



Business Intelligence

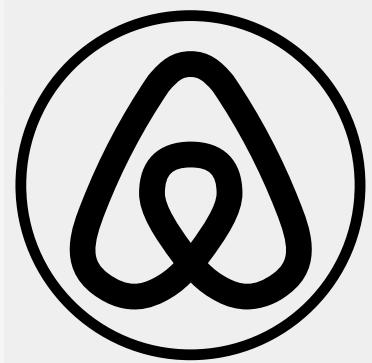
AIRBNB LISBON

Belong Anywhere

Presented by: Ricardo Santiago
Ricardo Silva



VALUE PROPOSITION



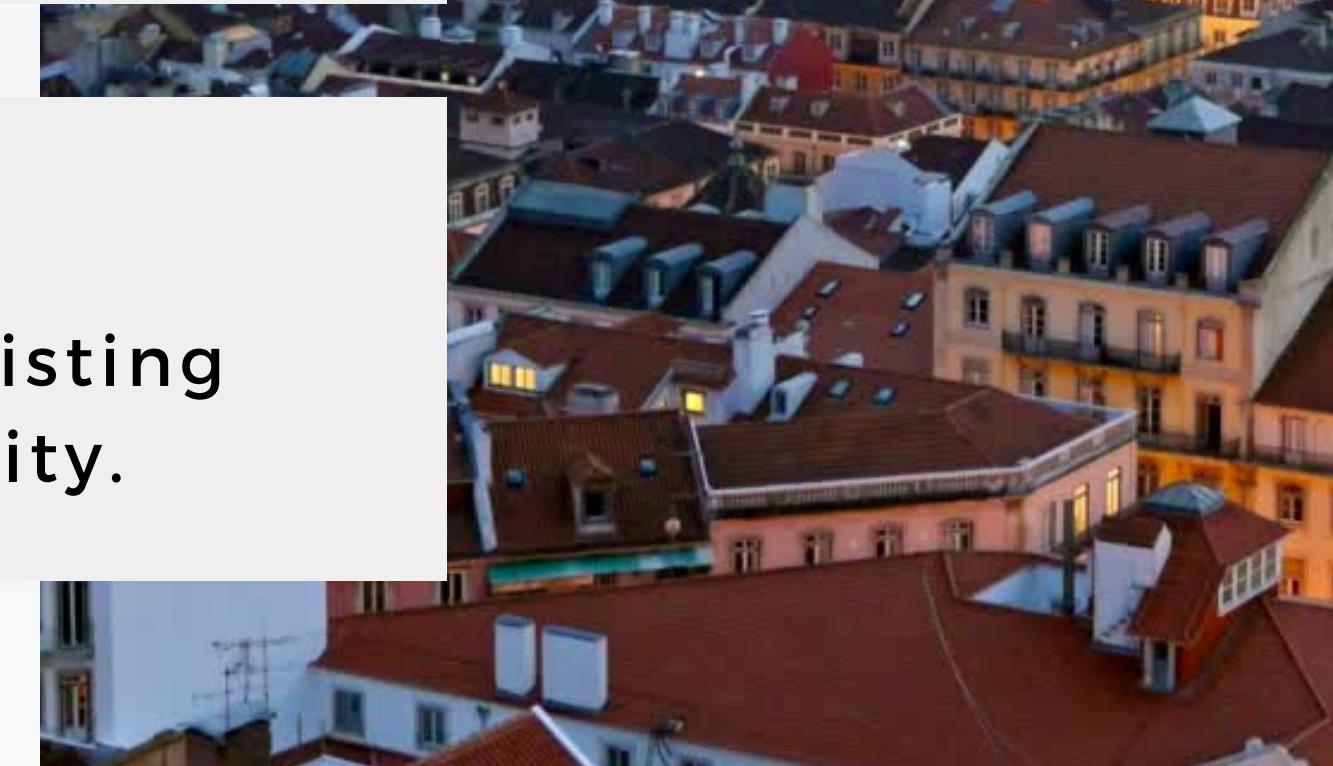
For the Airbnb:

Personalized recommendation system that provides insights on the current state and trends of the housing market.



For the Hosts:

Access to valuable insights and recommendations, enhancing their listing strategies and maximizing profitability.



Dataset Description



Inside Airbnb

Adding data to the debate

**INDEPENDENT, NON-COMMERCIAL,
OPEN SOURCE DATA TOOL**

**How is Airbnb really
being used in and affecting
your neighborhood?**

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• • • •
• • • •

X - @InsideAirbnb

Country/City	File Name	Description
Lisbon	listings.csv.gz	Detailed Listings data
Lisbon	calendar.csv.gz	Detailed Calendar Data
Lisbon	reviews.csv.gz	Detailed Review Data
Lisbon	listings.csv	Summary information and metrics for listings in Lisbon (good for visualisations).
Lisbon	reviews.csv	Summary Review data and Listing ID (to facilitate time based analytics and visualisations linked to a listing).
Lisbon	neighbourhoods.csv	Neighbourhood list for geo filter. Sourced from city or open source GIS files.
Lisbon	neighbourhoods.geojson	GeoJSON file of neighbourhoods of the city.

[show archived data](#)
(generally quarterly data for the last 12 months. For additional data, make an archived [data request](#).)

<http://insideairbnb.com/get-the-data>

Data Model for the DW

1 star, 3 dimensions:

Dim_hosts

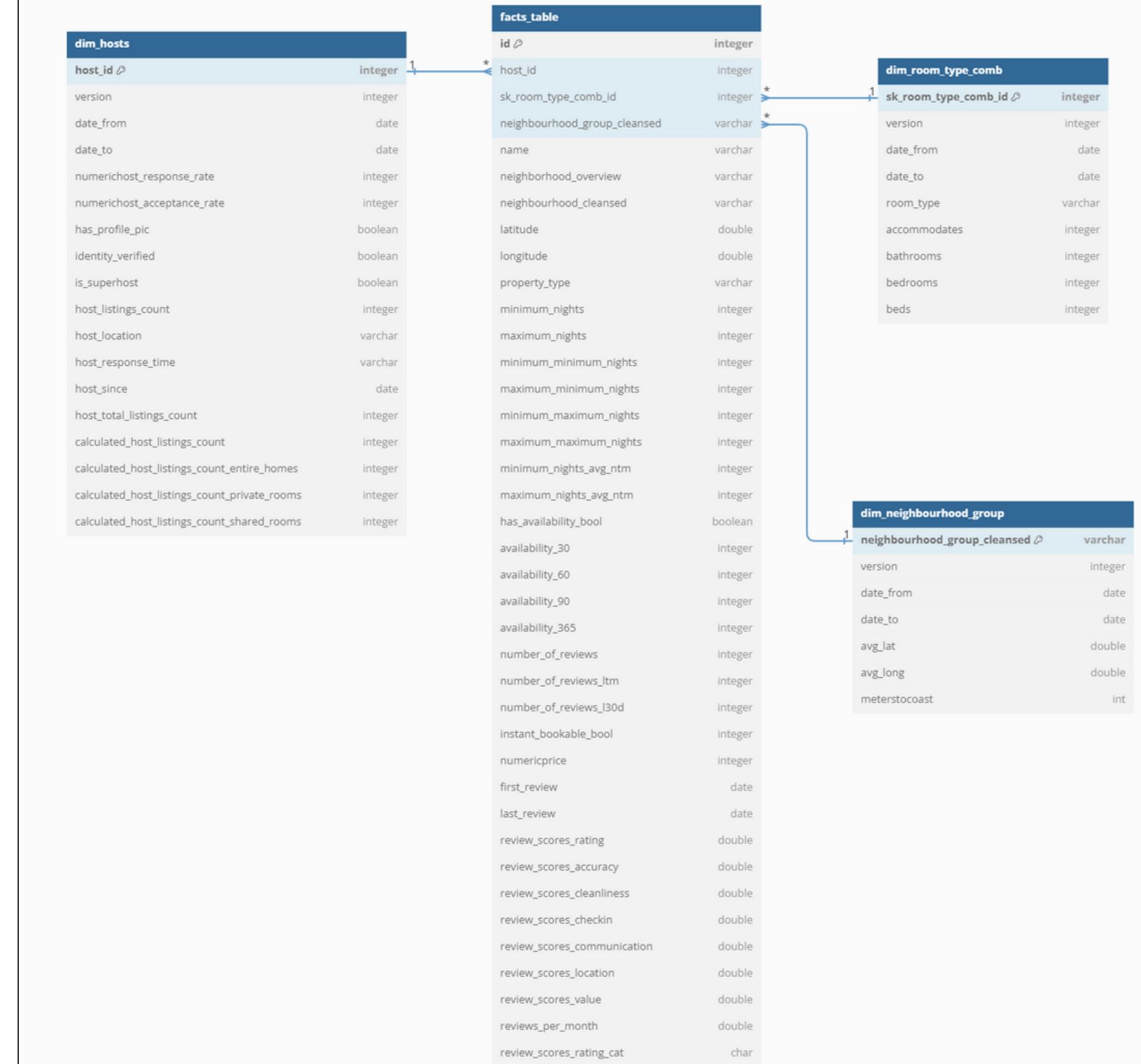
Used to characterize the hosts of the listings.

Dim_neighbourhood_group

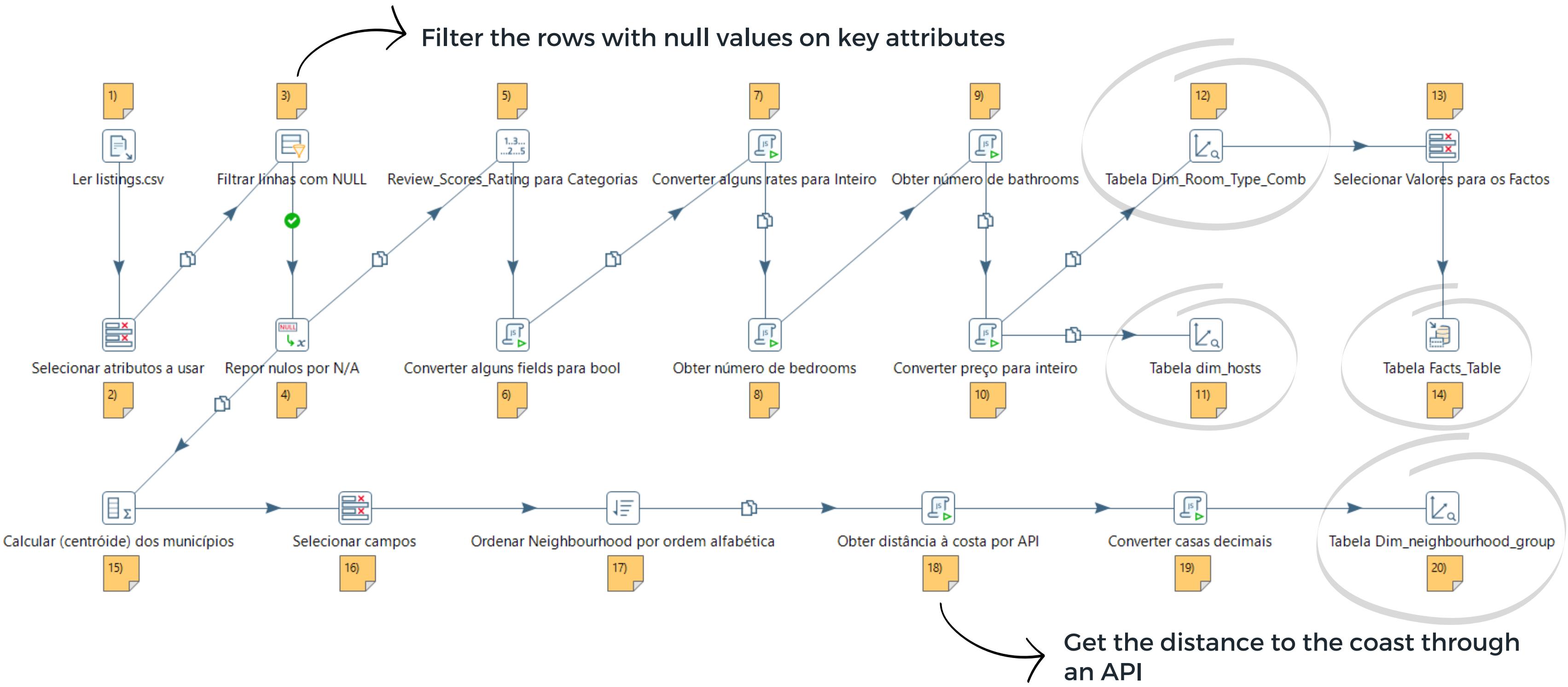
Used to characterize the neighbourhood where the listing is located.

Dim_room_type_comb

Used to characterize the type of combination related to the listing's features.

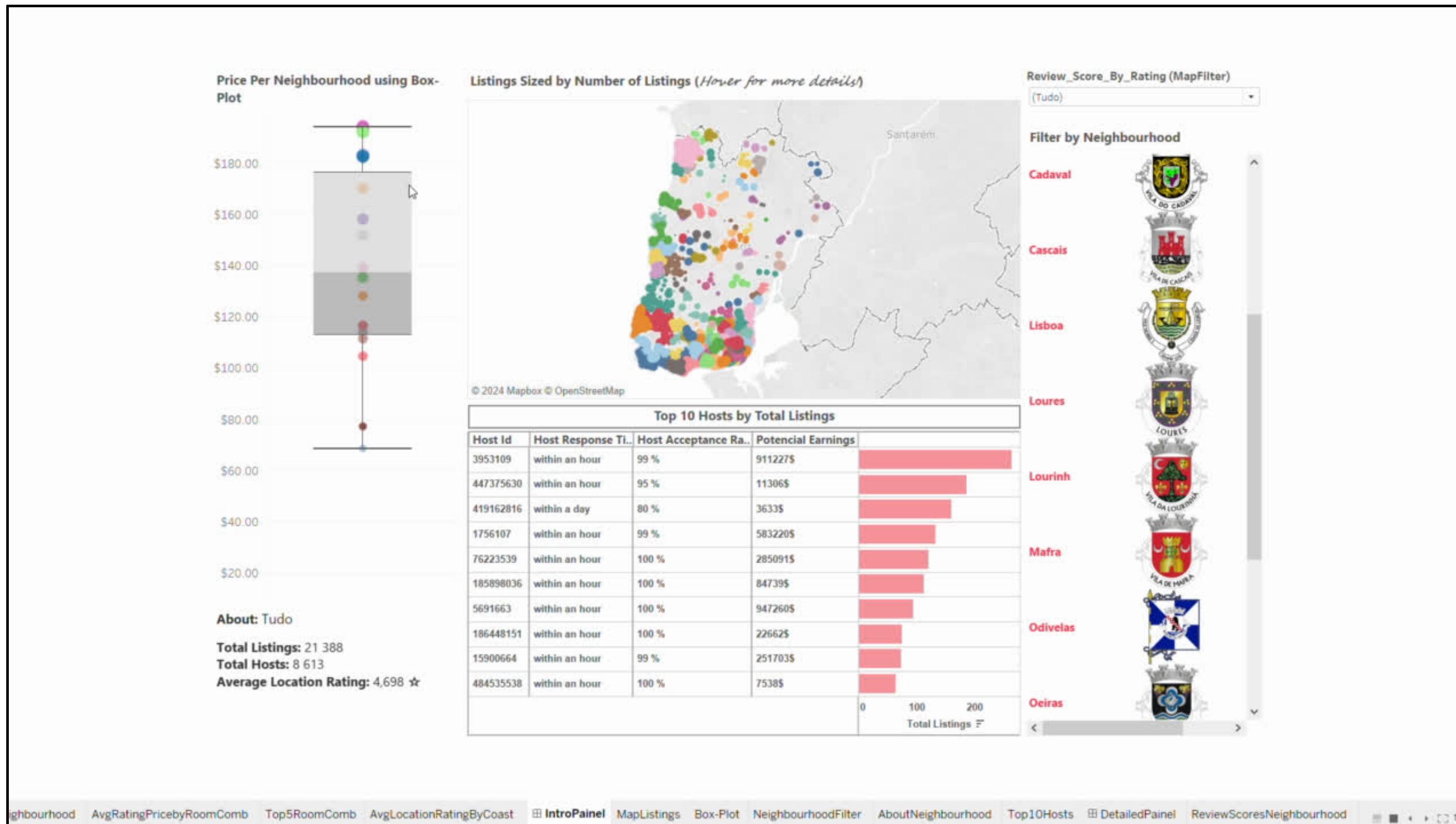


ETL Process Pentaho



Live Demo

Intro Painel



Live Demo

Detailed Painel



Average price by neighbourhood group - room type: Todo

Neighbourhood Group	Avg Price
Sintra	194,49 €
Alenquer	182,65 €
Sobral De Monte Agrao	139,33 €
Cadaval	135,35 €
Arruda Dos Vinhos	128,11 €
Azambuja	170,36 €
Cascais	192,33 €
Lisboa	116,58 €
Lores	104,50 €
Lourinh	158,39 €
Torres Vedras	114,27 €
Mafra	183,50 €
Vila Franca De Xira	152,01 €
Oeiras	111,48 €

Top 10 Listings by Average Rating x NumberOfReviews

Name	Neighbourhood	Numeric...	Rating
Boutique hotel in Lisboa	Santa Maria Maior	\$88.00	4,60 ★
Condo in Lisboa	Parque das Naes	\$29.00	4,80 ★
Guesthouse in Lisboa	Santo Antnio	\$29.00	4,50 ★
Guesthouse in Lisboa	Santo Antnio	\$34.00	4,50 ★
Guesthouse in Lisboa	Santo Antnio	\$37.00	4,50 ★
Rental unit in Lisboa	Misericrdia	\$131.00	4,90 ★
Rental unit in Moscavide	Moscavide e Portela	\$31.00	4,80 ★
Rental unit in Parede	Carcavelos e Parede	\$73.00	4,60 ★
Rental unit in Portela	Moscavide e Portela	\$38.00	4,90 ★
Rental unit in Sintra	S.Maria, S.Miguel, S.Martinho, S.Pedro P.	\$53.00	4,80 ★

Top 5 Room Type Co list

Room Type	Count
Entire home/apt	4 Accommodates
Private room	16 Accommodates
Shared room	16 Accommodates
Entire home/apt	4 Accommodates
Private room	4 Accommodates

Average Location Rating by distance do coast- Room Type: Todo



Neighbourhood Group	Avg Price
Mafra	4,77
Lisboa	4,70
Cascais	4,72
Sintra	4,68
Vila Franca De Xira	4,47
Lourinh	4,69
Oeiras	4,59
Loures	4,49
Amadora	4,44
Odivelas	4,36
Alenquer	4,71
Arruda Dos Vinhos	4,54
Torres Vedras	4,74
Azambuja	4,35
Sobral De Monte Agrao	4,64
Cadaval	4,72

Average rating and price by Neighbourhood Group filter by accommodates, bathrooms, bedrooms and beds

Neighbourhood Group ..	Avg Rating	Avg Price
Alenquer	4,80 ★	194,49 €
Amadora	4,67 ★	68,59 €
Arruda Dos Vinhos	4,89 ★	194,49 €
Azambuja	4,50 ★	139,33 €
Cadaval	4,88 ★	135,35 €
Cascais	4,71 ★	182,65 €
Lisboa	4,61 ★	116,58 €
Loures	4,66 ★	104,50 €
Lourinh	4,77 ★	158,39 €
Mafra	4,77 ★	183,50 €
Odivelas	4,58 ★	152,01 €
Oeiras	4,63 ★	111,48 €
Sintra	4,70 ★	194,49 €
Sobral De Monte Agrao	4,70 ★	139,33 €
Torres Vedras	4,82 ★	114,27 €
Vila Franca De Xira	4,44 ★	152,01 €

Review Scores by Neighbourhood- Room Type

Neigh	Média de Review Scor..	Média de Review Scor..	Média de Review Scor..
Arrocha	4,94 ★	4,94 ★	4,96 ★
Alenquer	4,90 ★	4,89 ★	4,93 ★
Torres Vedras	4,90 ★	4,78 ★	4,88 ★
Lourinh	4,84 ★	4,77 ★	4,83 ★
Mafra	4,85 ★	4,75 ★	4,85 ★
Alenquer	4,88 ★	4,82 ★	4,85 ★
Amadora	4,80 ★	4,71 ★	4,84 ★
Sintra	4,79 ★	4,73 ★	4,81 ★
Cascais	4,82 ★	4,73 ★	4,83 ★
Loures	4,75 ★	4,71 ★	4,79 ★
Sobral De Monte Agrao	4,72 ★	4,70 ★	4,90 ★
Oeiras	4,74 ★	4,65 ★	4,77 ★
Azambuja	4,51 ★	4,68 ★	4,59 ★
Lisboa	4,74 ★	4,65 ★	4,75 ★
Odivelas	4,73 ★	4,64 ★	4,75 ★
Vila Franca De Xira	4,51 ★	4,61 ★	4,65 ★

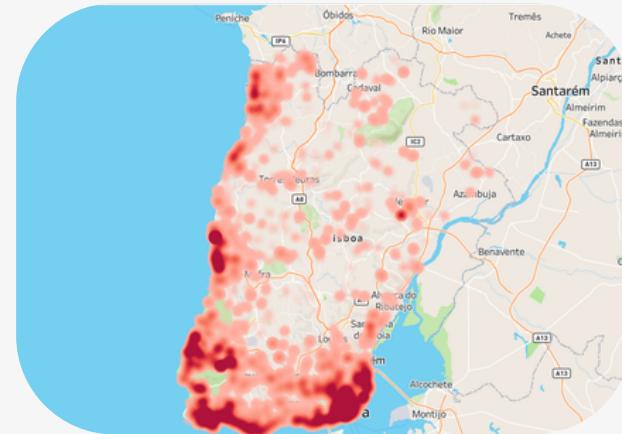
[Neighbourhood](#) [AvgRatingPricebyRoomComb](#) [Top5RoomComb](#) [AvgLocationRatingByCoast](#) [IntroPainel](#) [MapListings](#) [Box-Plot](#) [NeighbourhoodFilter](#) [AboutNeighbourhood](#) [Top10Hosts](#) [DetailedPainel](#) [ReviewScoresNeighbourhood](#)

VALUABLE INSIGHTS



Where are the majority of listings located on the platform?

In the coastal area of the city, specifically in the southwest area of Lisbon.



What is the neighbourhood with the lowest average accommodation price? And the highest?

Lowest average price: Amadora.
Highest price: Sintra.
The average price differs by \$80.9 in these neighbourhoods.



How does distance to coast affects price and review score of a location?

Although there is no direct correlation, locations closer to the coast such as Mafra, Sintra, and Cascais have a higher average price per night and receive higher review scores (at least 4.6).



What are the most successful listings in the city on the platform?

Our solution displays a Top 10 list of Listings by Average Rating multiplied by Number of Reviews. Each entry provides detailed characteristics about the listings.

Top 10 Listings by Average Rating x NumberOfReviews		
Neighbourhood	Numberic:	
Neigh in Lisboa - 4.57 - 1	\$88.00	4.60 ♂
o in Lisboa - 1 bedroom - 1	\$29.00	4.80 ♀
I shared bath	\$29.00	4.50 ♂
use in Lisboa - 1 bedroom - 1	\$34.00	4.50 ♀
use in Lisboa - 1 bedroom - 1	\$37.00	4.50 ♀
use in Lisboa - 1 bedroom - 1	\$131.00	4.90 ♂
use in Lisboa - 1 bedroom - 2	\$31.00	4.80 ♀
use in Lisboa - 1 bedroom - 2	\$73.00	4.60 ♂
use in Lisboa - 1 bedroom - 1	\$38.00	4.90 ♂
use in Lisboa - 1 bedroom - 1	\$53.00	4.80 ♀

WHAT'S NEXT?



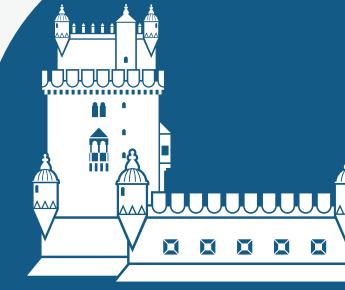
Introduce data from 2019 through 2023 to provide better insight into market trends and aid in making more accurate predictions.

TIME DIMENSION



Incorporate new cities into the dataset to create comparison maps across different cities and gain a more holistic view.

NEW CITIES



Introduce distance between locations and national monuments to understand how it affects ratings and prices.

NATIONAL MONUMENTS

AIRBNB LISBON

Belong Anywhere

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Q&A

