EVALUATION OF TOURIST SPOT USING REVIEW DATA POSTED ON TRAVEL INFORMATION WEBSITE: CASE STUDY IN ISHIKAWA PREFECTURE

Yuta BABA[1], Makoto FUJIU[2], and Yuma MORISAKI[3]

[1] *Undergraduate Student, School of Geosciences and Civil Engineering, Kanazawa University, Kanazawa, Japan,*
[2] *Associate Professor, Institute of Transdisciplinary Sciences for Innovation, Kanazawa University, Kanazawa, Japan,*
[3] *Assistant Professor, Institute of Transdisciplinary Sciences for Innovation, Kanazawa University, Kanazawa, Japan*
Correspond to Assoc Prof. M. FUJIU (fujiu@se.kanazawa-u.ac.jp)

Keywords: tourism-marketing, Big-data, Text-mining

1. GENERAL INSTRCUTIONS

Japan's national strength is declining due to the country's low birthrate and aging population. Under these situation, the development of the tourism industry in local government is as urgent task. In developing the tourism industry, it is extremely important to understand the needs and impressions of actual tourists toward tourist spots. In recent years, people's impressions of tourist attractions and descriptions of their behavior have been posted on the Internet by themselves, and this information has been accumulated as big data. In this study, using review posted on travel information websites, features and impressions of tourist spots in Ishikawa Prefecture: Hakui Kaga Wajima are quantified.

2. SUMMARY OF REVIEW DATA

In this study, one of the leading travel websites in the field of domestic travel, "Jalan.net "[1] (hereafter referred to as "Jalan"), was used. From this website, 56527 reviews of sightseeing spots in Ishikawa Prefecture posted over a 12-year period from September 1, 2010, to August 31, 2022, were obtained by scraping.

3. QUANTITATIVE EVALUATION OF IMPRESSIONS AND FEATURES FOR TOURIST SPOTS

Text mining was conducted on the review data collected in Chapter 2 to quantify the features and impressions of tourist spots in each region. all of the review data were subjected to morphological analysis by KHCoder[2]. For the features, we extracted the top 15 most frequently occurring nouns from the review data for each region. For the impressions, we selected three representative nouns from the frequently occurring nouns for each region and extracted the top five adjectives and adjectival verbs that are strongly related to these nouns by using the Jaccard coefficients. The 15 most frequently occurring nouns and the top 5 adjectives and adjectival verbs are shown in Tables 1 and 2, respectively. The top 15 most frequently occurring nouns were the sea, car, and shrines in Hakui; hot springs, experiences, and rabbit in Kaga ; and Senmaida, parking lots, and morning markets in Wajima , reflecting the features of each area's tourist attractions. The top five adjectives and adjectival verbs expressed the general impression of the representative words. This suggests that the features and impressions of tourist spots can be quantified by review.

Table 1. The 15 most frequently occurring nouns

Hakui		Kaga		Wajima	
car	1468	Experience	1571	Senmaida	749
Sand beach	1092	Bridge	949	Sea	588
sea	659	Hot Spring	919	Morning Market	490
drive	603	Yamanaka Onsen	846	Parking lot	449
beach	312	Rabbit	768	Road	448
wave's edge	296	Painting	743	Stations	426
Location	283	Location	580	Stores	335
best	244	Souvenirs	570	People	331
sandy beach	241	People	507	Terraced paddy fields	331
people	206	Strolling	497	Scenery	329
Waves	184	Hare	496	Location	302
Weather	176	So-yu	471	Wajima	256
Shrine	167	Hot spring resort	449	Rice paddies	232
Japan	166	promenade	446	Souvenirs	224
Tirihama Beach	160	Scenery	443	Light up	223

Table 2. The top 5 adjectives and adjectival verbs

Hakui					
Sea		Cars		Shrine	
beautiful	0.124	Good	0.1371	Quiet	0.183
good	0.0859	fun	0.081	Fine	0.0479
beautiful	0.0855	Unusual	0.0752	New	0.0471
Beautiful	0.081	pleasant	0.0622	Sacred	0.0465
Wonderful	0.0632	exhilarating	0.0604	Famous	0.0427
Kaga					
Hot spring		Experience		Rabbit	
Good	0.0811	courteous	0.267	Cute	0.1589
Many	0.0589	enjoyable	0.2658	Free	0.0619
Delicious	0.0497	Kind	0.116	Fun	0.0469
beautiful	0.0427	Difficult	0.1135	small	0.0417
wide	0.0391	Gentle	0.0761	many	0.0373
WaJima					
Senmaida		Parking lot		morning market	
Good	0.092	spacious	0.082	fun	0.1105
beautiful	0.087	clean	0.0763	many	0.0877
beautiful	0.0704	Good	0.0639	fresh	0.0863
Wonderful	0.0614	Much	0.0585	famous	0.0849
Delicious	0.0523	few	0.0541	Delicious	0.0819

4. CONCLUSION

In this study, the features of local tourist spots were quantified by extracting frequently appearing nouns from reviews posted on travel information websites. In addition, by extracting adjectives or adjectival verbs that are strongly related to the frequently appearing nouns, impressions of the tourist spots in each region were also quantified. The results suggest that it is possible to quantify the features and impressions of tourist spots in each region.

REFERENCES

[1] Jalan.net, Ishikawa Sightseeing Spots
https://www.jalan.net/kankou/190000/
[2] KHCoder, https://khcoder.net/