



Mini Project 1: Airbnb Amsterdam

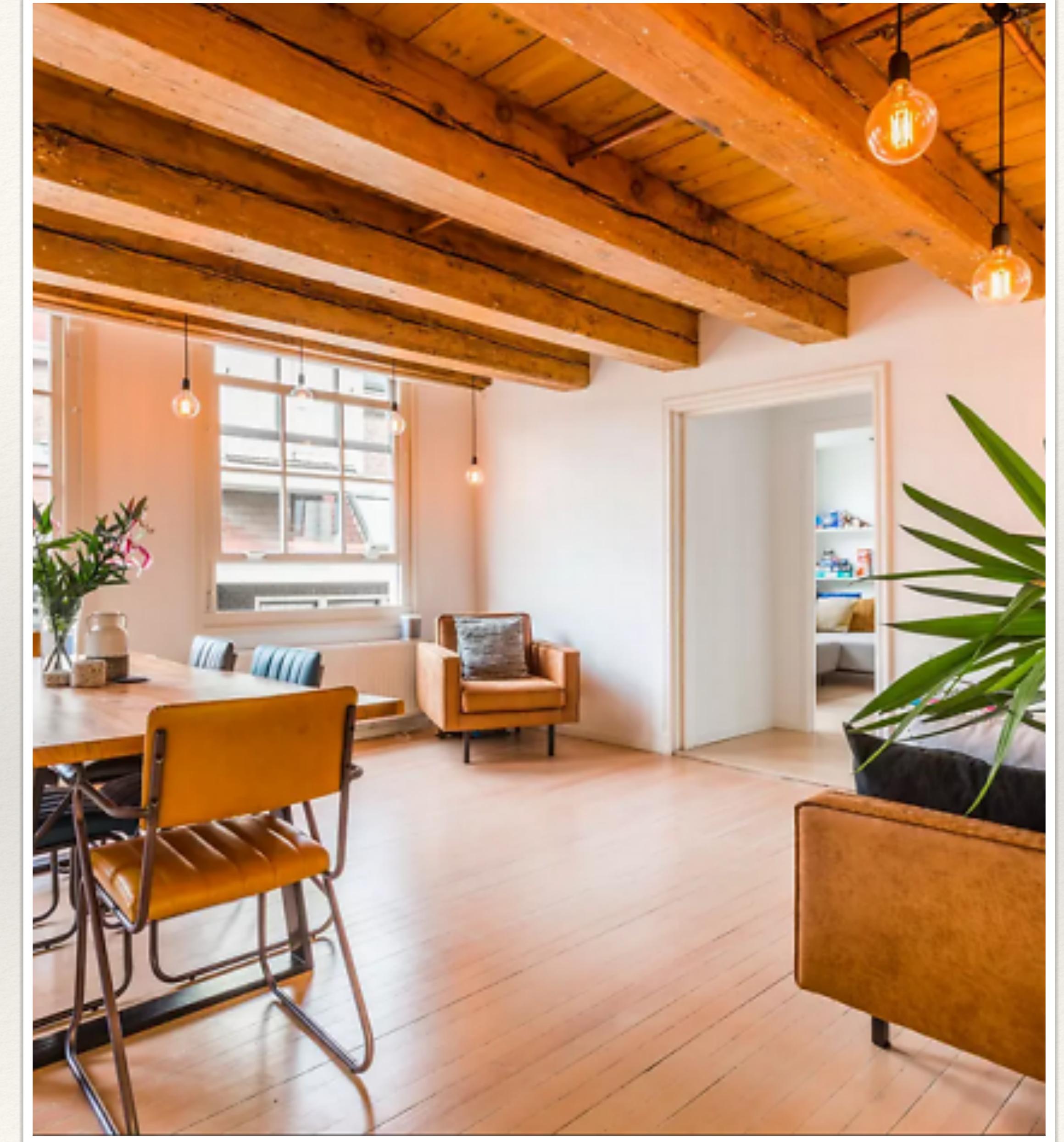


Johan Ng

Business Needs

Questions to ask

- ❖ Is there a **market potential** for investing in an AirBnB in Amsterdam?
- ❖ If so,
 - ❖ Which neighbourhood?
 - ❖ What property type?



Source: timeout.com

Assumptions

- ❖ Price is fixed no matter the amount of guests staying
- ❖ Booking is always for minimum number of nights allowed
- ❖ Only half of the bookings generate a review
- ❖ Based recommendations purely on revenue



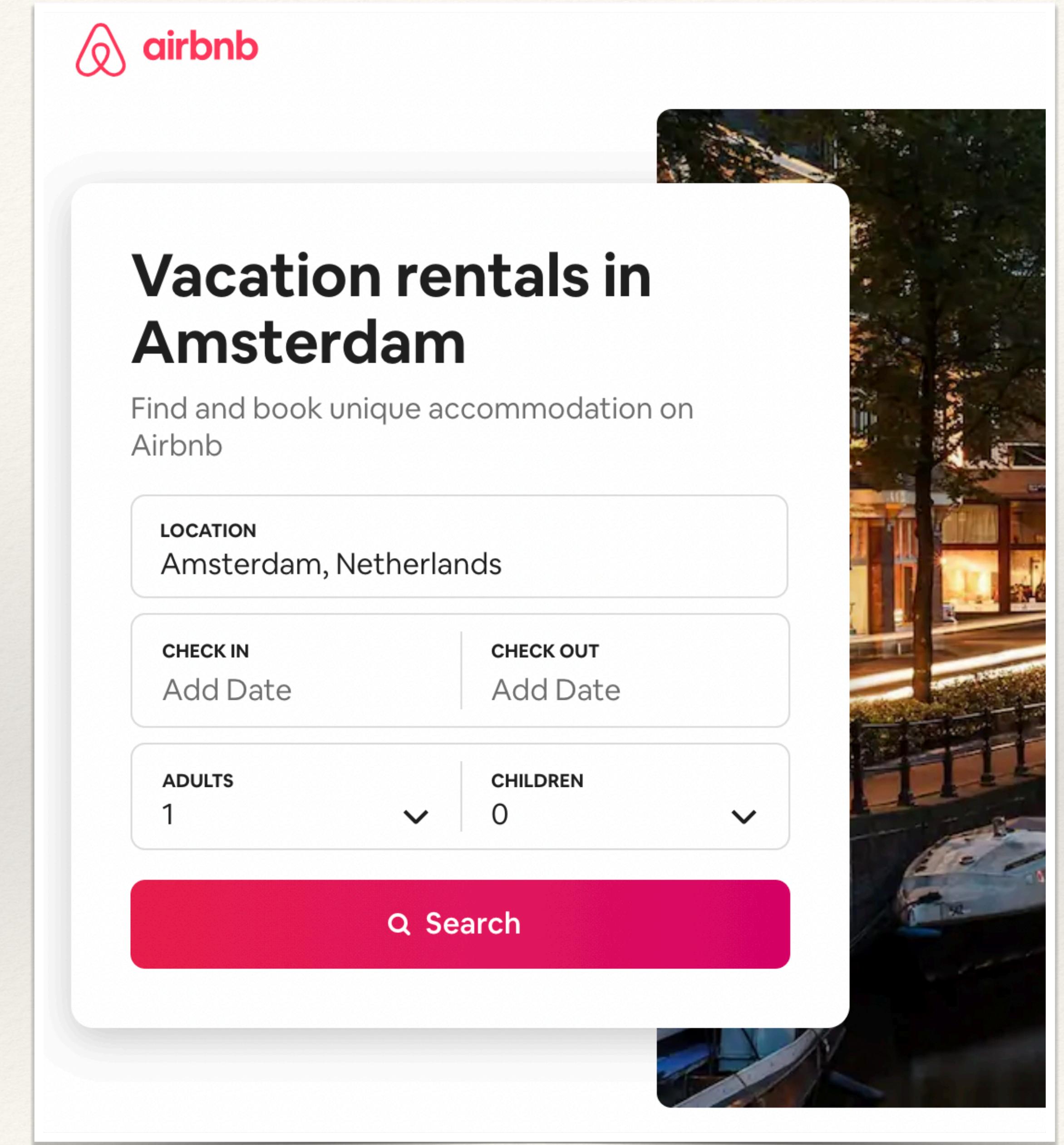
Source: thebrokebackpacker.com

Dataset and Cleaning the Data

Dataset

7833 Listings, 33 Columns

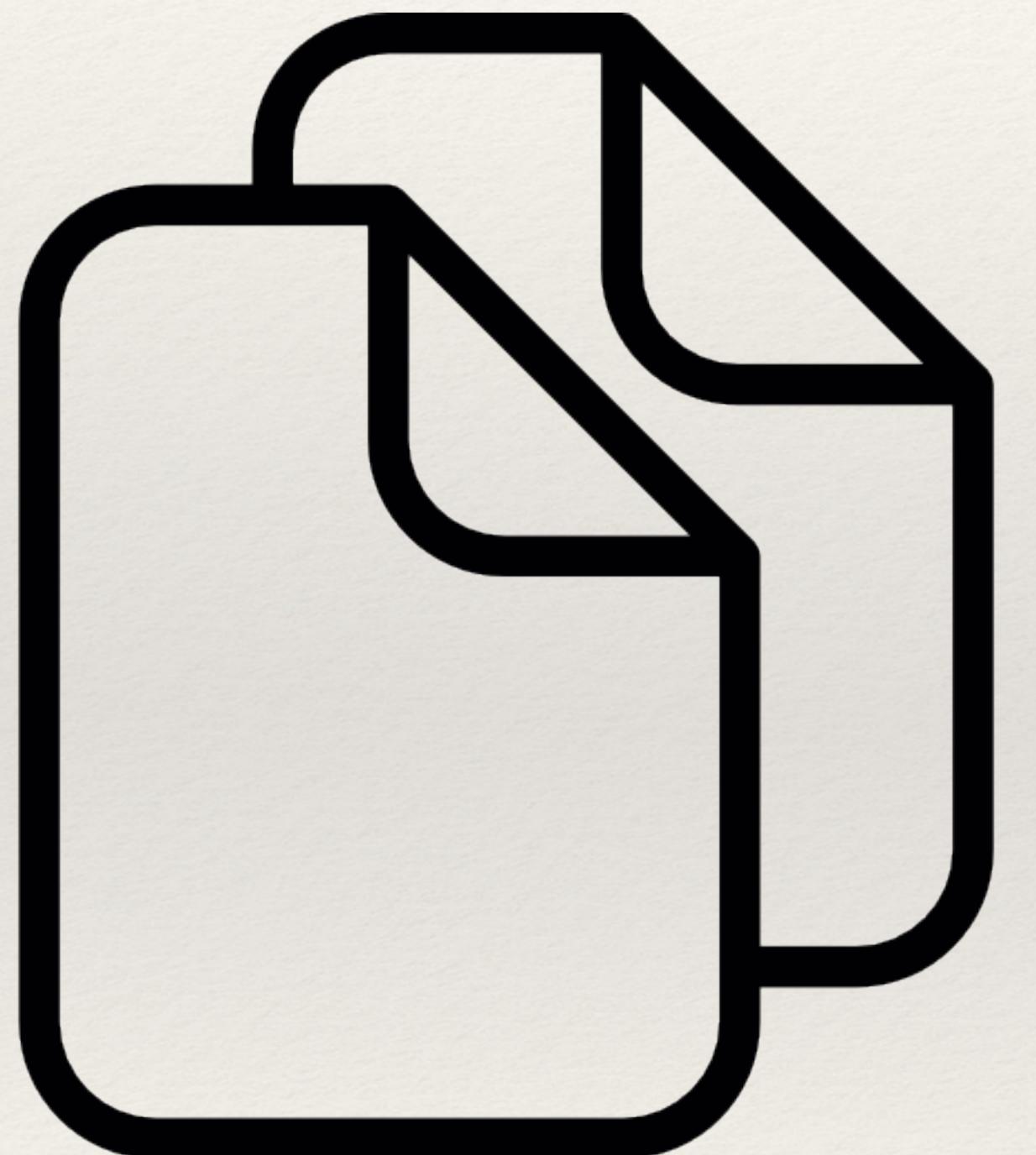
- ❖ host_id
- ❖ host_name
- ❖ neighbourhood_cleansed
- ❖ property_type
- ❖ price
- ❖ minimum_nights
- ❖ number_of_reviews
- ❖ review_scores_rating
- ❖ no_of_stays (NEW) ($\text{number_of_reviews} * 2$)
- ❖ est_total_revenue (NEW) ($\text{price} * \text{minimum_nights} * \text{no_of_stays}$)



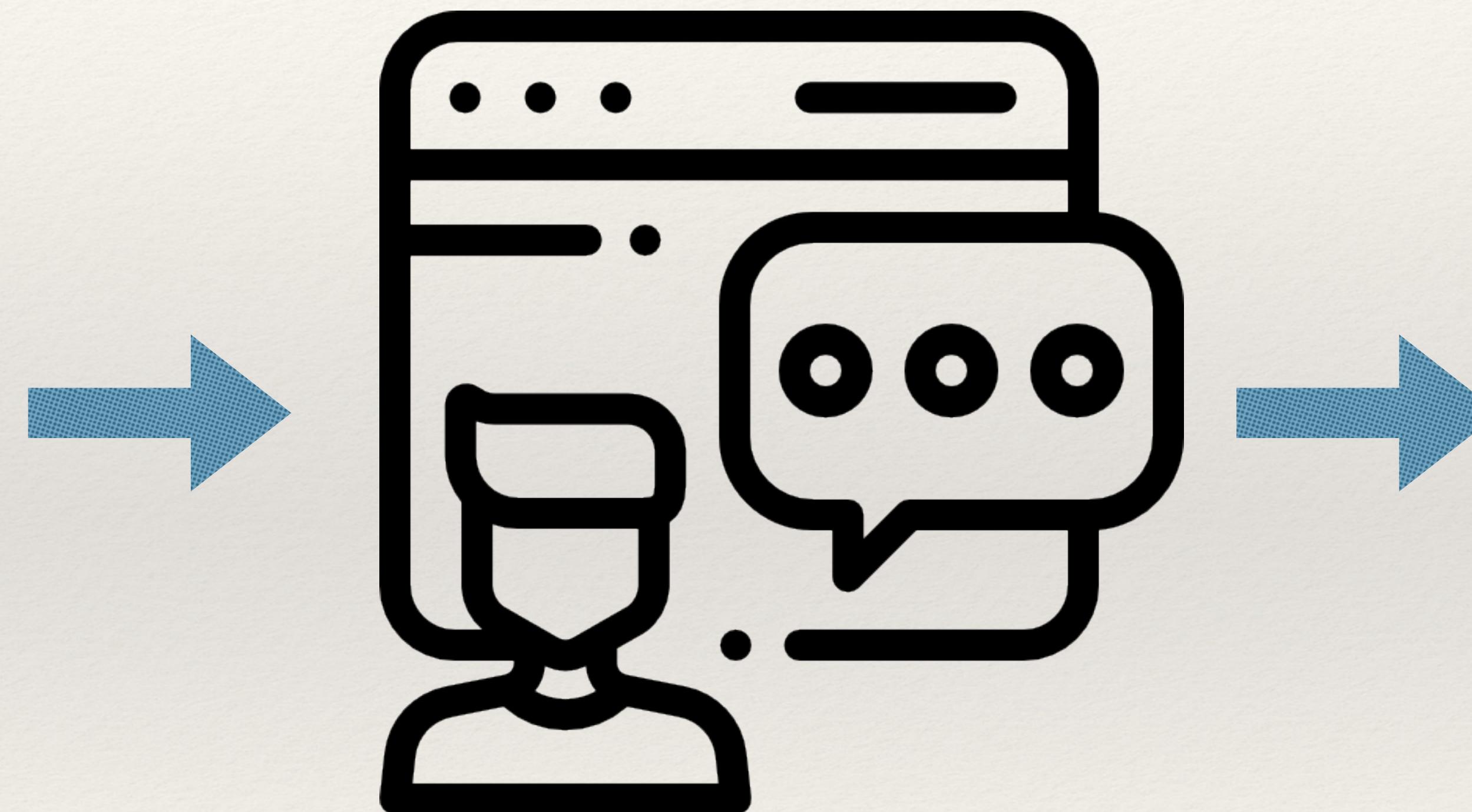
The screenshot shows the Airbnb search interface for vacation rentals in Amsterdam. The page title is "Vacation rentals in Amsterdam". Below it, a sub-instruction reads "Find and book unique accommodation on Airbnb". The search form includes fields for "LOCATION" (set to "Amsterdam, Netherlands"), "CHECK IN" (button labeled "Add Date"), "CHECK OUT" (button labeled "Add Date"), "ADULTS" (set to "1" with a dropdown arrow), and "CHILDREN" (set to "0" with a dropdown arrow). A large red "Search" button with a magnifying glass icon is at the bottom. To the right of the form, there is a vertical image of a canal scene in Amsterdam.

Source: airbnb.com

Cleaning the Data



Remove duplicate listings based on
“Id” Column

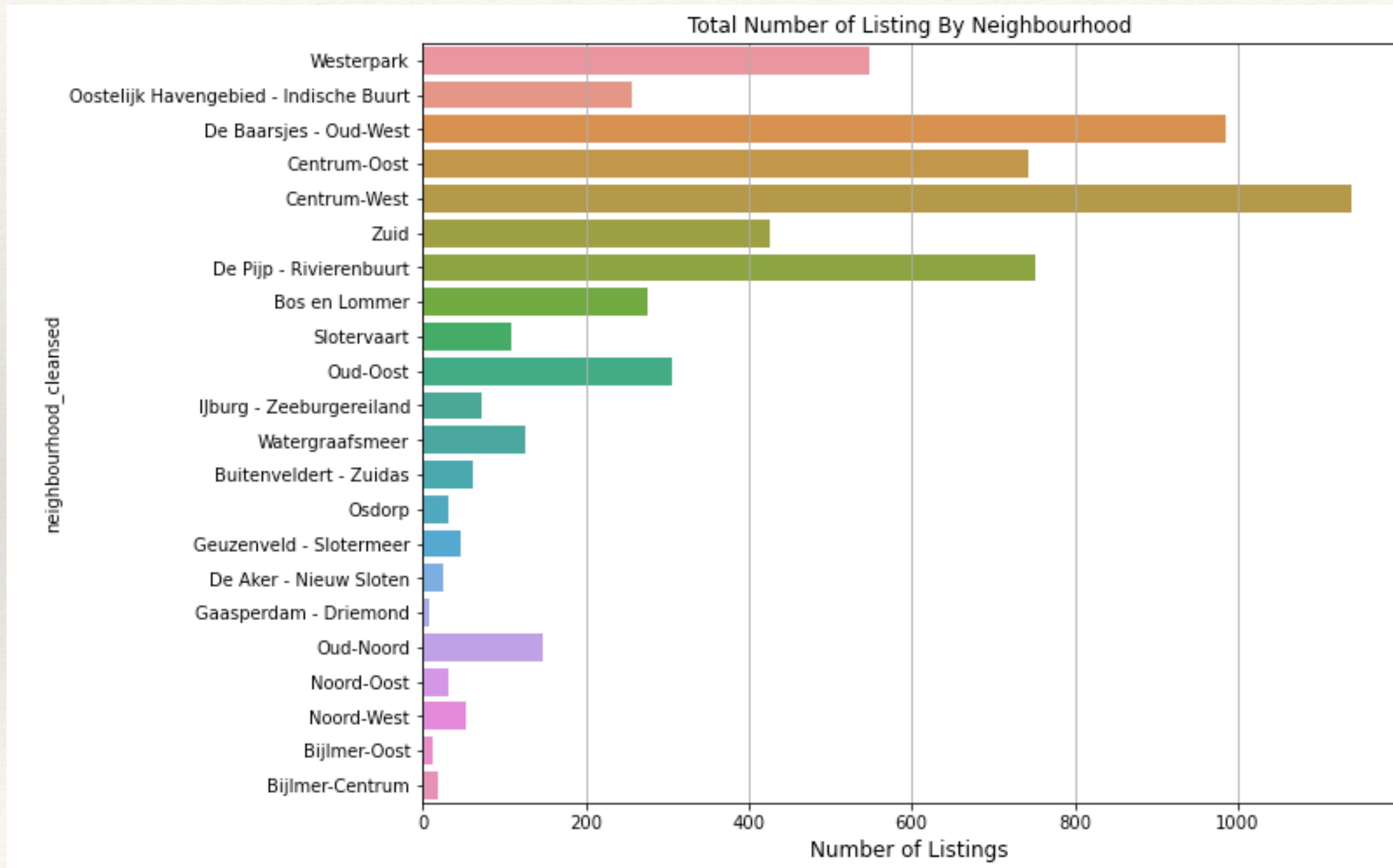


Fill all values of review_scores_rating
with 0 and remove all listings with 0
reviews

6175 Listings

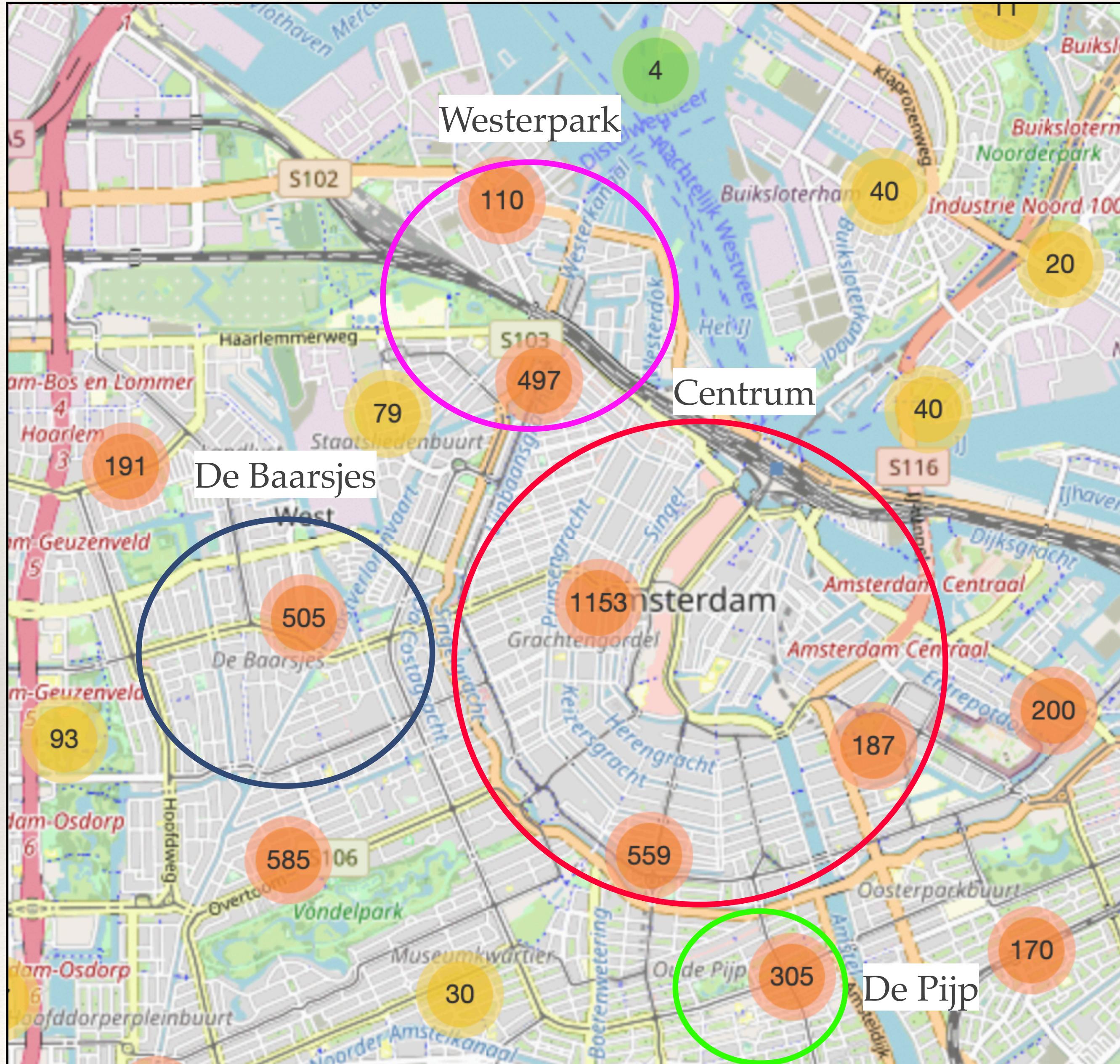
Exploring the Data

Total Listings by Neighbourhood



Top 5 Neighbourhoods

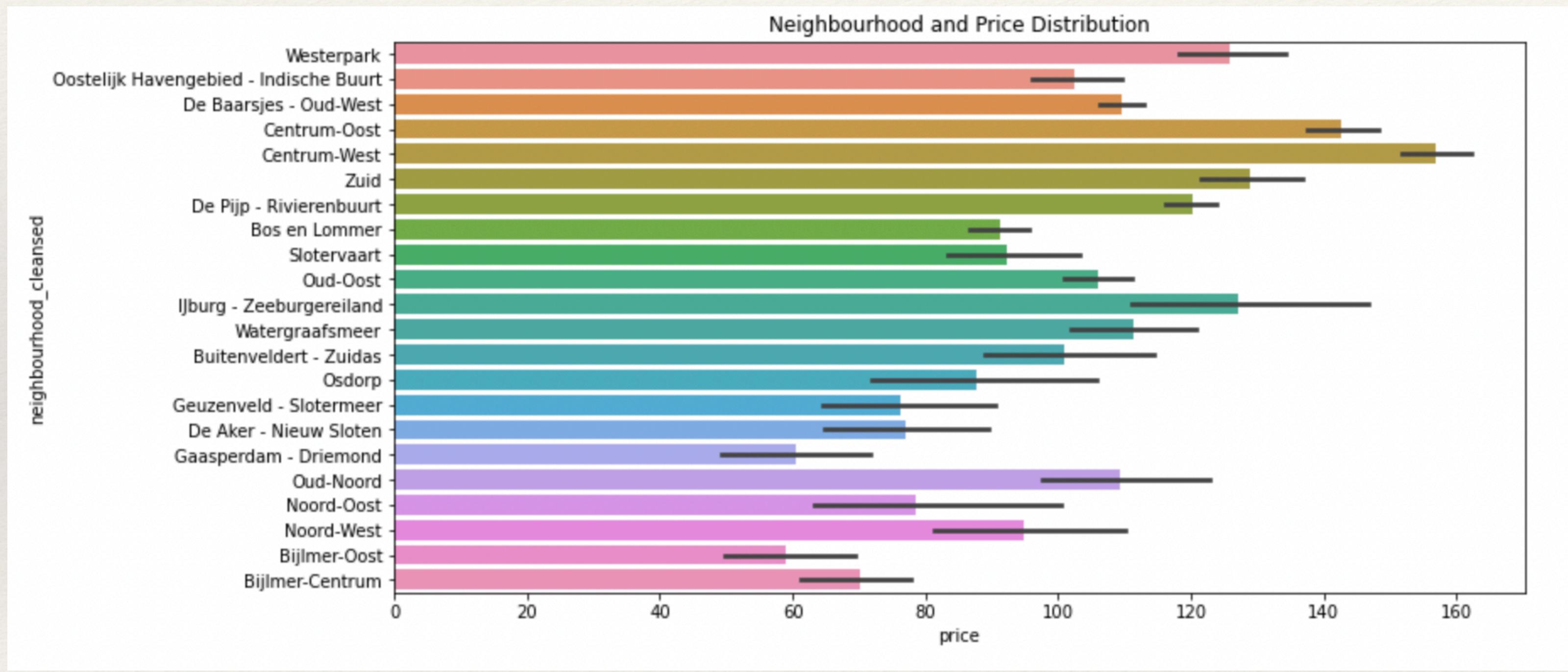
- 1) **Centrum-West** (1138 listings)
- 2) **De Baarsjes - Oud-West** (985 listings)
- 3) **De Pijp - Rivierenbuurt** (751 listings)
- 4) **Centrum-Oost** (743 Listings)
- 5) **Westerpark** (548 Listings)



Top 5 Neighbourhoods by listings

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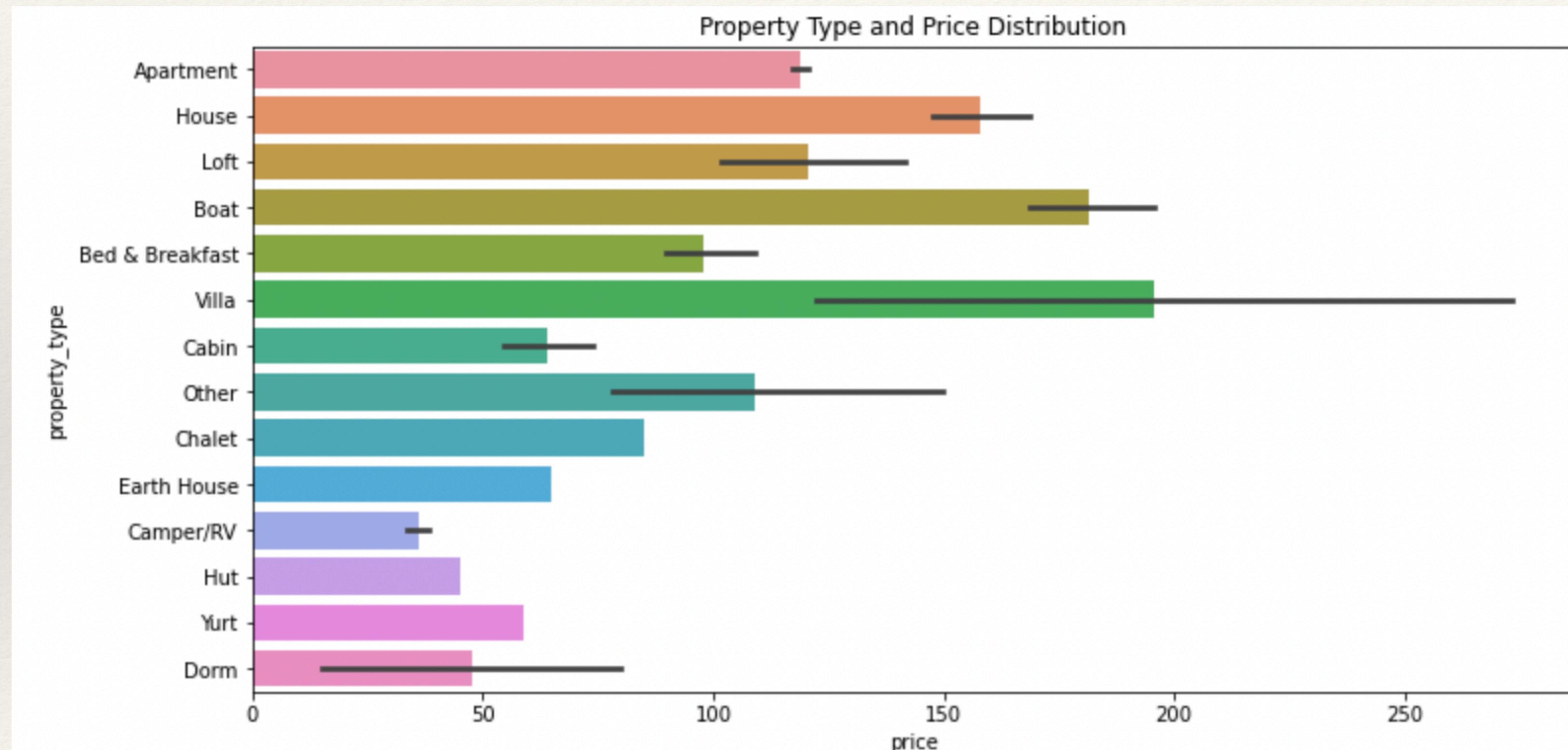
Neighbourhood and Price Distribution



Top 5 Neighbourhoods by price

- 1) **Centrum-West** (156.76 Euros)
- 2) **Centrum-Oost** (142.69 Euros)
- 3) **Zuid** (128.75 Euros)
- 4) **IJburg - Zeeburgereiland** (127.19 Euros)
- 5) **Westerpark** (125.90 Euros)

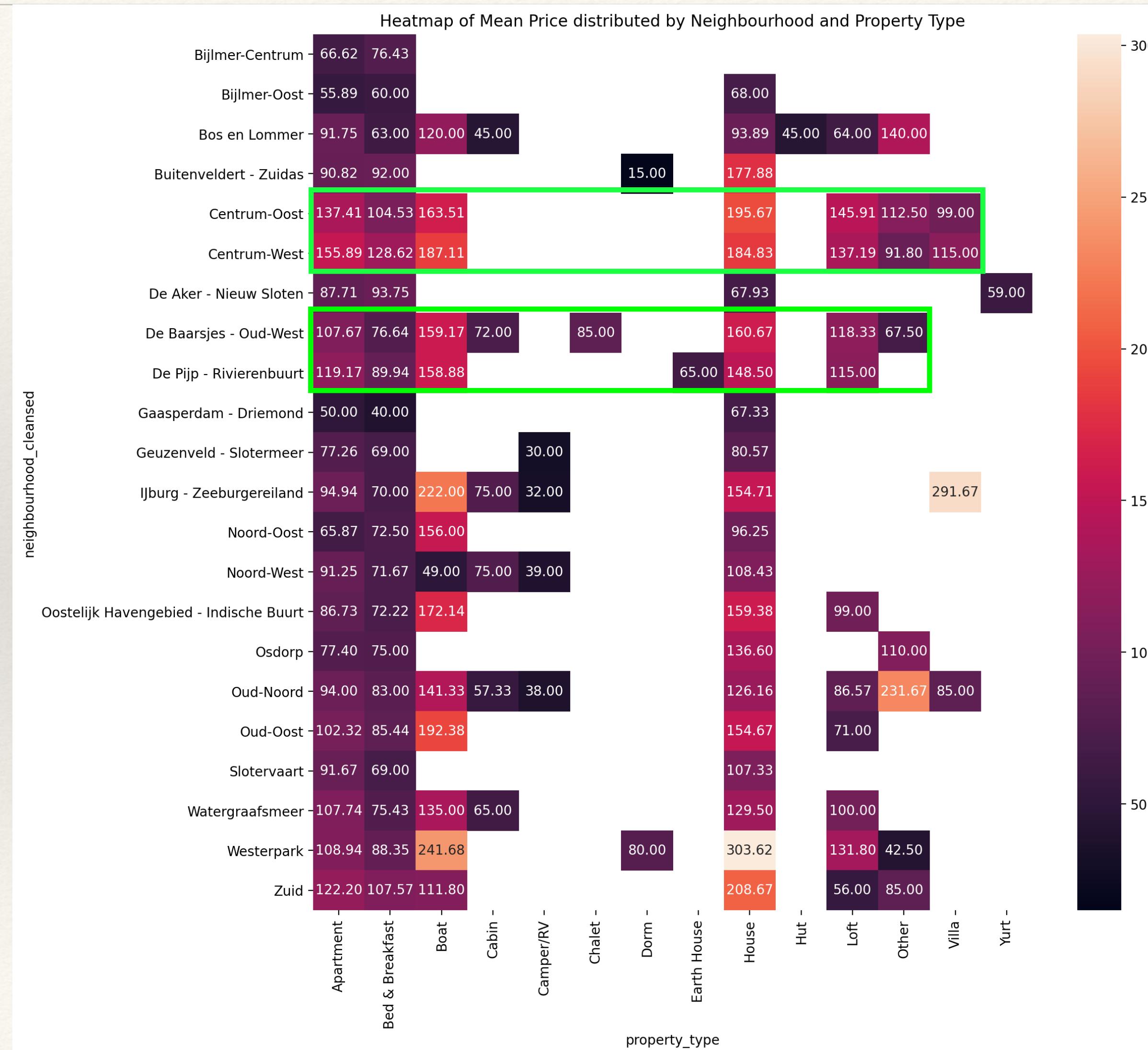
Property and Price Distribution



Top 5 Property Types by price

- 1) Villa (195.67 Euros)
- 2) Boat (181.26 Euros)
- 3) House (157.83 Euros)
- 4) Loft (120.57 Euros)
- 5) Apartment (119.05 Euros)

Heat map of Average Price



Top 10 Listings sorted by Revenue

host_id	host_name	neighbourhood_cleansed	property_type	room_type	accommodates	price	minimum_nights	number_of_reviews	review_scores_rating	no_of_stays	est_total_revenue	
1312	2314737	Daan	Centrum-West	House	Entire home/apt	4	180	7	180	97.0	360	453,600
901	1532319	Anand	Centrum-Oost	Apartment	Entire home/apt	2	123	19	50	97.0	100	223,700
724	1294098	Fernando	Centrum-West	House	Entire home/apt	4	230	7	53	99.0	106	170,660
1332	2345144	Maurizio	Centrum-West	Apartment	Entire home/apt	4	110	15	48	98.0	96	158,400
977	1672823	Ester	De Pijp - Rivierenbuurt	Apartment	Entire home/apt	4	141	2	229	99.0	458	129,156
572	965667	Sharon	De Baarsjes - Oud-West	Apartment	Entire home/apt	6	240	3	89	97.0	178	128,160
192	276068	The One Roomed Guesthouse	Centrum-West	Bed & Breakfast	Entire home/apt	4	119	3	174	94.0	348	124,236
435	680070	Hubert	Centrum-West	House	Entire home/apt	4	220	3	91	99.0	182	120,120
102	187580	Monique	Centrum-West	Bed & Breakfast	Entire home/apt	2	139	2	215	97.0	430	119,540
1180	2063612	Jan	Centrum-Oost	Apartment	Entire home/apt	4	299	3	64	98.0	128	114,816

Exploring the Data

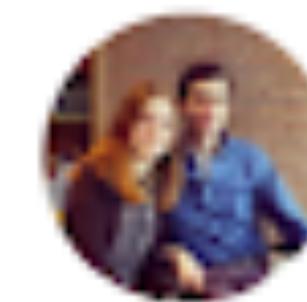
Reviews Analysis

Total Number of Listings: 6175

- ❖ **review_scores_rating column**
- ❖ **Average rating:** 92.21

334 Reviews ★★★★★

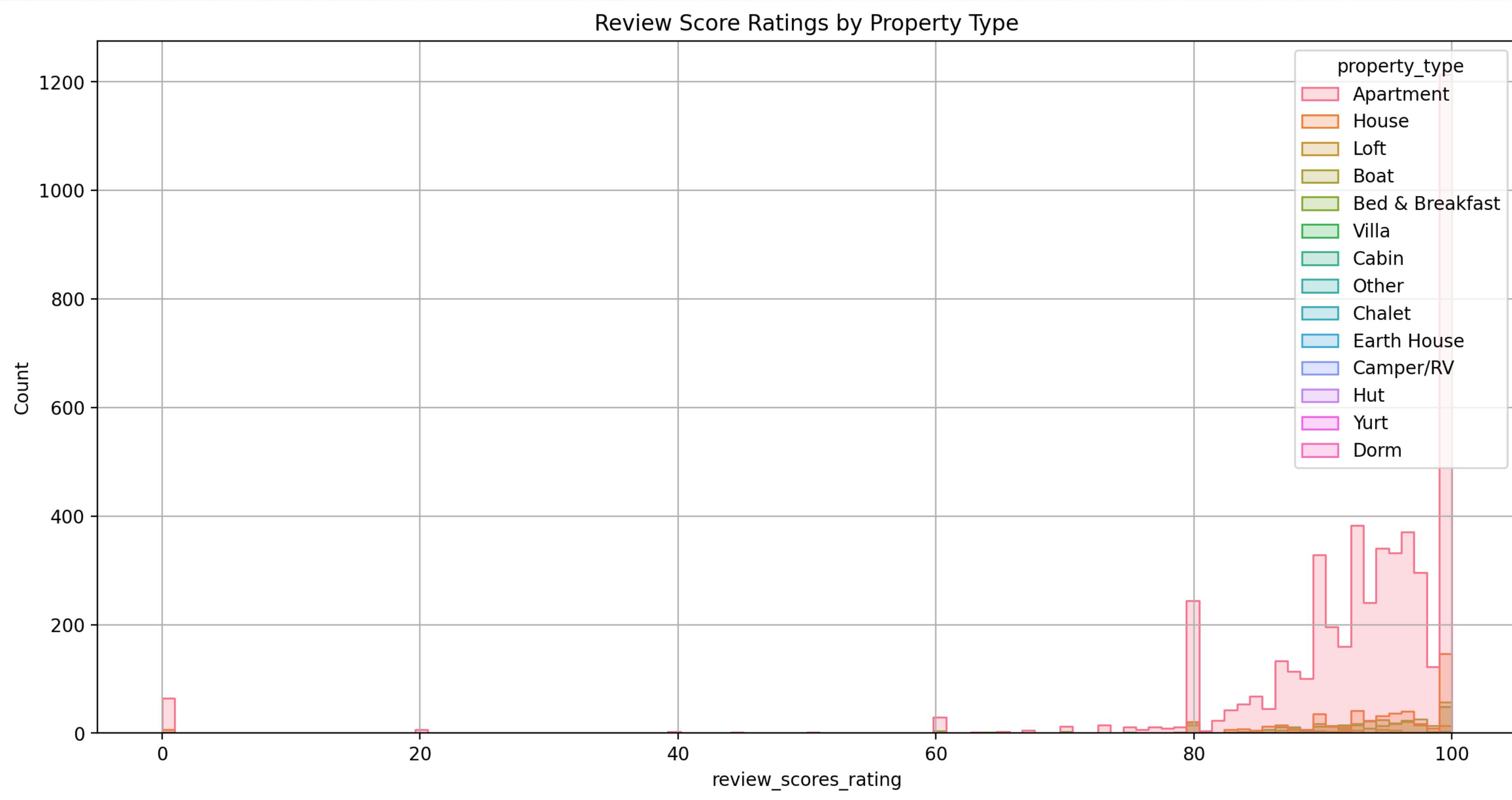
Accuracy	★★★★★	Lo
Communication	★★★★★	Ch
Cleanliness	★★★★★	Va



Pascal
August 2017

Everything was perfect and as described. Very clean, comfortable bed, spacious bedroom, good little breakfast, nice host. What are you waiting for?

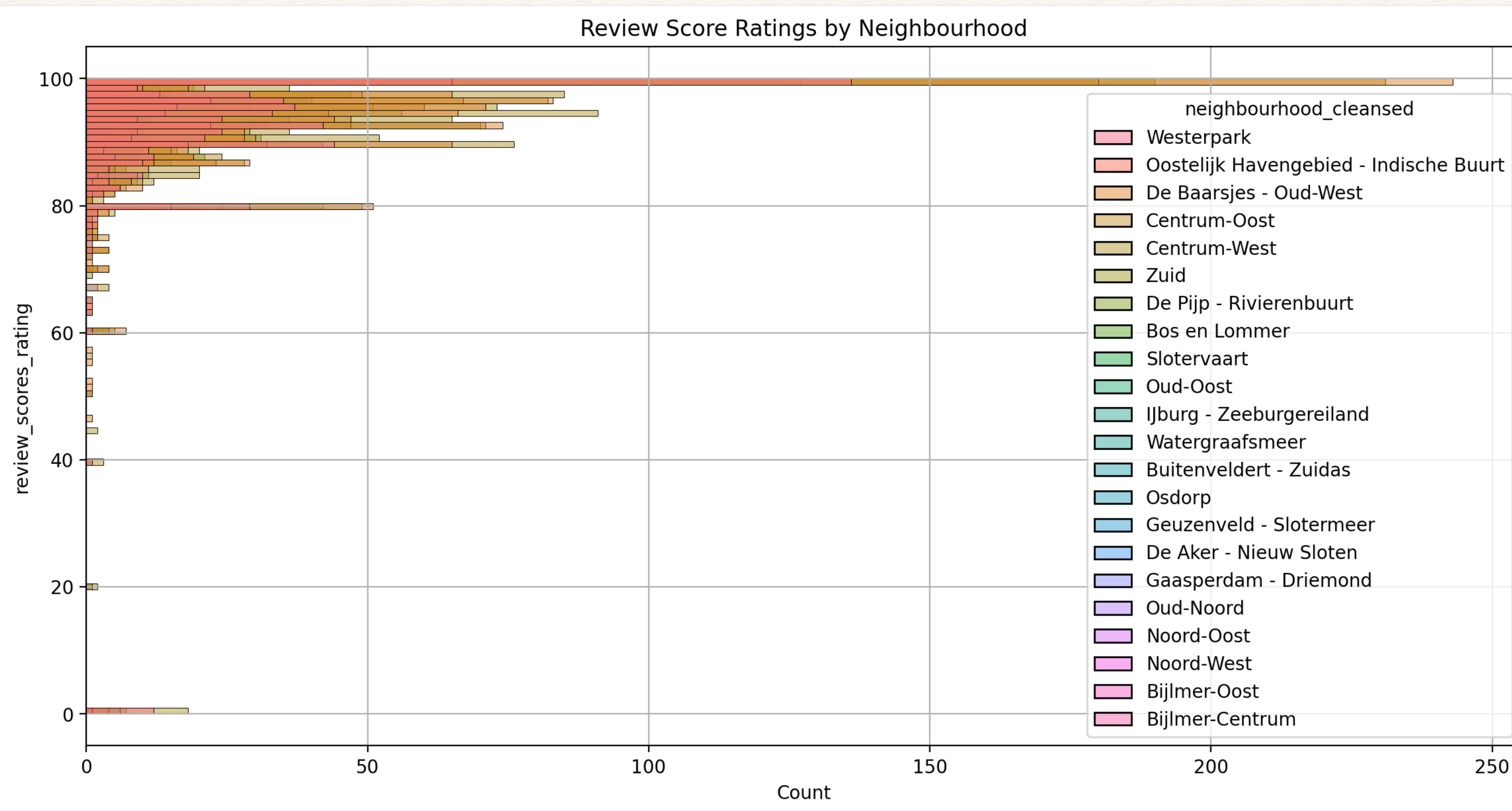
Review Scores and Property Type



Findings:

- ❖ **Apartment has more positive reviews (81.2% of the listings) with average review score of 92.20**
- ❖ **Boats (4.29% of the listings) had a higher average review score of 93.69**

Review Scores and Neighbourhood



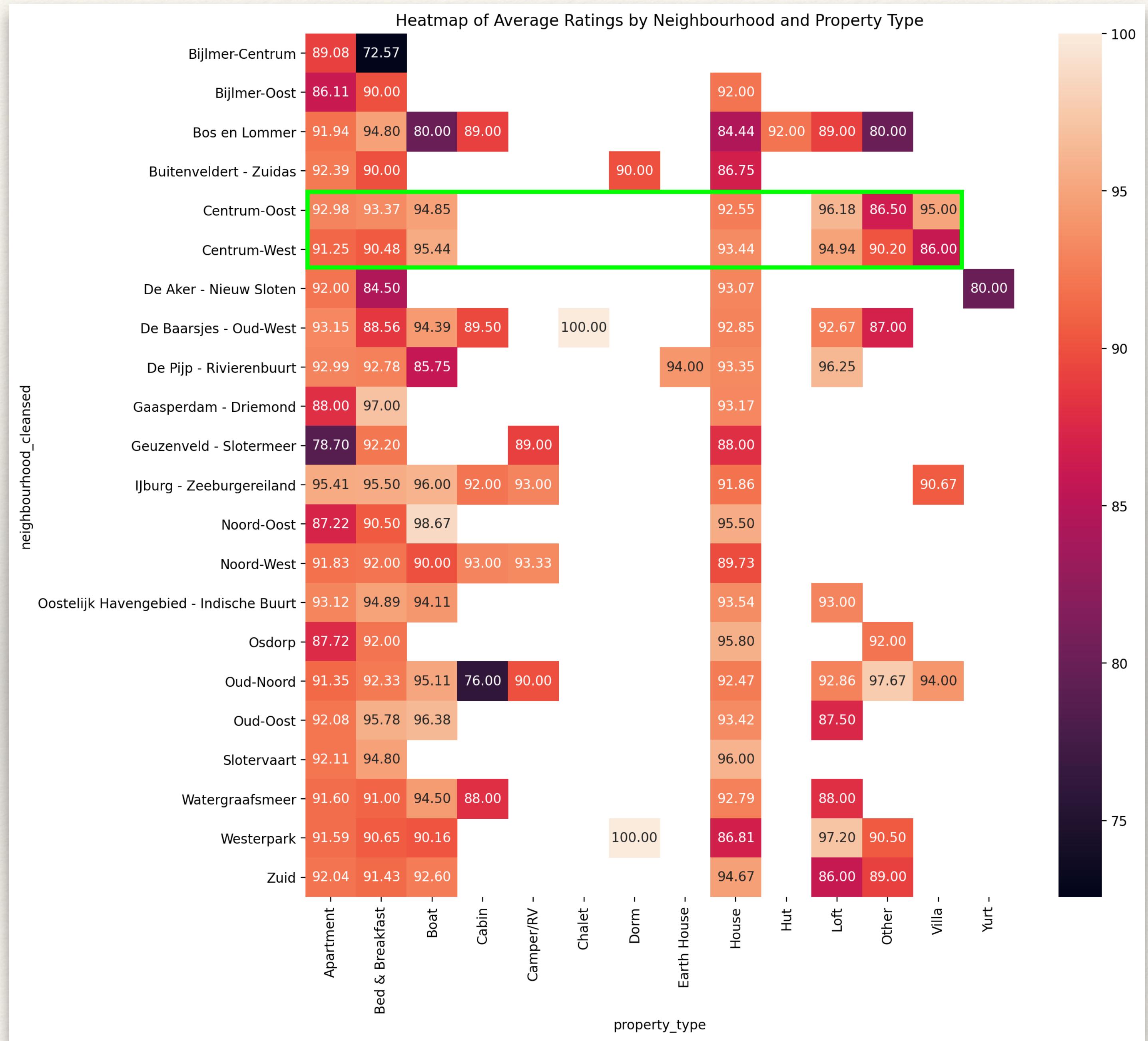
Review Scores and Neighbourhood

Top 5 Neighbourhoods based on highest average review scores

- 1) IJburg - Zeeburgereiland - 95.10
- 2) Zuid - 94.72
- 3) Centrum- Oost - 94.62
- 4) Slotervaart - 94.58
- 5) De Baarsjes - Oud-West - 94.25

Top 5 Neighbourhoods based on Listings

- 1) Centrum-West - 94.02
- 2) De Baarsjes - Oud-West - 94.25
- 3) De Pijp - Rivierenbuurt - 94.10
- 4) Centrum-Oost - 94.62
- 5) Westerpark - 93.99



Recommendations

Recommendation #1

- ❖ Invest in an AirBnB in **Centrum - West**
- ❖ **Generates most revenue** as seen in Top 10 listings
- ❖ **Most Popular** neighbourhood with good average review scores
- ❖ Property Type to Invest: **Boat**
 - ❖ 3rd Highest review score of **95.44**



Recommendation #2

- ❖ Invest in an AirBnB in **Centrum - Oost**
- ❖ Higher Average Review Scores across most property types as compared to Centrum West
- ❖ Property type to invest: **Apartment/Bed & Breakfast**



End of Presentation

