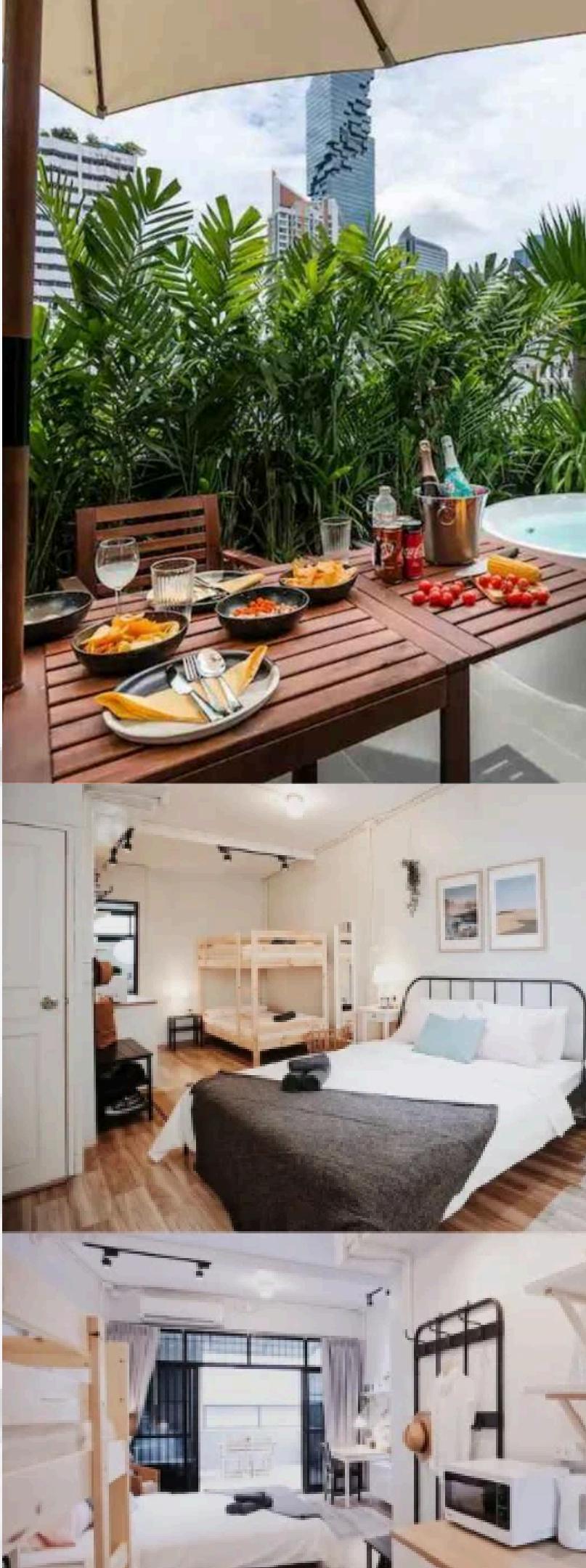
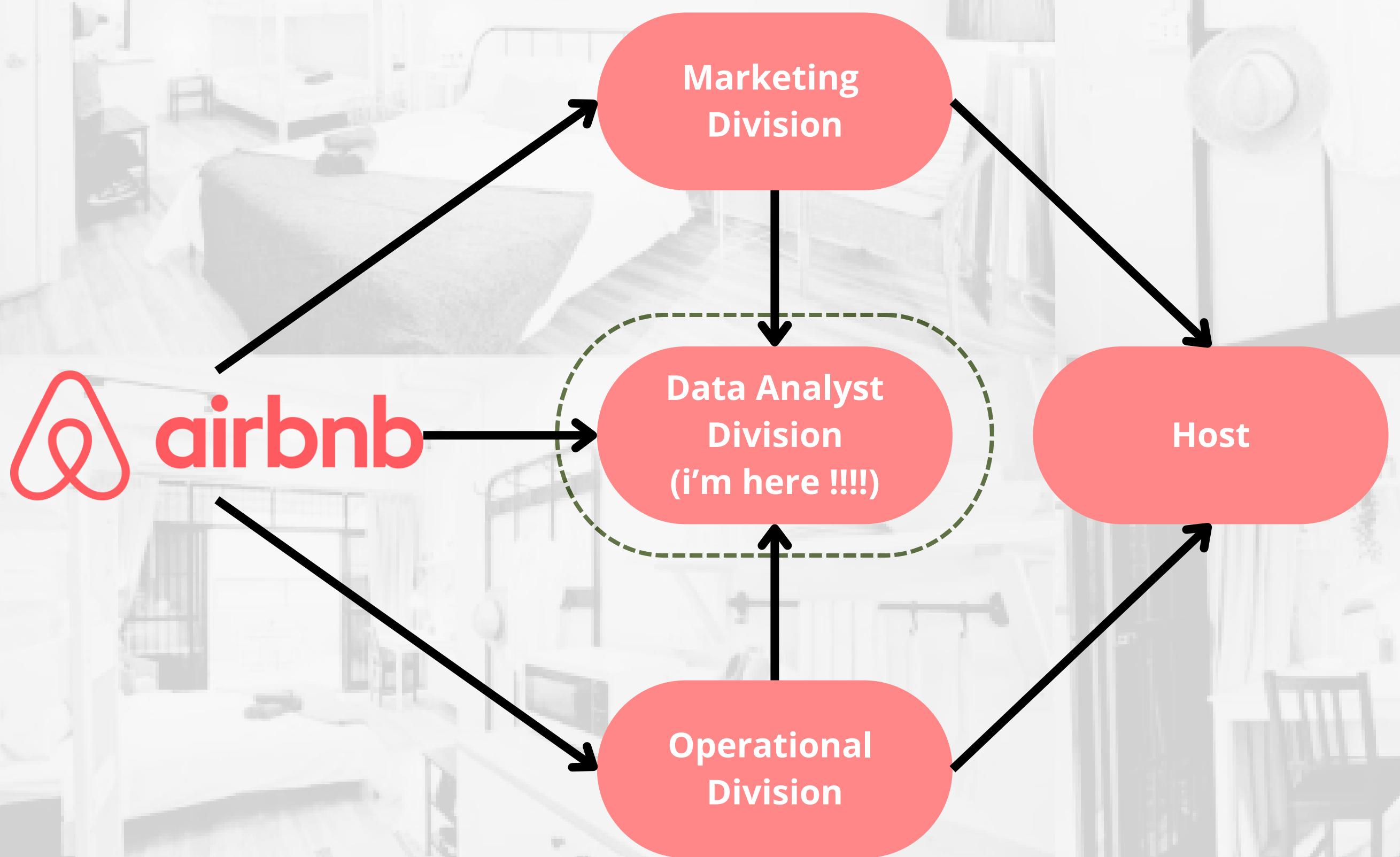


Understanding What Drives Reviews: Strategic Insights for Airbnb Listings in Bangkok

Project By Dhika Wahyu Pratama



STAKEHOLDER



PRELIMINARY DATA INFORMATION

The data used comes from Airbnb Bangkok, which contains information on listings of accommodations that have received reviews and those that have not. In addition to review information, this data also includes review frequency, room type, rental price, geographic location, and the level of property availability throughout the year.



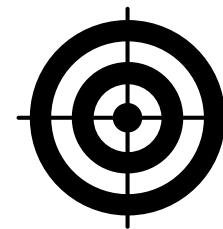
PROBLEM STATEMENT

“What are the characteristics of Airbnb listings in Bangkok that have received reviews, compared to listings that have not been reviewed?”



Objective

- Identify the type of accommodation that users are more interested in
- Knowing the areas that have higher potential to be rented
- Optimizing the availability level of listings so that they appear and are reviewed more often
- Knowing area that must be boost to get more engagement



Target

Push and optimize the district or area that have more potential to get more reviews

Data Understanding & Data Cleaning

Dataset Variable

Feature	Description
id	Unique ID for each listing
name	Name of the listing
host_id	Unique ID of the host/owner of the listing
host_name	Name of the host
neighbourhood	District or area where the listing is located
latitude	Latitude coordinate of the listing location
longitude	Longitude coordinate of the listing location
room_type	Type of accommodation (Entire home/apt, Private room, Shared room)
price	Price per night (in local currency)
minimum_nights	Minimum number of nights required for booking
number_of_reviews	Total number of reviews received by the listing
last_review	Date of the most recent review
reviews_per_month	Average number of reviews received per month
calculated_host_listings_count	Number of listings owned by the host
availability_365	Number of days in a year the listing is available for booking
number_of_reviews_ltm	Number of reviews received in the last 12 months

Missing Values

Unnamed: 0	0
id	0
name	8
host_id	0
host_name	1
neighbourhood	0
latitude	0
longitude	0
room_type	0
price	0
minimum_nights	0
number_of_reviews	0
last_review	5790
reviews_per_month	5790
calculated_host_listings_count	0
availability_365	0
number_of_reviews_ltm	0

Delete Rows
because only 0.1%
from data

Allow missing values

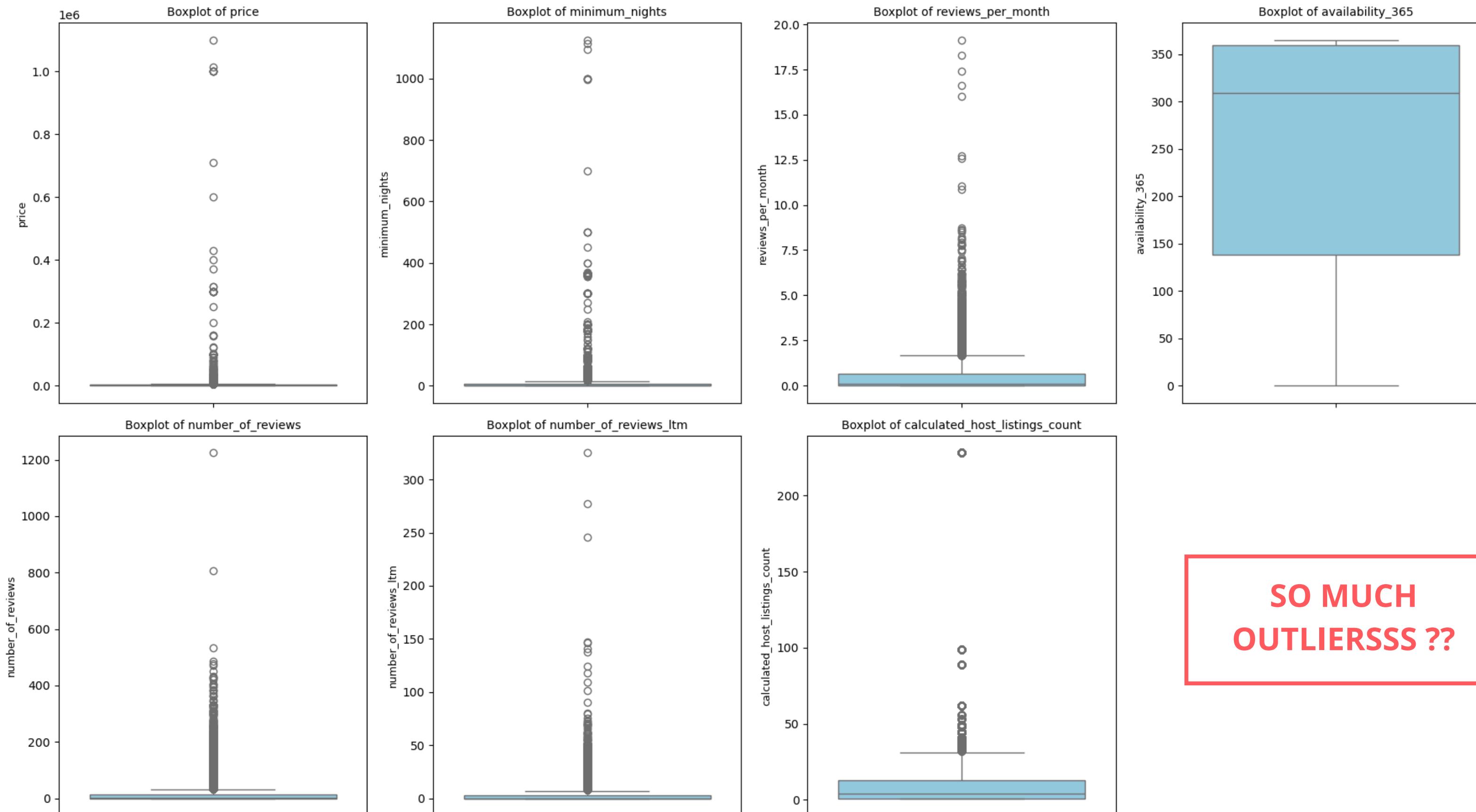
Analyze and Handle
because More than
30% data

Filling missing values
with 0

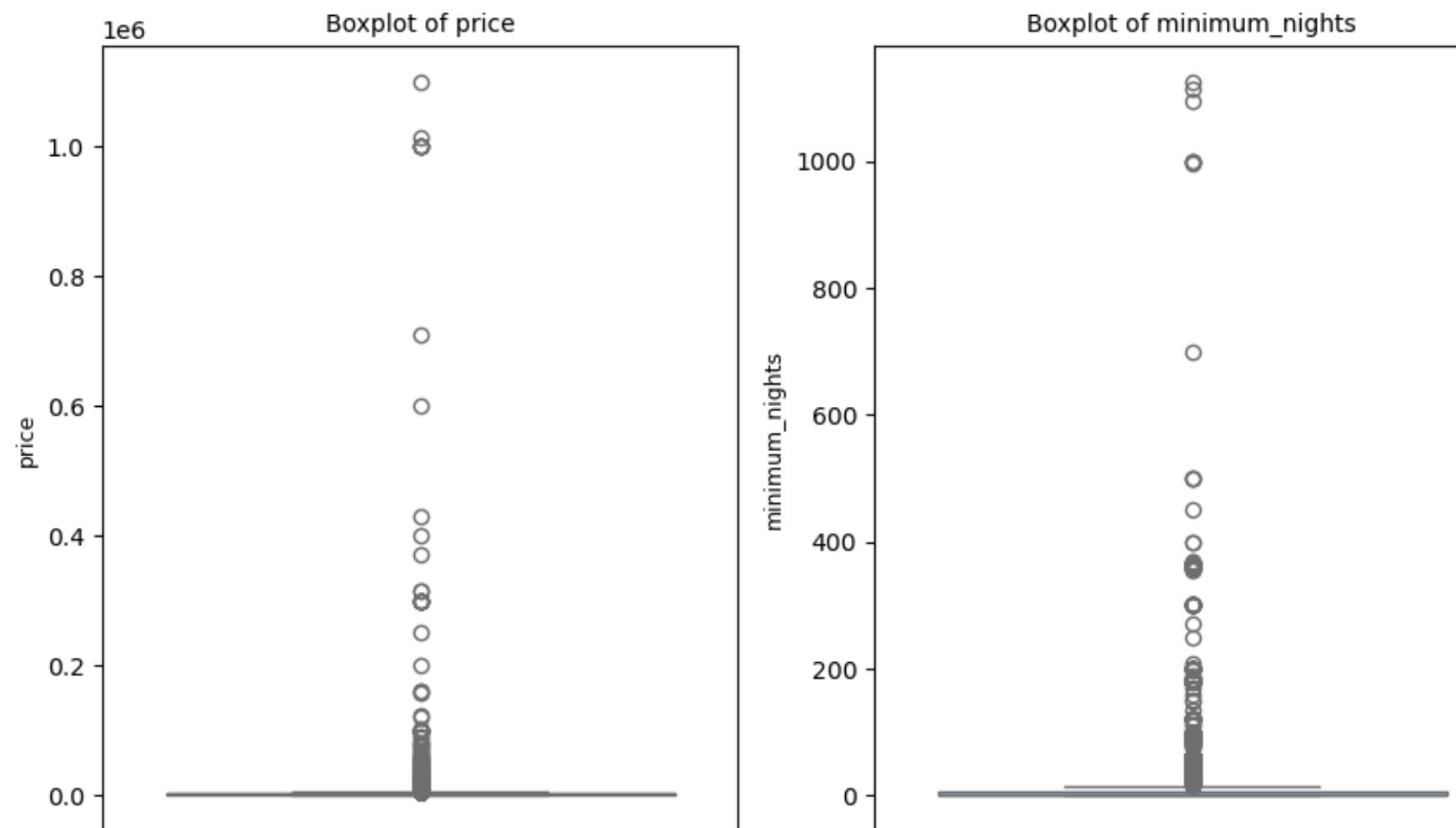


Outliers

Boxplot Kolom Numerik Airbnb Bangkok



Outliers



Handling Outliers

Do Nothing with outliers

Why?

Data Represents genuine conditions and makes sense

Minimum Nights > 90

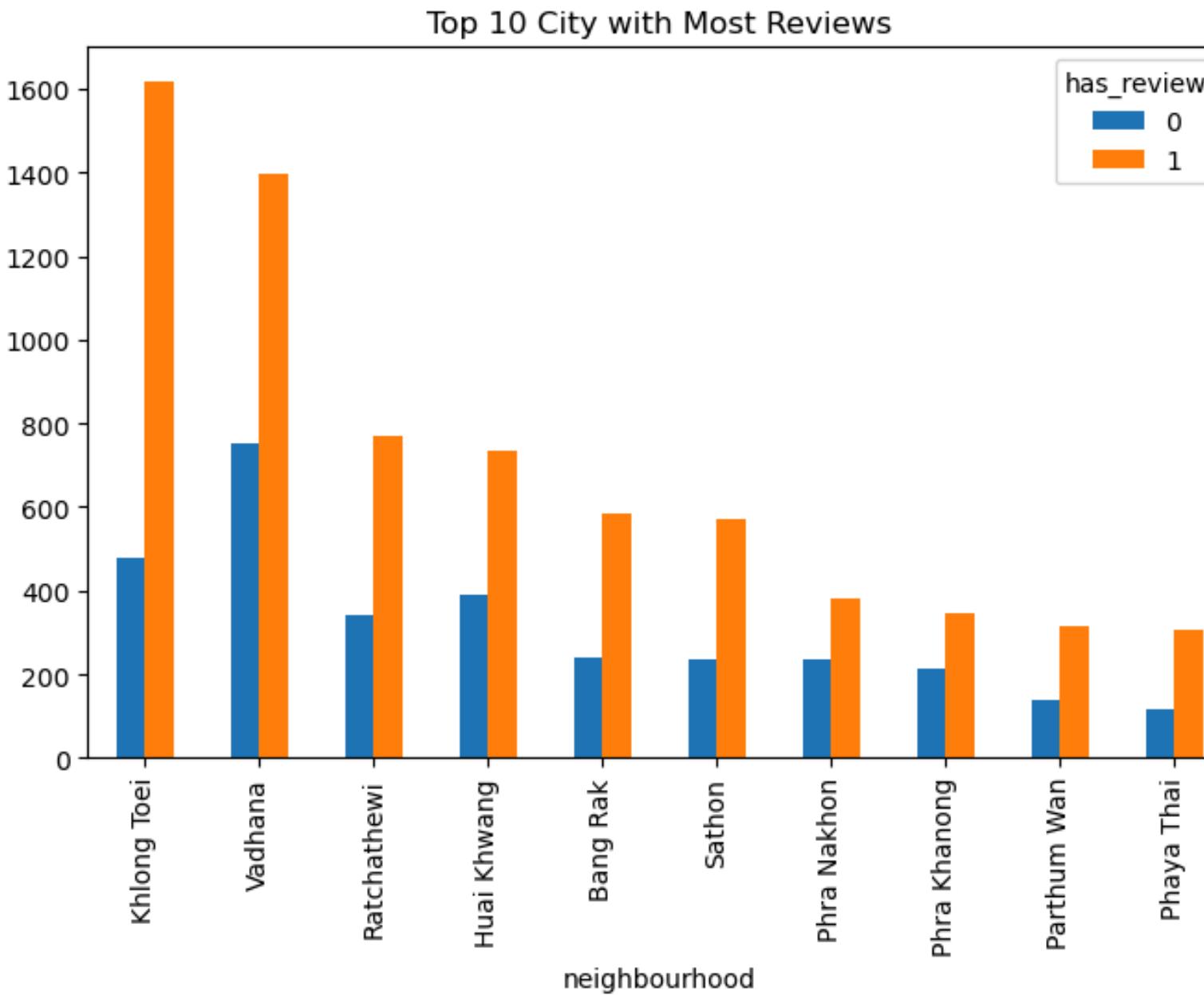
room_type	Total
Entire home/apt	339
Hotel room	1
Private room	108
Shared room	3

Feature Engineering

- Converting `id` and `host_id` to string
- Converting `last_review` to date_time
- Add new Feature named `has_review`
- Handling Missing Values on `reviews_per_month`
- Droping duplicated and unused features
- Add new Feature named `min_night_bin`to simplify the `minimum_nights`

Data Analysis

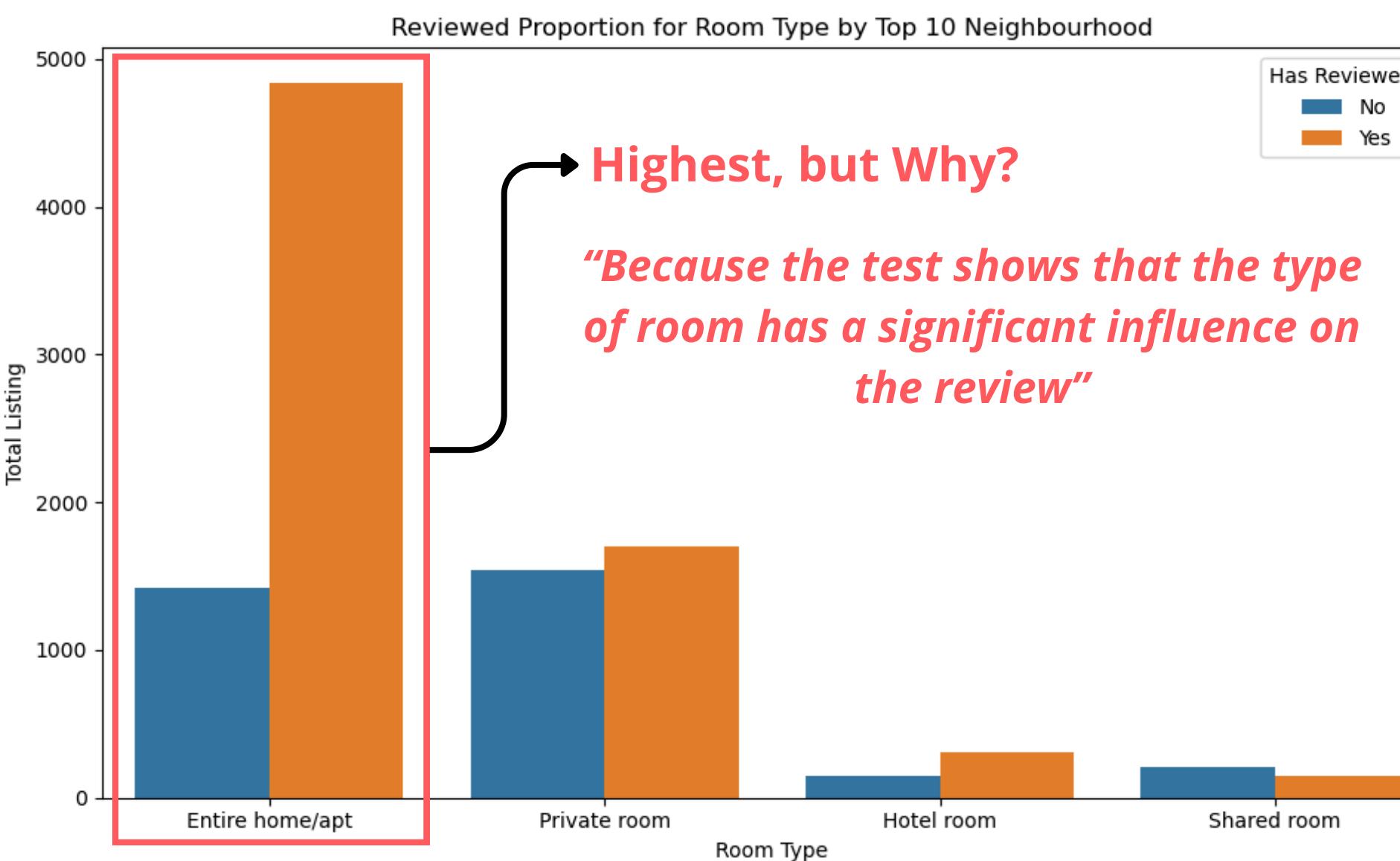
Khlong Toei Has the Most Reviews, But Vadhana have more potential



Which district has the most reviewed listings?

- All regions on the list show more active listings than unreviewed ones.
- Location plays a crucial role: Neighbourhood with high reviews are suitable for new listing promotion or passive listing competitiveness improvement strategies.
- Airbnb Intervention Opportunities: Regions with many unreviewed listings (such as Vadhana) can be targeted for promotion or platform optimization.

Entire room/apt are usually get reviewed compare to the others



Is there a difference in `room_type` from Districts or that are frequently reviewed and those that are not?

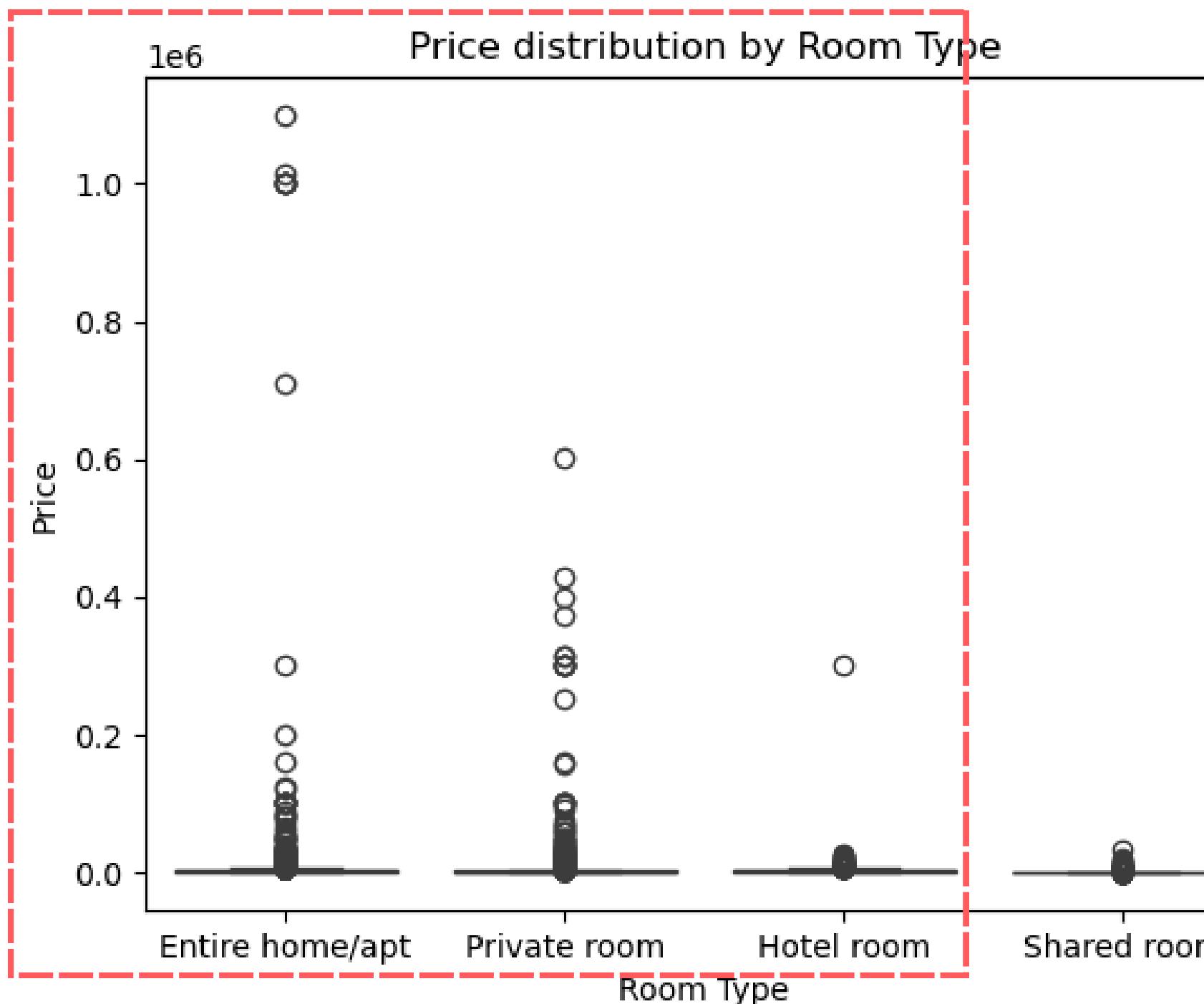
Referring to Expectancy Disconfirmation Theory (EDT) from Tom Schiebler et al., 2025:

Ekspektasi vs Kenyataan	Hasil Evaluasi	Kemungkinan Review
Kenyataan > Ekspektasi	Positive Disconfirmation	Review positif
Kenyataan = Ekspektasi	Confirmation	Mungkin tidak beri review
Kenyataan < Ekspektasi	Negative Disconfirmation	Review negatif

- Entire home/apt → Higher price → Higher expectations → Greater chance of reviews (both positive and negative)
- Shared room → Lower expectations → If appropriate, less memorable → Fewer reviews

Pricing Strategies Affected the Reviews

Is there a difference in `room_type` from Districts or that are frequently reviewed and those that are not?



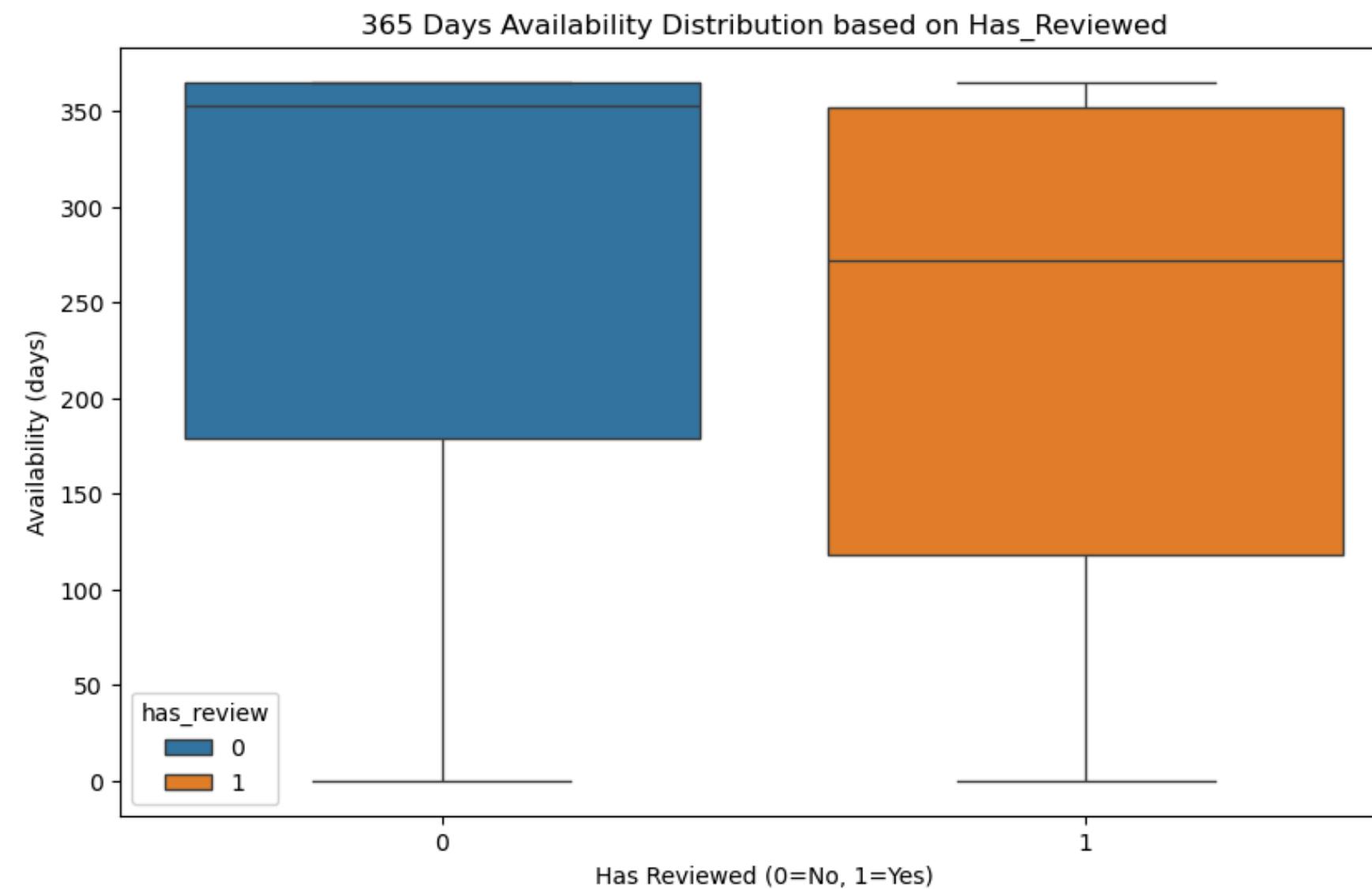
Price is affecting reviews activity

"Because the test shows that the price from some type of room has a significant influence on the review"

High prices don't always mean good ratings - if they don't match expectations based on room type (e.g. shared rooms are expensive), it will lead to disappointment and potential negative reviews.

Availability :

Less Availability is usually get reviewed by Customer



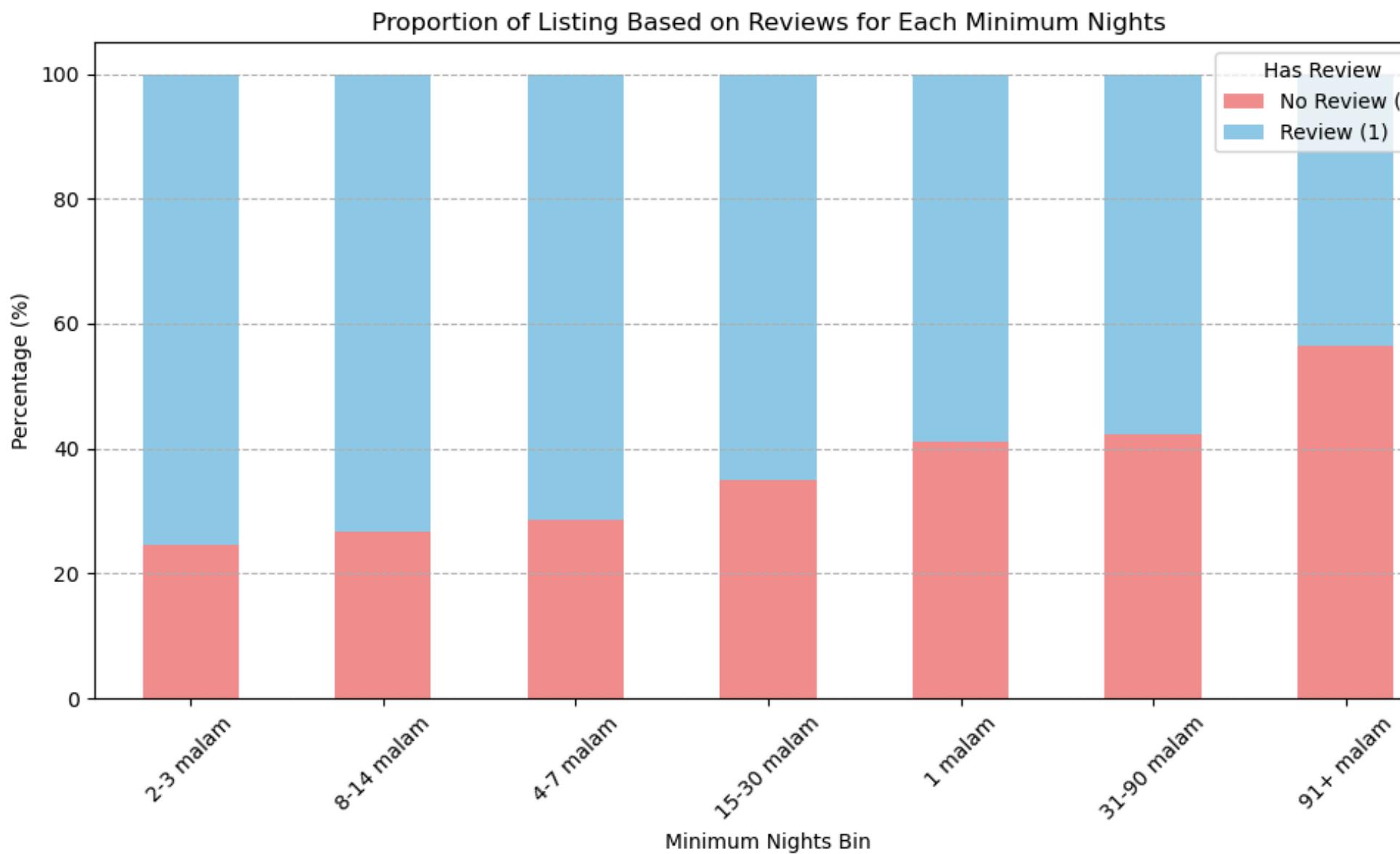
Availability Range

- **has_review = 0:** Narrow and high range (100-365 days) → often available, but not yet in demand.
- **has_review = 1:** Wide range (0-365 days) → flexible use, potentially frequently booked.

Interpretation & Implication

- Listing without reviews but highly available → May be less attractive or less known.
- Listing with reviews → Flexibly available, shows high activity & good schedule management.

2-3 Nights are likely get reviewed than the other options



- There is a clear downward trend in review proportion as the minimum nights requirement increases, this suggests that shorter-stay listings are more appealing to guests and likely get reviewed more often.

Conclusion & Recomendation

Conclusions

- Mostly located in strategic neighbourhoods such as Khlong Toei and Vandhana, which also have the highest total number of listings.
- Active or reviewed room is frequently consist of Private rooms or Entire homes/apartments, while inactive listings tend to be Shared rooms or Hotel rooms.
- Active listings are not always available 365 days a year, often due to frequent bookings, whereas inactive listings are often available year-round but receive little interest.
- Active listings tend to be more attractive and competitive in terms of price, location, and room type.
- Active listings more commonly set shorter minimum stays, such as 2-3 nights or 4-7 nights.
- Listings with a minimum stay of 91+ nights are far less likely to receive reviews.

Recomendation

1

Focus promotion and operational support on neighbourhoods that have shown strong performance, such as Khlong Toei and Vadhana.

- It would be beneficial for Airbnb to also encourage listings outside these two areas to reduce dependency on dominant locations and unlock the potential of less explored regions.

2

Prioritize listings with room types such as Entire home/apt or Private room, as these receive more user reviews.

3

Promote listings with moderate pricing, since extreme prices (either too low or too high) tend to receive fewer reviews.

- Airbnb could consider offering automated market-based price analysis by area and room type to help hosts determine the optimal pricing.

Recomendation

4

Promote listings with realistic availability (not full 365 days), as active listings tend to have more flexible and demand-driven availability.

5

Launch onboarding and education programs for new hosts.

- Many inactive listings are newly created. Providing education on optimizing pages, descriptions, and calendars could help hosts secure their first booking.

6

Experiment with first-booking incentives.

- New or unrated listings could receive a special badge or temporary discounts to attract user attention.

7

Flexible minimum nights settings:

- Listings should avoid setting excessively long minimum stays. Durations of 2–7 nights have proven to receive the most reviews.
- Airbnb can implement automatic suggestions or warnings when hosts set minimum stays that are too high.

THANK YOU

