a new space that adds to the imagination. The sensation of playing is more enjoyable. The game is quite old; we know the Sims is a game through the computer with the concept of real life and family relationships [32], which is simulated through the arrangement of interior and exterior furniture buildings that it has become so popular. The thing that blends with real life, family relationships, and natural life is an exciting concept and lasts quite a long time. Architecture is here to accommodate [33]. These needs are genuine and bring aesthetic value that enlivens the atmosphere of a game [34].

The connection here is quite clear, the current conditions make many people quite stuffy and claustrophobic with many demands in real life, so the escape that does not require significant effort is playing video games that are currently increasingly advanced. Communication between players with unlimited distances is one of the attractions for users to replace social interaction activities even for the scope of communication around the game.

### 3.5 Architectural Instrumental Value

Architectural design is the basis of applied arts. Ecological structure in architectural design becomes an aesthetic value. Art and nature are crucial factors in meeting the need for comfort [35]. As a user, applying art and nature will provide enough space to carry out activities and give the impression of being away from disturbing "noisy things." Through Natural, educational, and Art aspects, a design can present as a therapeutic space for its users; Kraftl calls it architectural therapy [35]. A building cannot stick in one's memory unless it gives an impression. This impression will be remembered, which collectively can form an image.

A natural design approach resulting from the contact of natural elements can form an impressive image for its users; as Mangunwijaya said in his book *Wastu Citra* that a picture would be awe-inspiring if it is transcendent, which gives meaning and enters the scope of aesthetics [33]. Suppose architectural design refers to keywords from Google search results referring to things that are stressless through traveling for healing purposes. In that case, architecture can provide space for these demands. The ecological design will give the impression that it can answer these needs. An ecological design with a good appreciation of nature is not a fake romantic, as Romo Mangun said [33].

## 4. CONCLUSION

The data collection results through Google Trends unexpectedly brought up many new things that could be developed in further research. Some of the findings from the results of browsing using Google Trends are as follows:

1. The appearance of words and locations related to traveling after an in-depth search with Google Trends, namely healing, video games, nature, beaches, and nature.
2. Interestingly, the cities with the most access to these keywords are Depok, which ranks first, followed by Malang, Bogor, Denpasar, and Jakarta, which are developed cities with adequate facilities.
3. The cities most accessed through the Google search engine related to traveling are North Kuta, Abiansema, Godean, Banguntapan, and Kuta. The five cities; have relatively uniform characteristics when searched using the Google search engine, which is specified by images. The appearance of natural landscapes and natural-smelling destinations adorns the Google search results page.

4. Video games are a travel medium with characters that don't waste too much energy compared to visiting a place. Video games attract internet media users, especially during the Covid-19 pandemic, which carried out more "stay at home" activities.
5. Architectural designs' focus on several findings can be narrowed down to designs that "return to nature" to meet these traveling and healing needs.

#### 4.1 Ecological Approach

Accommodating the wishes of the results of Google Trends data, Architecture can present itself by bringing an approach close to nature, both form, material, and meaning, which is packaged more creatively according to the progress of today's human desires. Hence, Architect has the opportunity to realize Architecture in the medical tourism industry, which accommodates healing needs from traveling search results.

The findings above can be further researched on architecture in the context of games as part of an alternative journey. Besides that, architecture research related to medical tourism is currently the focus of developing the tourism industry sector. Phenomena that are no less interesting to explore are big cities with complete facilities that need more healing than the cities below them based on data from the Google search engine.

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