Finnish Tourist Comments on TripAdvisor

Peng Yang

Based on national strategy (Visit Finland), Finland is divided into four tourism zones: capital area, western archipelago, Lakeland and Lapland. To get a more representative data sample, seventy most popular HIAs (Hospitality Industry and Attraction) were selected in the four zones proportionally on TripAdvisor. The HIAs include 20 attractions, 18 hotels and 32 restaurants across the whole country from Helsinki to Rovaniemi.

Туре	Name	Link					
Attraction	Porvoo Old	https://www.tripadvisor.com/Attraction Review-g315777-					
I	Town	d5499362-Reviews-Porvoo Old Town-Porvoo Uusimaa.html					
Attraction	Sea Fortress	https://www.tripadvisor.com/Attraction Review-g189934-					
I	Suomenlinna	d199918-Reviews-Sea Fortress Suomenlinna-					
<u> </u>		<u>Helsinki_Uusimaa.html</u>					
Attraction	Arktikum	https://www.tripadvisor.com/Attraction_Review-g189922-					
<u> </u>		d645854-Reviews-Arktikum-Rovaniemi_Lapland.html					
Attraction	Ruka	https://www.tripadvisor.com/Attraction_Review-g189928-					
_		d594062-Reviews-Ruka-Kuusamo Northern Ostrobothnia.html					
Attraction	Sandcastle	https://www.tripadvisor.com/Attraction_Review-g227603-					
I	Lappeenranta	d4697105-Reviews-Sandcastle Lappeenranta-					
_		Lappeenranta South Karelia.html					
Attraction	Nallikari Beach	https://www.tripadvisor.com/Attraction_Review-g189929-					
I		d6703717-Reviews-Nallikari_Beach-					
I		Oulu_Northern_Ostrobothnia.html					
Attraction	Temppeliaukio	https://www.tripadvisor.com/Attraction_Review-g189934-					
I	Church	d1372894-Reviews-Temppeliaukio Church-					
I		Helsinki_Uusimaa.html					
Attraction	Tampereen	https://www.tripadvisor.com/Attraction_Review-g189948-					
I	Tuomiokirkko	d604970-Reviews-Tampereen_Tuomiokirkko-					
I		Tampere_Pirkanmaa.html					
Attraction	Turku Castle	https://www.tripadvisor.com/Attraction_Review-g189949-					
I		d1553703-Reviews-Turku Castle-Turku Southwest Finland.html					
Attraction	SantaPark	https://www.tripadvisor.com/Attraction_Review-g189922-					
I		d202600-Reviews-SantaPark the Home Cavern of Santa Claus-					
I		Rovaniemi_Lapland.html					
Attraction	Pyynikki Park	https://www.tripadvisor.com/Attraction_Review-g189948-					
I	and	d661108-Reviews-Pyynikki Park and Observation Tower-					
I	Observation	Tampere Pirkanmaa.html					
I	Tower						
Attraction	Santa Claus	https://www.tripadvisor.com/Attraction_Review-g189922-					
	Office	d548079-Reviews-Santa Claus Office-Rovaniemi Lapland.html					
Attraction	Santa Claus	https://www.tripadvisor.com/Attraction_Review-g189922-					
	Village	d591471-Reviews-Santa Claus Village-Rovaniemi Lapland.html					

Attraction	Helsinki	https://www.tripadvicor.com/Attraction_Povious_g190024			
ALLIGCTION		ttps://www.tripadvisor.com/Attraction_Review-g189934-			
Λ++ r = -+ !	Cathedral	d202596-Reviews-Helsinki Cathedral-Helsinki Uusimaa.html			
Attraction	Seurasaari	https://www.tripadvisor.com/Attraction_Review-g189934-			
	Island and	d202598-Reviews-Seurasaari Island and Open Air Museum-			
	Open-Air	Helsinki_Uusimaa.html			
Attraction	Museum Old Market Hall	https://www.tripadvisor.com/Attraction Review-g189934-			
Attraction	Old Market Hall	d314921-Reviews-Old Market Hall-Helsinki Uusimaa.html			
Attraction	Sarkanniemi	https://www.tripadvisor.com/Attraction Review-g189948-			
Attraction	Theme Park	d604969-Reviews-Sarkanniemi Theme Park-			
	THEIHE Falk	Tampere Pirkanmaa.html			
Attraction	Helsinki Central	https://www.tripadvisor.com/Attraction Review-g189934-			
Attraction	Railway Station	d245975-Reviews-Helsinki Central Railway Station-			
	Railway Station	Helsinki Uusimaa.html			
Attraction	Korkeasaaren	https://www.tripadvisor.com/Attraction_Review-g189934-			
Attraction	Elaintarha	d245526-Reviews-Korkeasaaren Elaintarha-			
	Liaiiitaiiia	Helsinki Uusimaa.html			
Attraction	Linnanmaki	https://www.tripadvisor.com/Attraction Review-g189934-			
, action	Amusement	d245527-Reviews-Linnanmaki Amusement Park-			
	Park	Helsinki Uusimaa.html			
Hotel	Santa Claus	https://www.tripadvisor.com/Hotel Review-g189922-d2151632-			
Hotel	Holiday Village	Reviews-Santa Claus Holiday Village-Rovaniemi Lapland.html			
Hotel	Hotel Helka	https://www.tripadvisor.com/Hotel Review-g189934-d237691-			
110101	Hoterriena	Reviews-Hotel Helka-Helsinki Uusimaa.html			
Hotel	Radisson Blu	https://www.tripadvisor.com/Hotel Review-g189934-d206762-			
Hotel	Plaza Hotel,	Reviews-Radisson Blu Plaza Hotel Helsinki-			
	Helsinki	Helsinki Uusimaa.html			
Hotel	Arctic Light	https://www.tripadvisor.com/Hotel Review-g189922-d7331932-			
	Hotel	Reviews-Arctic Light Hotel-Rovaniemi Lapland.html			
Hotel	Scandic Grand	https://www.tripadvisor.com/Hotel Review-g189934-d228670-			
	Marina	Reviews-Scandic Grand Marina-Helsinki Uusimaa.html			
Hotel	GLO Hotel	https://www.tripadvisor.com/Hotel Review-g189934-d625374-			
	Kluuvi Helsinki	Reviews-GLO Hotel Kluuvi Helsinki-Helsinki Uusimaa.html			
Hotel	Kakslauttanen	https://www.tripadvisor.com/Hotel Review-g667560-d293333-			
	Arctic Resort	Reviews-Kakslauttanen Arctic Resort-Saariselka Lapland.html			
Hotel	Holiday Club	https://www.tripadvisor.com/Hotel Review-g667560-d266637-			
	Saariselka	Reviews-Holiday Club Saariselka-Saariselka Lapland.html			
Hotel	Scandic	https://www.tripadvisor.com/Hotel Review-g189948-d2554253-			
	Tampere	Reviews-Scandic Tampere Station-Tampere Pirkanmaa.html			
	Station				
Hotel	Original Sokos	https://www.tripadvisor.com/Hotel Review-g189948-d232153-			
-	Hotel Ilves	Reviews-Original Sokos Hotel Ilves-Tampere Pirkanmaa.html			
Hotel	Hotel	https://www.tripadvisor.com/Hotel Review-g189934-d652575-			
	Katajanokka	Reviews-Hotel Katajanokka-Helsinki Uusimaa.html			
Hotel	GLO Hotel Art	https://www.tripadvisor.com/Hotel Review-g189934-d232143-			
-		Reviews-GLO Hotel Art-Helsinki Uusimaa.html			
Hotel	Hotel Lilla	https://www.tripadvisor.com/Hotel Review-g189934-d7940665-			
- -	Roberts	Reviews-Hotel Lilla Roberts-Helsinki Uusimaa.html			
Hotel	Hotel Kamp	https://www.tripadvisor.com/Hotel_Review-g189934-d199923-			
-		Reviews-Hotel Kamp-Helsinki Uusimaa.html			
	1				

Hotel	Scandic Oulu	https://www.tripadvisor.com/Hotel Review-g189929-d622589-			
	City	Reviews-Scandic Oulu City-Oulu Northern Ostrobothnia.html			
Hotel	Holiday Club	https://www.tripadvisor.com/Hotel Review-g12184272-			
	Saimaa	d2402972-Reviews-Holiday Club Saimaa-			
		Rauha Lappeenranta South Karelia.html			
Hotel	Radisson Blu	https://www.tripadvisor.com/Hotel Review-g189949-d228673-			
	Marina Palace	Reviews-Radisson Blu Marina Palace Hotel Turku-			
	Hotel, Turku	Turku Southwest Finland.html			
Hotel	Scandic Kuopio	https://www.tripadvisor.com/Hotel Review-g189908-d228675-			
	Source Ruopio	Reviews-Scandic Kuopio-Kuopio Northern Savonia.html			
Restaurant	Restaurant	https://www.tripadvisor.com/Restaurant Review-g189934-			
	Lappi	d779830-Reviews-Restaurant Lappi-Helsinki Uusimaa.html			
Restaurant	Restaurant	https://www.tripadvisor.com/Restaurant Review-g189934-			
restaurant	Savoy	d801888-Reviews-Restaurant Savoy-Helsinki Uusimaa.html			
Restaurant	Restaurant	https://www.tripadvisor.com/Restaurant Review-g189934-			
Restaurant	Muru	d2201057-Reviews-Restaurant Muru-Helsinki Uusimaa.html			
Restaurant	Restaurant	https://www.tripadvisor.com/Restaurant Review-g189934-			
Restaurant	Zetor	d822843-Reviews-Restaurant Zetor-Helsinki Uusimaa.html			
Restaurant	Restaurant	https://www.tripadvisor.com/Restaurant Review-g189934-			
Restaurant	Savotta	d783282-Reviews-Restaurant Savotta-Helsinki Uusimaa.html			
Restaurant					
Restaurant	Restaurant Nasinneula	https://www.tripadvisor.com/Restaurant_Review-g189948-			
	Nasififieula	d795263-Reviews-Restaurant Nasinneula-			
Dantarrant	Davinskali II. Ikan	Tampere Pirkanmaa.html			
Restaurant	Ravinteli Huber	https://www.tripadvisor.com/Restaurant_Review-g189948- d3650308-Reviews-Ravinteli_Huber-Tampere_Pirkanmaa.html			
Restaurant	Pizzeria Napoli	https://www.tripadvisor.com/Restaurant_Review-g189948-			
		d777510-Reviews-Pizzeria Napoli-Tampere Pirkanmaa.html			
Restaurant	Tintå	https://www.tripadvisor.com/Restaurant_Review-g189949-			
		d2233703-Reviews-Tinta-Turku_Southwest_Finland.html			
Restaurant	Viikinkiravintola	https://www.tripadvisor.com/Restaurant Review-g189949-			
	Harald	d775453-Reviews-Viikinkiravintola Harald-			
		Turku Southwest Finland.html			
Restaurant	Kathmandu	https://www.tripadvisor.com/Restaurant Review-g189932-			
· · ·	Palace	d7257213-Reviews-Kathmandu Palace-Espoo Uusimaa.html			
Restaurant	Kilim	https://www.tripadvisor.com/Restaurant Review-g189932-			
		d800185-Reviews-Kilim-Espoo Uusimaa.html			
Restaurant	Amarillo	https://www.tripadvisor.com/Restaurant Review-g226906-			
	Flamingo	d1437908-Reviews-Amarillo Flamingo-Vantaa Uusimaa.html			
Restaurant	Kreikkalainen	https://www.tripadvisor.com/Restaurant Review-g226906-			
	Grilli Souvlaki	d10544859-Reviews-Kreikkalainen Grilli Souvlaki-			
	J. III. J.	Vantaa Uusimaa.html			
Restaurant	Kauppuri 5	https://www.tripadvisor.com/Restaurant Review-g189929-			
	Burgers	d3267306-Reviews-Kauppuri 5 Burgers-			
		Oulu Northern Ostrobothnia.html			
Restaurant	Sokeri-Jussin	https://www.tripadvisor.com/Restaurant Review-g189929-			
Restaurant	Kievari	d776779-Reviews-Sokeri Jussin Kievari-			
	Mevall	Oulu Northern Ostrobothnia.html			
Restaurant	Figaro	https://www.tripadvisor.com/Restaurant Review-g189942-			
nestaurant	Figaro Restaurant	d799452-Reviews-Figaro_Restaurant-			
	nestaurant				
		Jyvaskyla Central Finland.html			

Restaurant	Pollowaari	https://www.tripadvisor.com/Restaurant Review-g189942-					
		d2368713-Reviews-Pollowaari-Jyvaskyla Central Finland.html					
Restaurant	Popot Cafe &	https://www.tripadvisor.com/Restaurant Review-g189937-					
	Bistro	d10734173-Reviews-Popot Cafe Bistro-					
		Lahti Tavastia Proper.html					
Restaurant	Muikkuravintol	https://www.tripadvisor.com/Restaurant Review-g189908-					
	a Sampo	d785316-Reviews-Muikkuravintola Sampo-					
		Kuopio Northern Savonia.html					
Restaurant	Musta Lammas	https://www.tripadvisor.com/Restaurant Review-g189908-					
		d785315-Reviews-Musta Lammas-					
		Kuopio Northern Savonia.html					
Restaurant	Wolkoff	https://www.tripadvisor.com/Restaurant Review-g227603-					
		d739462-Reviews-Wolkoff-Lappeenranta South Karelia.html					
Restaurant	Ravintola Roka -	https://www.tripadvisor.com/Restaurant Review-g189922-					
	Street Bistro	d8573890-Reviews-Ravintola Roka Street Bistro-					
		Rovaniemi_Lapland.html					
Restaurant	Restaurant Nili	https://www.tripadvisor.com/Restaurant_Review-g189922-					
		d1137566-Reviews-Restaurant_Nili-Rovaniemi_Lapland.html					
Restaurant	Strampen	https://www.tripadvisor.com/Restaurant_Review-g189951-					
		d786349-Reviews-Strampen-Vaasa_Ostrobothnia.html					
Restaurant	Kielo	https://www.tripadvisor.com/Restaurant_Review-g189905-					
		d1094419-Reviews-Kielo-Joensuu North Karelia.html					
Restaurant	Indigo	https://www.tripadvisor.com/Restaurant_Review-g676315-					
	Restaurang &	d850423-Reviews-Indigo_Restaurang_Bar-					
	Bar	Mariehamn_Aland_Island_Aland.html					
Restaurant	Smakbyn	https://www.tripadvisor.com/Restaurant_Review-g1675218-					
		d3669369-Reviews-Smakbyn-Sund Aland Island Aland.html					
Restaurant	The	https://www.tripadvisor.com/Restaurant_Review-g262036-					
	Gingerbread	d807202-Reviews-The Gingerbread House-					
	House	<u>Hameenlinna Tavastia Proper.html</u>					
Restaurant	Porvoon	https://www.tripadvisor.com/Restaurant_Review-g315777-					
	Paahtimo	d799274-Reviews-Porvoon_Paahtimo-Porvoo_Uusimaa.html					
Restaurant	Zum Beispiel	https://www.tripadvisor.com/Restaurant_Review-g315777-					
		d4470779-Reviews-Zum_Beispiel-Porvoo_Uusimaa.html					
Restaurant	Ravintola Vausti	https://www.tripadvisor.com/Restaurant_Review-g189936-					
		d3370238-Reviews-Ravintola Vausti-Kotka Kymenlaakso.html					

On the HIA's page, we narrowed down the reviews only in Finnish resulting in 7428 unique users' page links. Users without location in Finland were removed, such as one user wrote reviews in Finnish, but location info is in Poland. Finally, there were 4182 users' pages were further scraped into each review page.

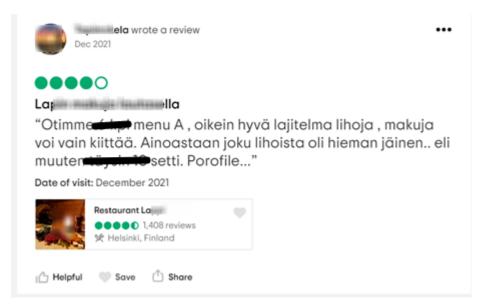
Notwithstanding the fact that users are aware of their data are accessible publicly at TripAdvisor, username, profile icon and sensitive review were altered to protect identity.

Figure 1 HIA Page

Reviews	(1,408	3)					Wr	ite a review
Excellent		Traveler type Families Couples Solo Business Friends		Time of year Mar-May Jun-Aug Sep-Nov Dec-Feb		Language		
Show reviews that Q Search reviews All reviews so interior ravin	ews	reindeer meat	finnish food	finnish expo	erience	Sort	t by: Most F	Recent v
tela 84 reviews	Google 1 Otimme lihoista o Date of vi	ranslation T. December 202	in hyvä lajitelm		kuja voi vain	n kiittää. A	Ainoastaan j	
	Helpful?	ம்						P

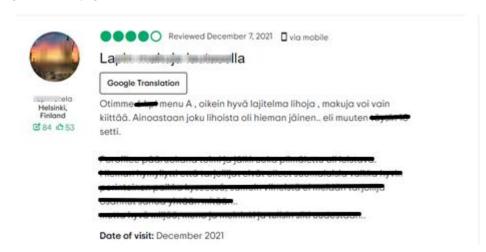
On the user's page, all reviews posted were collected including posted date, visited date, review rate, review page link, helpful, image, HIA name and HIA location and so on.

Figure 2 user page

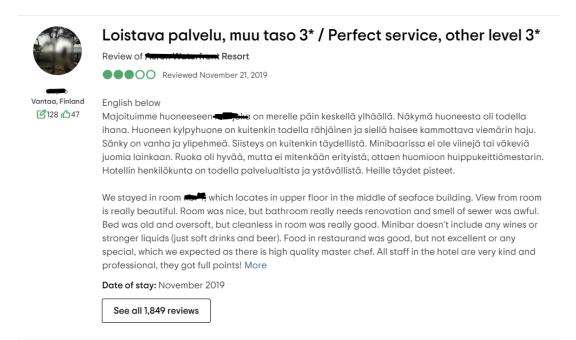


Due to review on user' page is not fully displayed, a further scrape on each review page was conducted to get all text, title and translation, language, via mobile and trip type if available.

Figure 3 review page



On the review page, if there is translation button, then the English version of text will be scaped. However, few pages including more than 1 language, which were kept as English in language category.



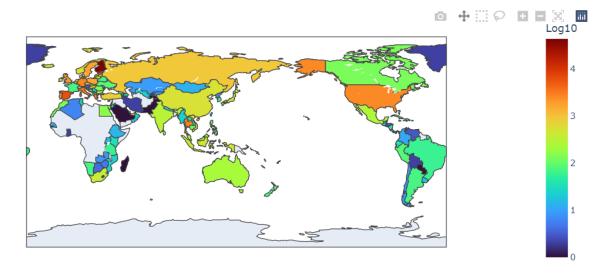
At last, the coarse data were pre-processed to get a clean dataset (101,401reviews) such as some reviews only hold pictures were removed and some locations from TripAdvisor were not recognized by python module(geopy) which were manually coded (i.e. Kimoto island, Finland).

Which countries were most commented by Finns?

TripAdvisor is one of the most popular social media for tourists to comment about their travel experience. 101,401 reviews by 4182 Finnish tourists were scraped from TripAdvisor.

Finland undoubtedly is most commented with 43890 reviews followed by Spain, Estonia and Italy. Thailand and USA are the most commented countries in Asia and Americas respectively.

In terms of cities, the first 10 most commented cities are Helsinki, Tampere, Tallinn (Estonia), Turku, Oulu, Vantaa, Kuopio, Espoo, Crete (Greece), Berlin (Germany).



In terms of monthly comments, the highest number of destinations was July 2017 followed by Julys in 2016, 2018 and 2019. Due to the Covid-19 affect, the comments have dropped a lot since.



What are the most popular topics in multilingual?

Finns wrote comments mostly in Finnish (61%), English (38%), Swedish (.3%) and other languages.

The first 12 topics are pizza, food, coffee and cake, hamburger, museum, wine, fish, beer, church, salad, restaurant service. Sauna is the most different topic in English if all reviews were translated into English.

