
Hostel Analysis of backpacked countries

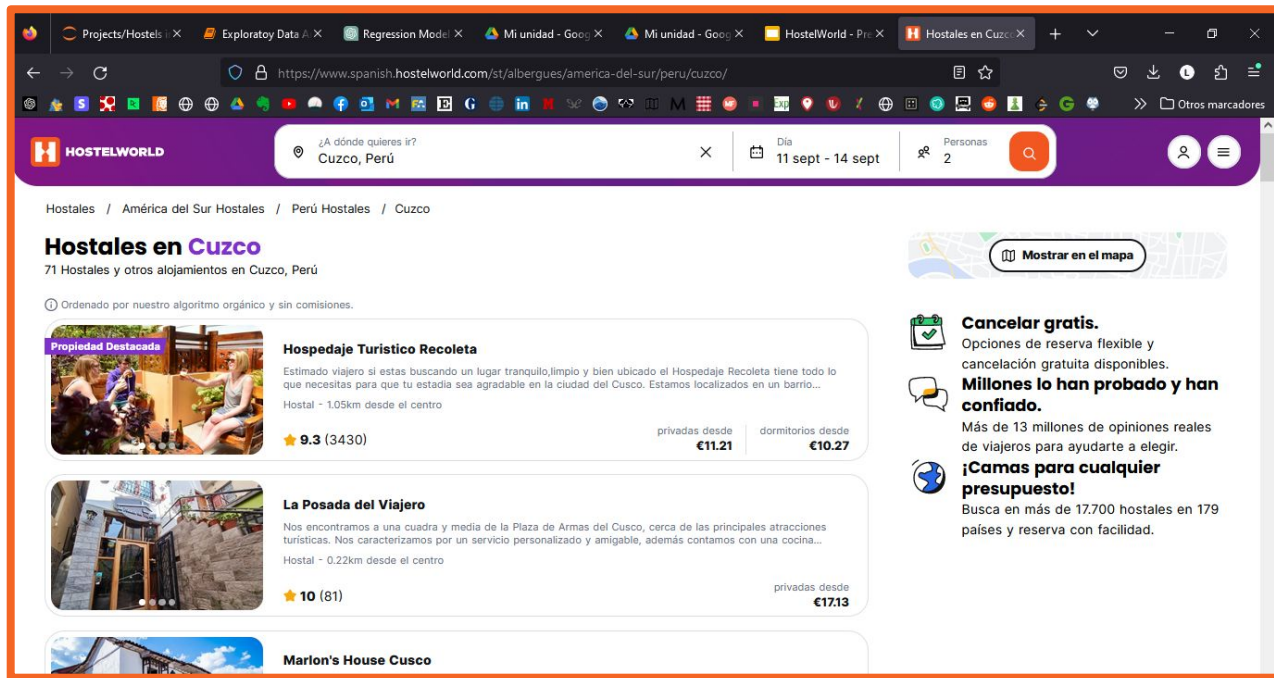
Lucas Bernal, 10.09.2023

What was done

1. Data Scrapping
 2. Data cleaning and validation
 3. Exploratory Data Analysis
 - a. Single variables
 - b. Multiple variables analysis
 4. Price estimator using Machine Learning
 - a. Model development
 - b. Dorm price estimator
-

Data Scrapping

Web Scrapping from Hostelworld



The screenshot shows a web browser window with multiple tabs. The active tab is 'Hostales en Cuzco'. The URL bar shows 'https://www.spanish.hostelworld.com/st/albergues/americadel-sur/peru/cuzco/'. The page header is purple with the Hostelworld logo and search filters. The search filters include '¿A dónde quieres ir? Cuzco, Perú', 'Día 11 sept - 14 sept', and 'Personas 2'. The main content area shows a list of hostels in Cuzco, Peru. The first hostel is 'Hospedaje Turístico Recoleta' with a rating of 9.3 (3430 reviews) and prices starting from €11.21 for private and €10.27 for dormitories. The second hostel is 'La Posada del Viajero' with a rating of 10 (81 reviews) and a price starting from €17.13 for private. The third hostel is 'Marlon's House Cusco'. To the right of the list, there is a map section with a 'Mostrar en el mapa' button. Below the map, there are three promotional banners: 'Cancelar gratis.' (Cancel for free), '¡Millones lo han probado y han confiado.' (Millions have tried it and trusted it), and '¡Camas para cualquier presupuesto!' (Beds for any budget!).

Hostales / América del Sur Hostales / Perú Hostales / Cuzco

Hostales en Cuzco

71 Hostales y otros alojamientos en Cuzco, Perú

Ordenado por nuestro algoritmo orgánico y sin comisiones.

Propiedad Destacada

Hospedaje Turístico Recoleta

Estimado viajero si estas buscando un lugar tranquilo, limpio y bien ubicado el Hospedaje Recoleta tiene todo lo que necesitas para que tu estadía sea agradable en la ciudad del Cusco. Estamos localizados en un barrio...
Hostal - 1.05km desde el centro

★ 9.3 (3430)

privadas desde €11.21 | dormitorios desde €10.27

La Posada del Viajero

Nos encontramos a una cuadra y media de la Plaza de Armas del Cusco, cerca de las principales atracciones turísticas. Nos caracterizamos por un servicio personalizado y amigable, además contamos con una cocina...
Hostal - 0.22km desde el centro

★ 10 (81)

privadas desde €17.13

Marlon's House Cusco

Cancelar gratis.
Opciones de reserva flexible y cancelación gratuita disponibles.

¡Millones lo han probado y han confiado.
Más de 13 millones de opiniones reales de viajeros para ayudarte a elegir.

¡Camas para cualquier presupuesto!
Busca en más de 17.700 hostales en 179 países y reserva con facilidad.

Data Cleaning and Validation

Data Cleaning and Validation

	country	city	name	description	rating	reviews	km_to_centre	min_private_price	min_dorm_price
0	colombia	medellin	Black Sheep Hostel Medellin	A travellers favourite in Medellin for over fi...	9.2	(3170)	- 5.39km from city centre	€19.69	€15.75
1	colombia	medellin	Oasis Hostel	Oasis Hostel is a unique hostel in the heart o...	9.1	(236)	- 2.21km from city centre	NaN	NaN
2	colombia	medellin	Secret Buddha	Home away from home. That Simple. If you wish ...	9.6	(160)	- 14.65km from city centre	€15.64	€14.63
3	colombia	medellin	Baku laureles Hostel	A perfect place for travellers who want to imm...	10.0	(6)	- 1.85km from city centre	NaN	€11.25
4	colombia	medellin	Secret Buddha	Home away from home. That Simple. If you wish ...	9.6	(160)	- 14.65km from city centre	€15.64	€14.63

Before

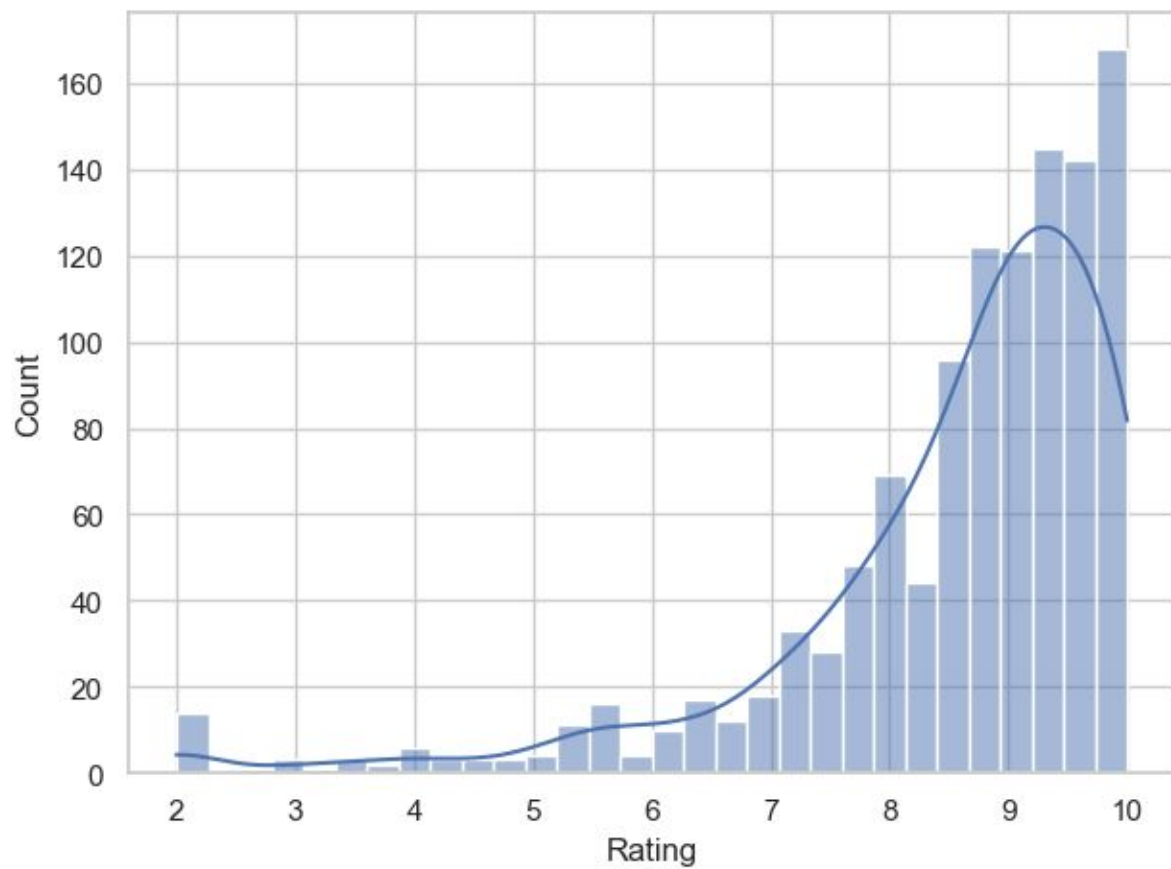
	country	city	name	description	rating	reviews	km_to_centre	min_private_price	min_dorm_price
0	Colombia	Medellin	Secret Buddha	Home away from home. That Simple. If you wish ...	9.6	160	14.65	15.64	14.63
1	Colombia	Medellin	Baku laureles Hostel	A perfect place for travellers who want to imm...	10.0	6	1.85	NaN	11.25
2	Colombia	Medellin	Hostel Metro Floresta	Our hostel is always full of lovely vibes. Her...	9.6	28	2.44	10.35	10.35
3	Colombia	Medellin	Yellow House Hostel	We are Yellow House Hostel, a very quiet, nice...	9.5	5	2.43	7.88	7.88
4	Colombia	Medellin	Viajero Medellin Hostel	360 Â° view of Medellin in the coolest neighb...	9.4	901	4.79	21.80	18.00

After

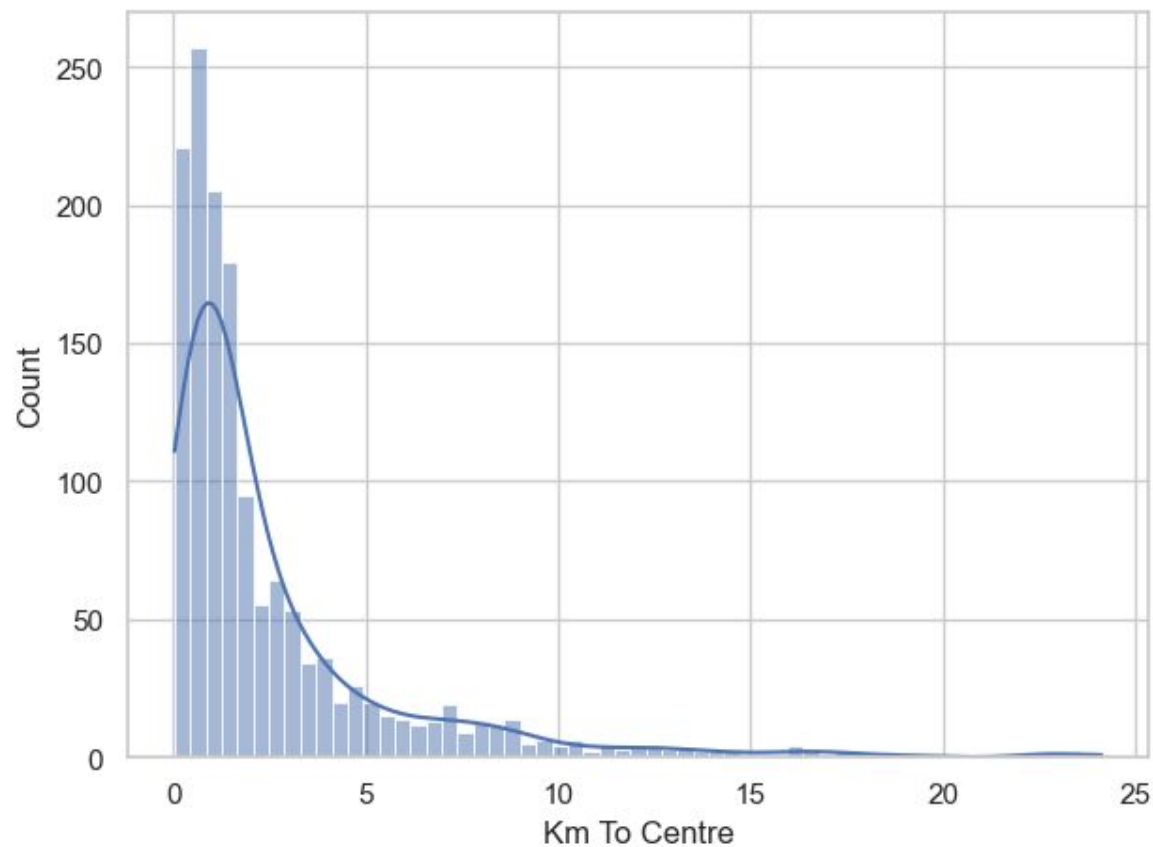
Exploratory Data Analysis

Single Variable

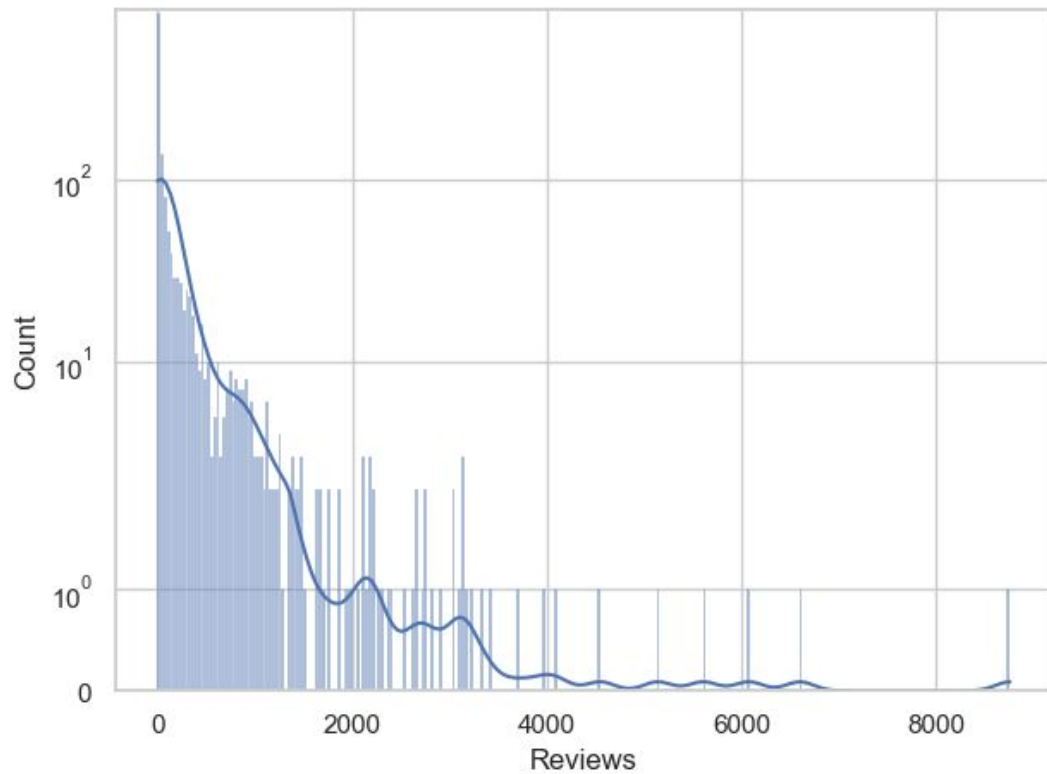
Ratings



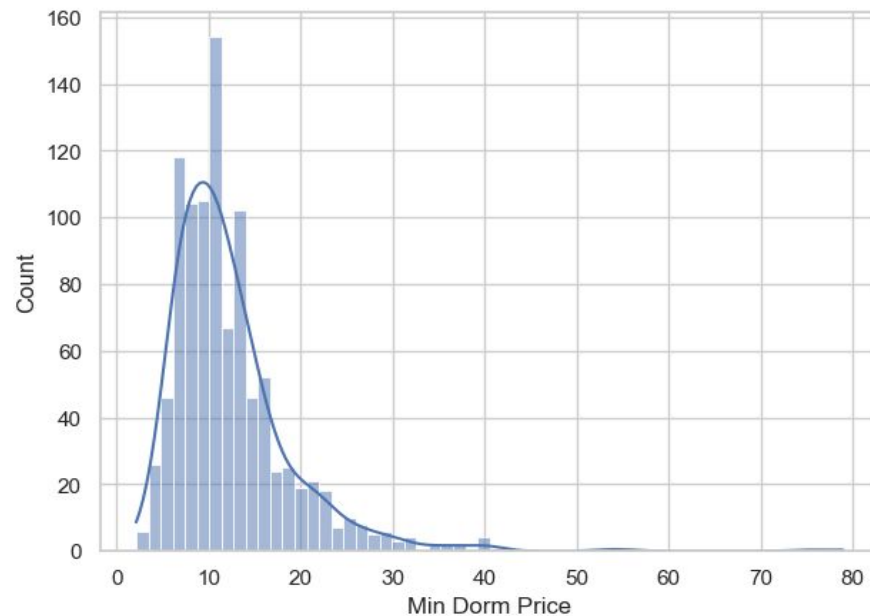
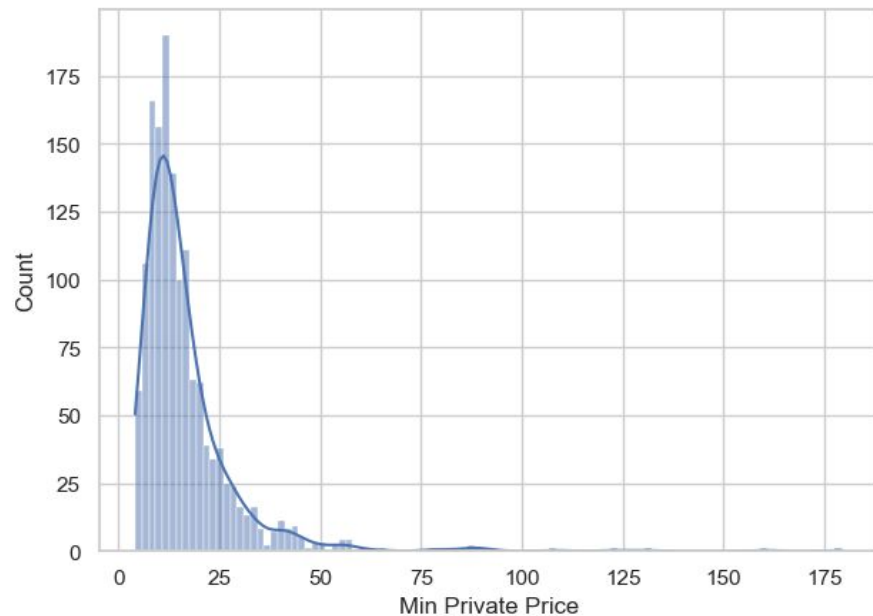
Km to centre



Reviews



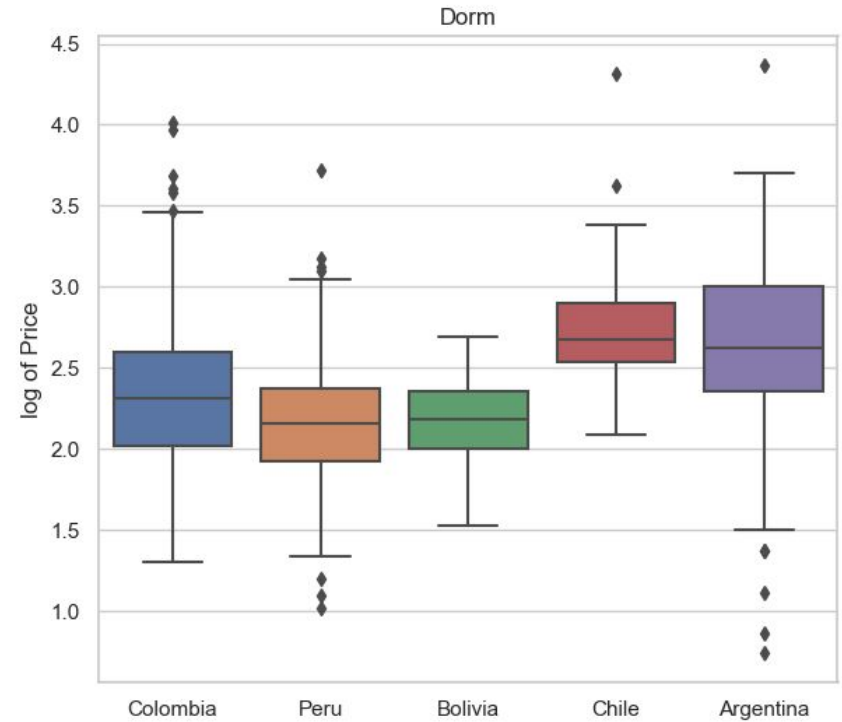
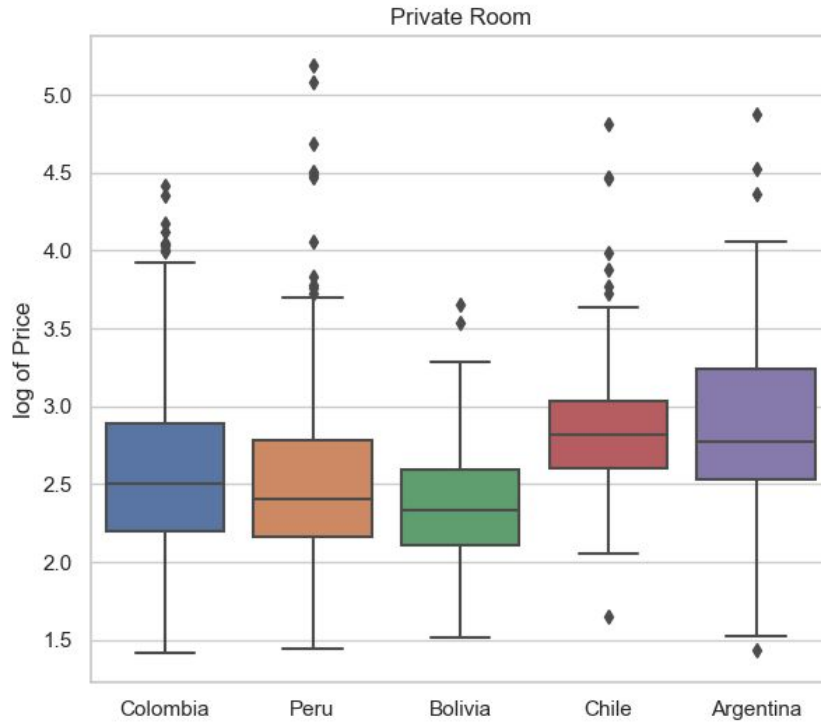
Private rooms and dorms prices



Exploratory Data Analysis

Multiple Variables

Price per country



Difference in prices in private rooms is significantly different between all country pairs except for Argentina-Chile, Bolivia-Peru and Colombia-Peru. The same results were observed for the dorm prices, with the only exception that in this case also the difference in prices between Colombia and Peru is significant.

Best and worst locations for hostels - by country

	Country	Average Hostel Rating
1	Chile	8.69
2	Colombia	8.65
3	Peru	8.56
4	Bolivia	8.48
5	Argentina	8.39

Best and worst locations for hostels - by city

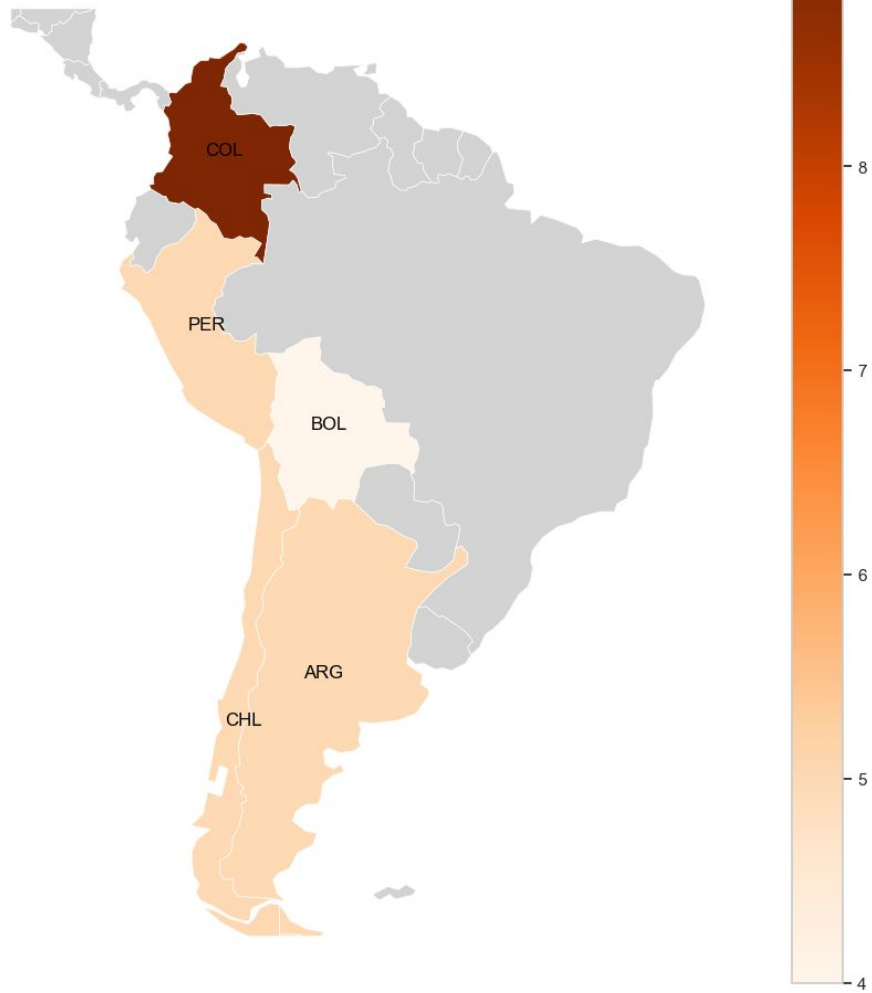
Best destinations by hostel rating

	City	Average Hostel Rating
1	San Gil	9.45
2	Minca	8.88
3	Mendoza	8.87
4	San Pedro de Atacama	8.86
5	Palomino	8.86

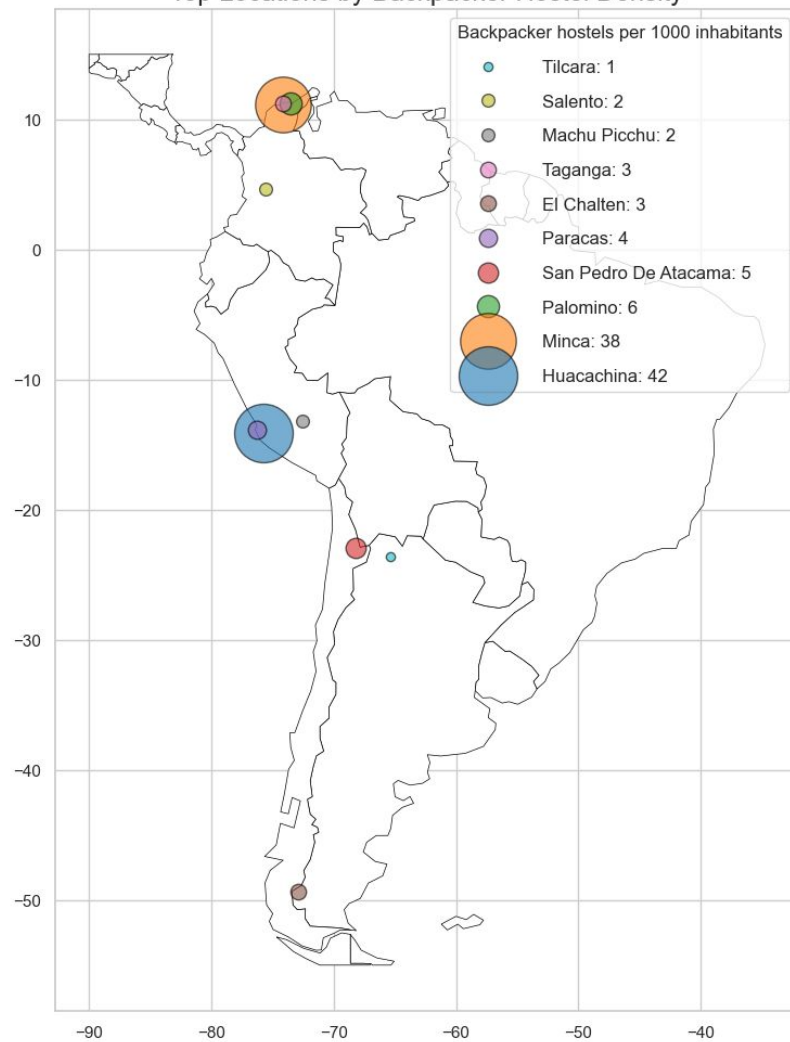
Worst destinations by hostel rating

	City	Average Hostel Rating
1	Salta	9.45
2	Machu Picchu	8.88
3	Puerto Iguazú	8.87
4	Bogotá	8.86
5	Cartagena	8.86

Backpacker Hostels per Million Inhabitants



Top Locations by Backpacker Hostel Density



Price estimation using Machine Learning

Model Development

	country	city	rating	reviews	km_to_centre	min_dorm_price
0	Colombia	Medellin	9.6	160	14.65	14.63
1	Colombia	Medellin	10.0	6	1.85	11.25
2	Colombia	Medellin	9.6	28	2.44	10.35
3	Colombia	Medellin	9.5	5	2.43	7.88
4	Colombia	Medellin	9.4	901	4.79	18.00

Model Development

Increase price estimation

	Feature	Coefficient
66	city_Isla Fuerte	11.344361
162	city_Ushuaia	9.149872
127	city_San Andres Island	8.276633
13	city_Bariloche	7.871747
47	city_El Chalten	6.366288
114	city_Puerto Varas	6.233791
53	city_Girardot	5.810721
154	city_Tintipan Island	4.805729
150	city_Tandil	4.792583
44	city_Easter Island	4.729746

Decrease price estimation

	Feature	Coefficient
5	country_Colombia	-3.360700
107	city_Popayan	-3.623318
52	city_Filandia	-3.748641
23	city_Cafayate	-3.919432
167	city_Valparaiso	-4.341425
153	city_Tilcara	-4.356558
6	country_Peru	-4.435855
79	city_Los Penitentes	-4.734510
3	country_Bolivia	-4.838045
129	city_San Gil	-5.343304

Dorm Price Estimator

	country	city	rating	reviews	km_to_centre	days	min_dorm_price	total
991	Colombia	Medellin	9.5	20	0.5	1	12.892601	12.89

The estimated minimal amount spent on dorms for the trip is 12.89€

Dorm Price Estimator

	country	city	rating	reviews	km_to_centre	days	min_dorm_price	total
991	Colombia	Medellin	9.5	20	0.5	3	12.892601	38.67

The estimated minimal amount spent on dorms for the trip is 38.67€

Dorm Price Estimator

	country	city	rating	reviews	km_to_centre	days	min_dorm_price	total
991	Colombia	Medellin	9.5	20	0.5	3	12.892601	38.67
992	Argentina	Salta	9.0	20	3.0	5	14.866215	74.35
993	Chile	Valparaiso	8.0	5	0.8	7	11.394314	79.73

The estimated minimal amount spent on dorms for the trip is 192.75€