



Capstone 2 Project

AIRBNB LISTING BANGKOK

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About us:

- VMN Tourism Consultant is a model startup that was founded in May 2010 and focuses on tourism asset management research in Thailand.



PROJECT AIRBNB HOST LIST ANALYSIS BY NEIGHBOURHOOD

Goals

*To know where is the place to make
new investment **AirBnb** at Bangkok*

BUSINESS UNDERSTANDING

Background

AirBnb's are basically a hotel, but you stay at someone else's house instead. AirBnB has been everywhere around the world. AirBnb in Bangkok has become to the most popular stay in Thailand.

Objectives

- To know where is the best place investment to new AirBnb.
- Where is Tourists Favorite to stay at AirBnb Bangkok by neighbourhood.

Project Timeline

10 Days



Problem Formulation:

1. Where is the best place investment for new AirBnb host list?
2. What kind of investment that is having highest opportunity for new AirBnb host?
3. What kind of AirBnb's titles host that appears most often?



WORK STEP

1

Data Cleansing

2

**Exploratory Data
Analysis**

3

**Business Insight &
Recomendation**



Data Cleansing



Handling Missing Value

id	0
name	8
host_id	0
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
year	5790
month	5790

id	0
name	0
host_id	0
neighbourhood	0
latitude	0
longitude	0
room_type	0
price	0
minimum_nights	0
number_of_reviews	0
last_review	0
reviews_per_month	0
calculated_host_listings_count	0
availability_365	0
number_of_reviews_ltm	0
year	0
month	0

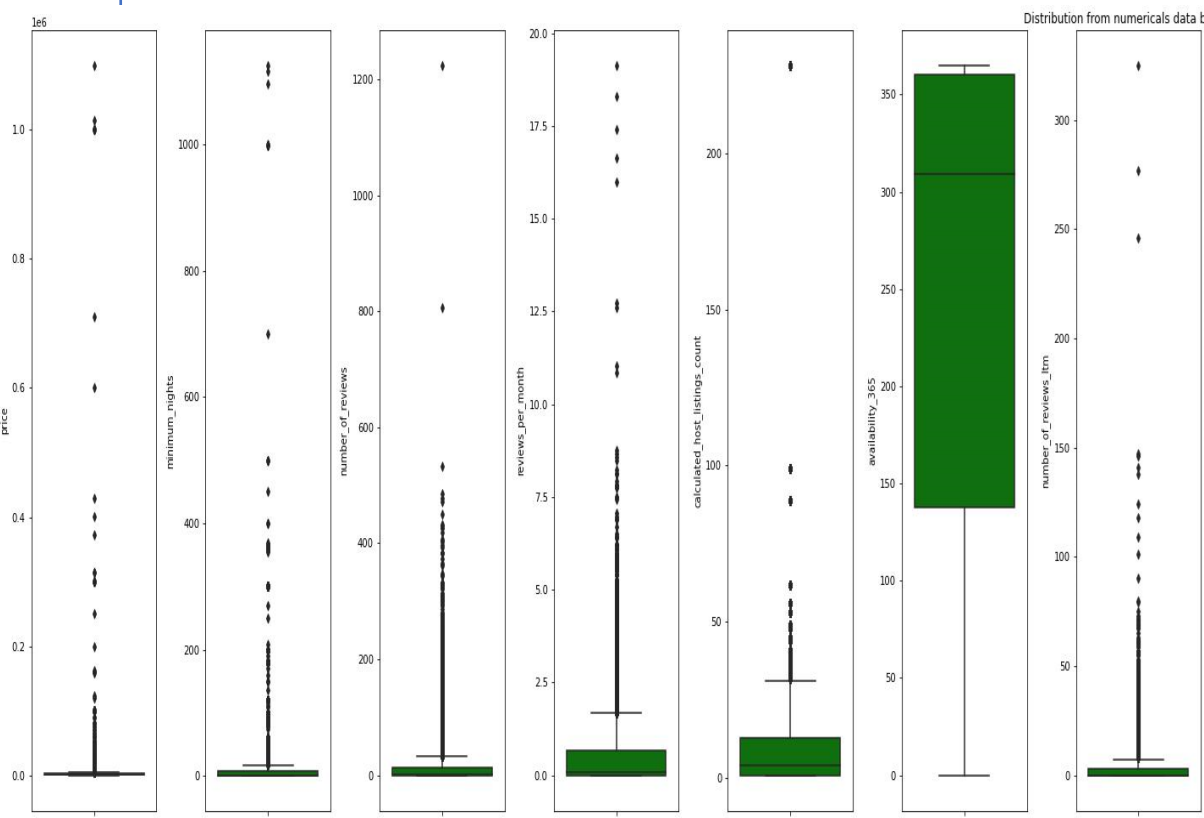
Missing value 36.6%



Handle Outlier



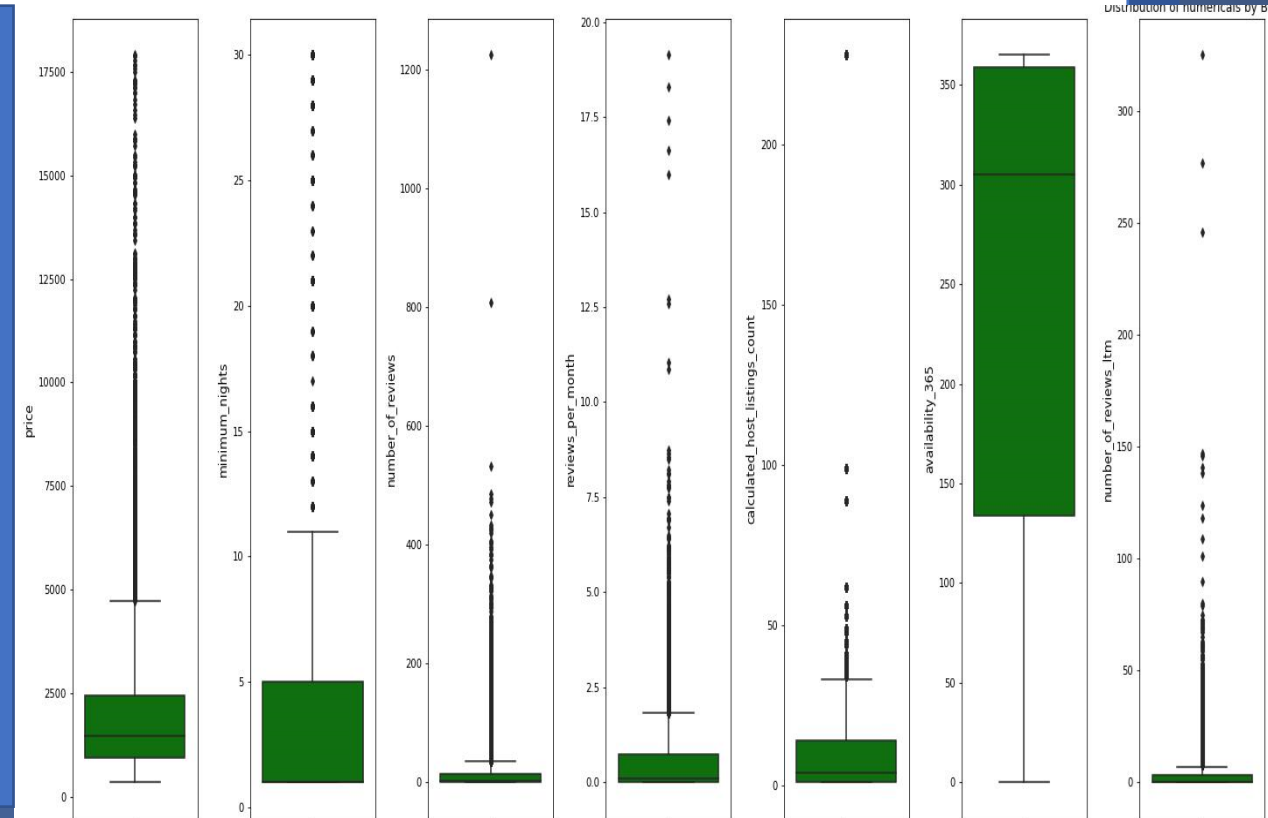
Drop the data that is not normal with distribution <1% and >99%, and minimum stay > 30.



Before

Shape

15854 rows x 17 columns



After

Shape

14674 rows x 17 columns



EXPLORATORY DATA ANALYSIS (EDA)

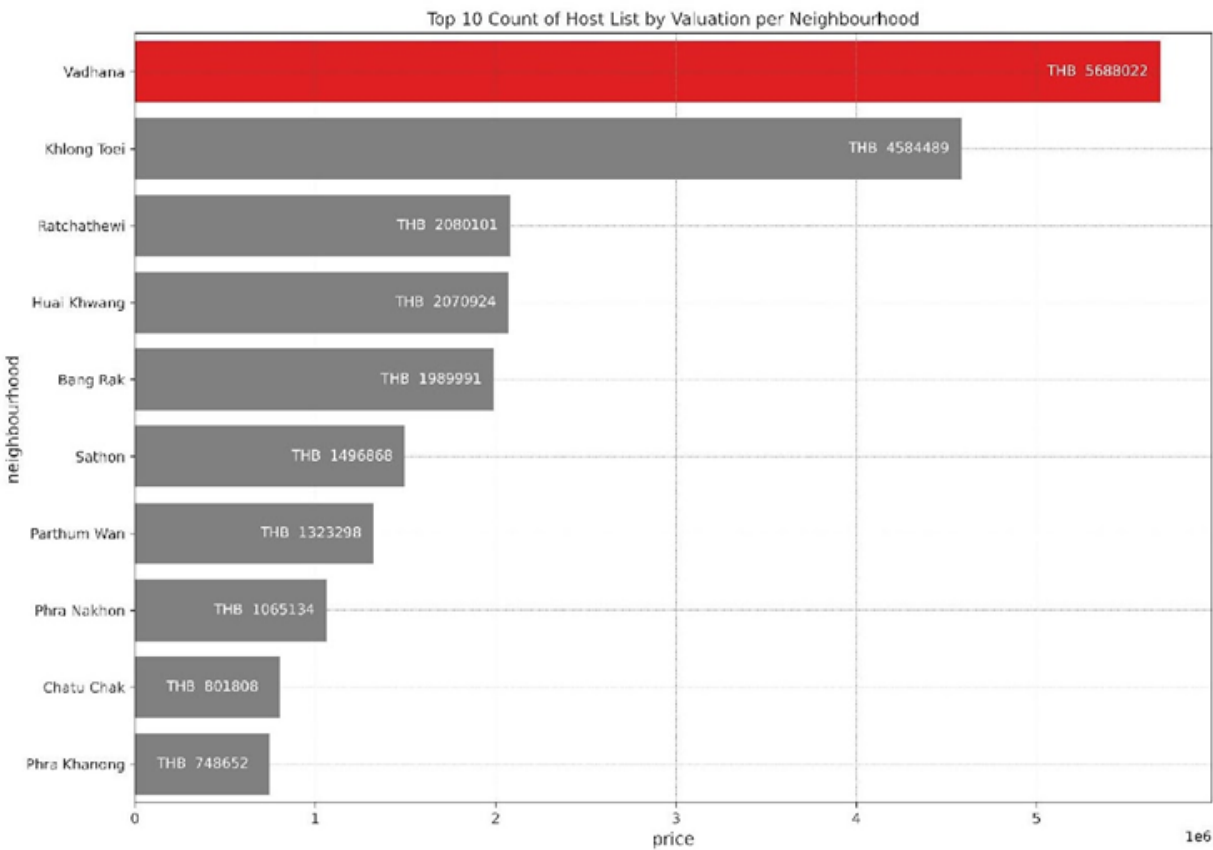
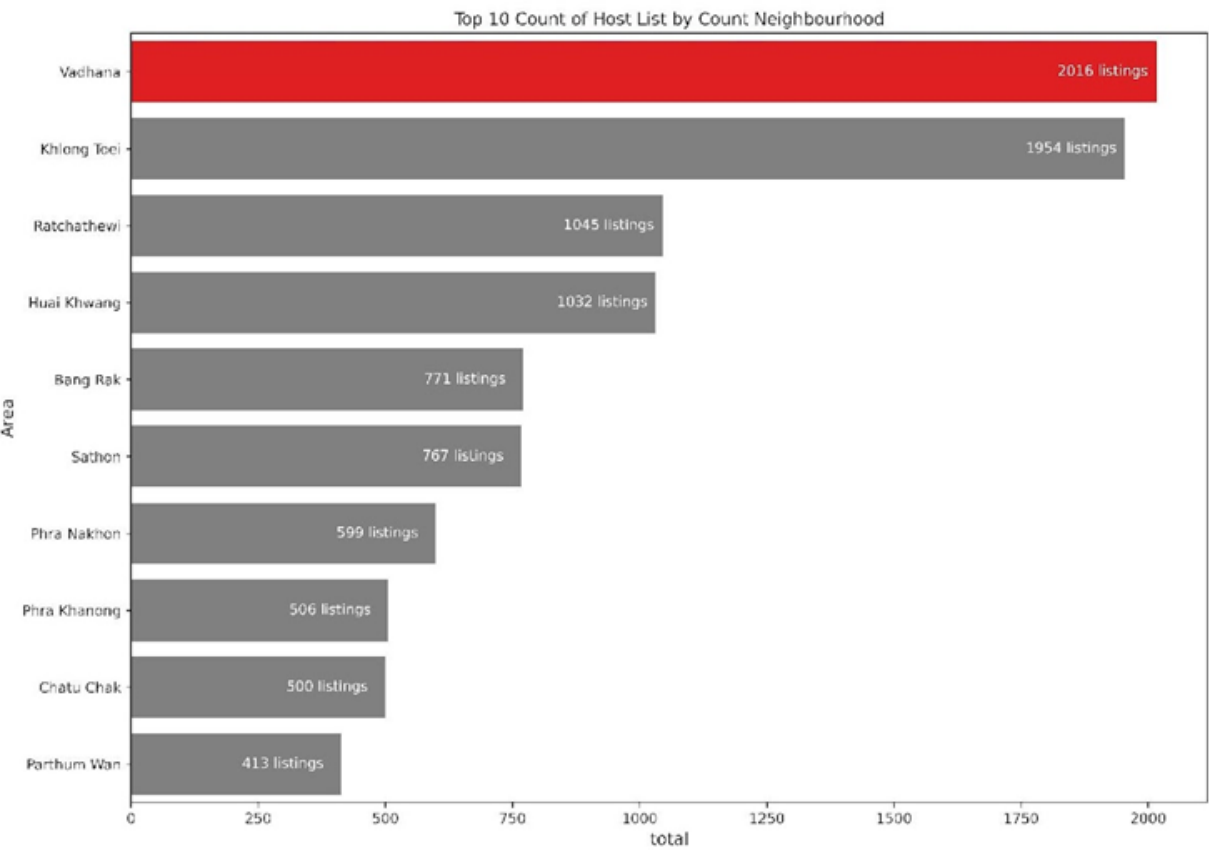
- ☐ Data Description
- ☐ *Business Insight*
- ☐ Data Visualization

Statistika Deskriptif

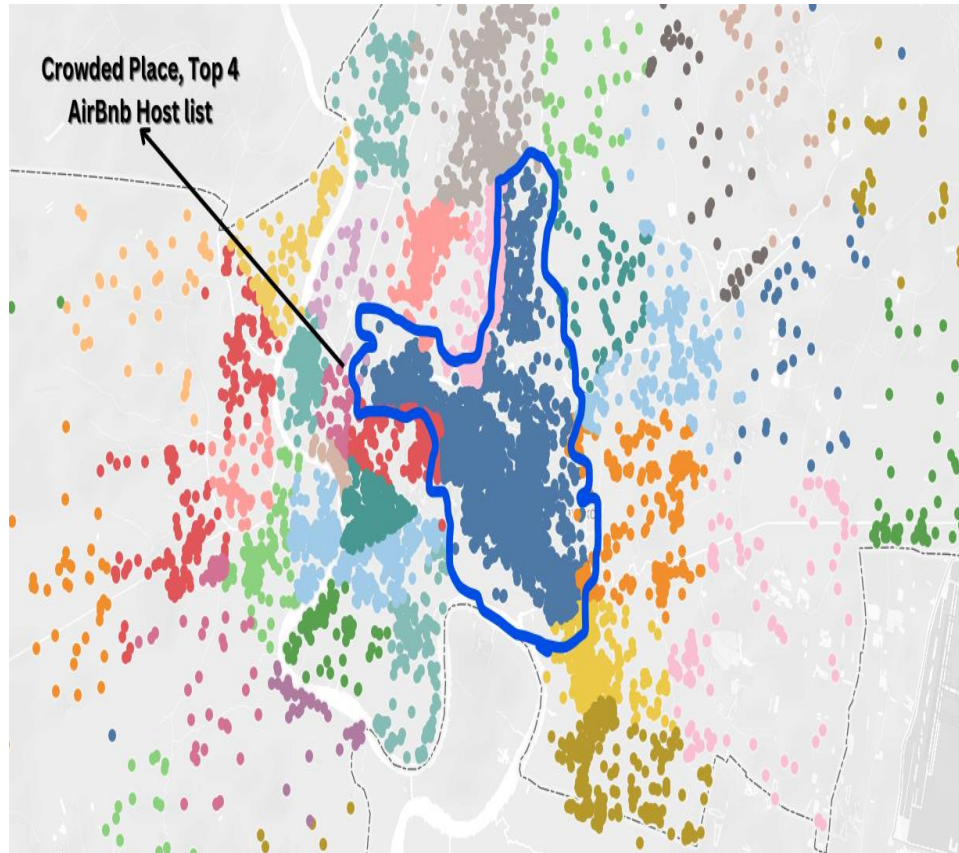
	price	minimum_nights	number_of_reviews	calculated_host_listings_count	availability_365	number_of_reviews_ltm
count	14674.000000	14674.000000	14674.000000	14674.000000	14674.000000	14674.000000
mean	2103.399550	6.318386	17.282677	14.428922	242.068829	3.712553
std	2098.271644	9.837356	41.557044	31.247977	126.033234	9.200151
min	351.000000	1.000000	0.000000	1.000000	0.000000	0.000000
25%	930.000000	1.000000	0.000000	1.000000	134.000000	0.000000
50%	1458.000000	1.000000	2.000000	4.000000	305.000000	0.000000
75%	2450.000000	5.000000	14.000000	14.000000	359.000000	3.000000
max	17904.000000	30.000000	1224.000000	228.000000	365.000000	325.000000

Top 10 areas in Bangkok with the most listing count and valuation(room per day)? How many listings are there?

Comparison between top 10 count of host list by count and valuation neighbourhood

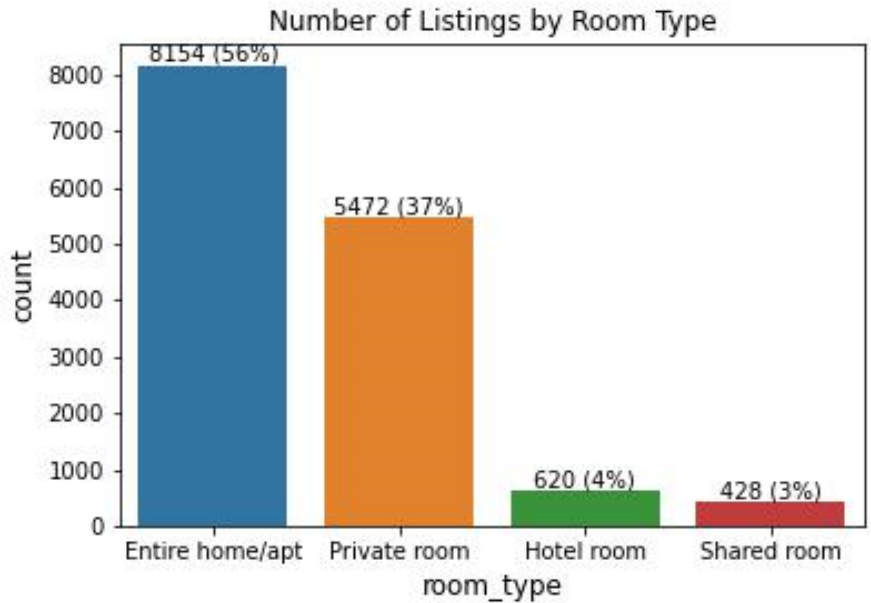


Conclusion of host list area neighbourhood



AirBnb at Area Vadhana, Khlong Toei, ratchattadewi, huai kwhank, and bang rak are become the most list AirBnb to stay in Bangkok based on count list host and valuation per area.

Room type insight



The Most Airbnb's type room in Bangkok is Entire home/apt. But the most less room in Bangkok is Shared room.

A. Common price room

	room_type	price
0	Hotel room	1753.5
1	Entire home/apt	1580.0
2	Private room	1229.0
3	Shared room	550.0

The most expensive of Airbnb room type is Hotel room, but the cheapest is Shared room.

B. Common minimum stay

	room_type	minimum_nights
0	Entire home/apt	2.0
1	Hotel room	1.0
2	Private room	1.0
3	Shared room	1.0

From room type minimum nights, we can know that minimum nights to stay is 1 night, except entire home/apt is 2 nights.

Statistic Inferensia

Kruskal –Walles Test:

H0: There is no significant difference between price and room type on Airbnb.

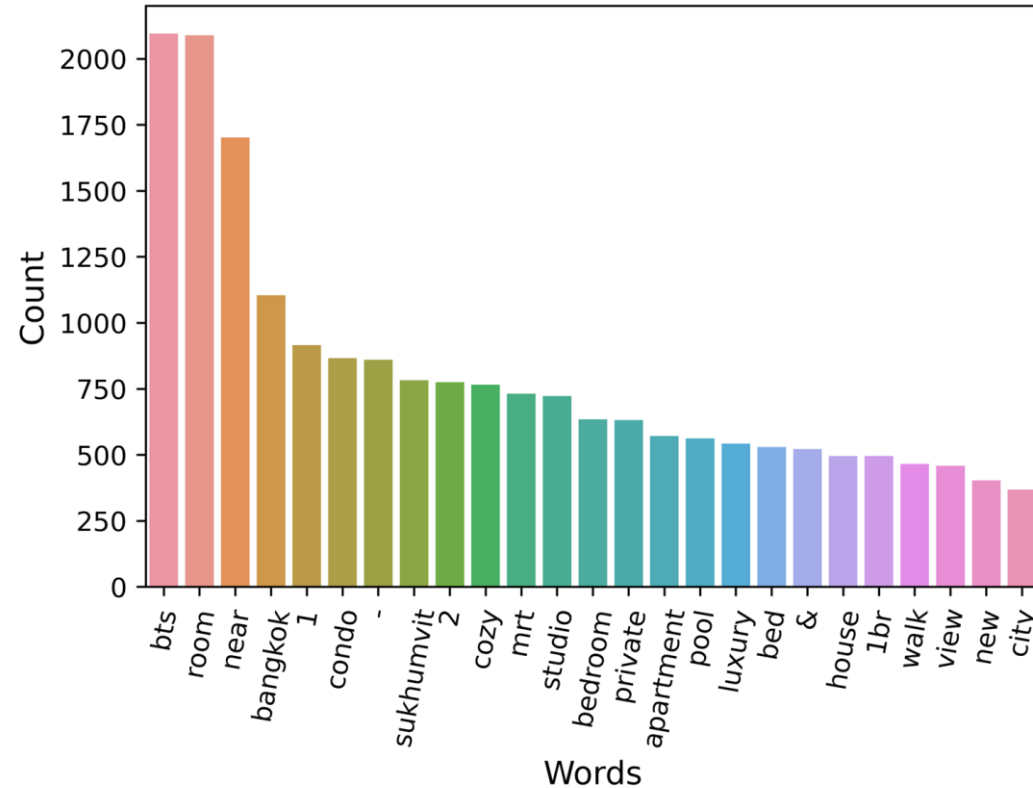
H1: There is a significant difference between price and room type on Airbnb.

```
Kruskal-Wallis H-test  
H-statistic: 1042.0638315261183  
p-value: 1.3490171686423432e-225
```

We get $p\text{-value} < 0.05$, the meaning is there is a significant difference between price and room type on Airbnb. So more expensive price will get higher classification of room type.

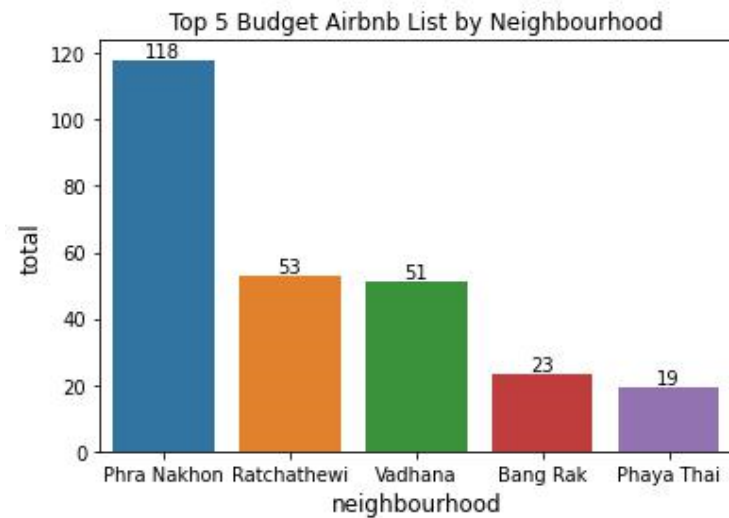
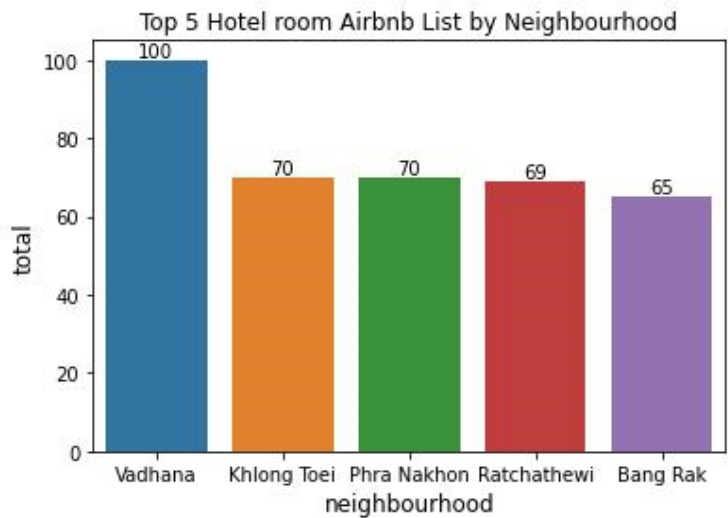
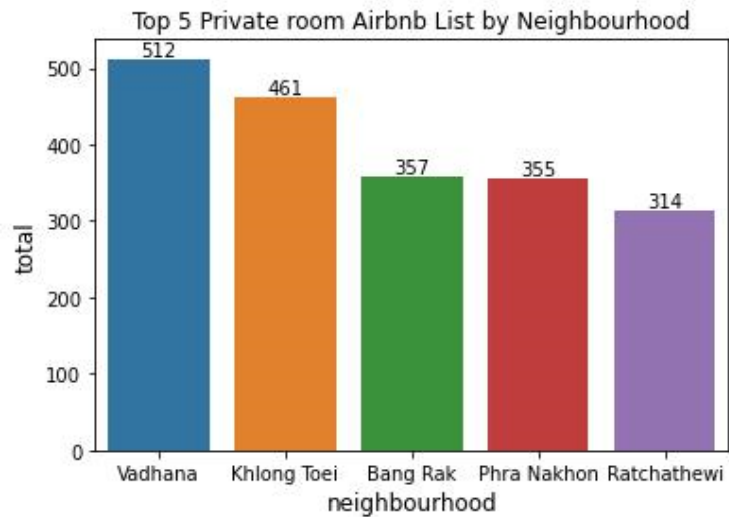
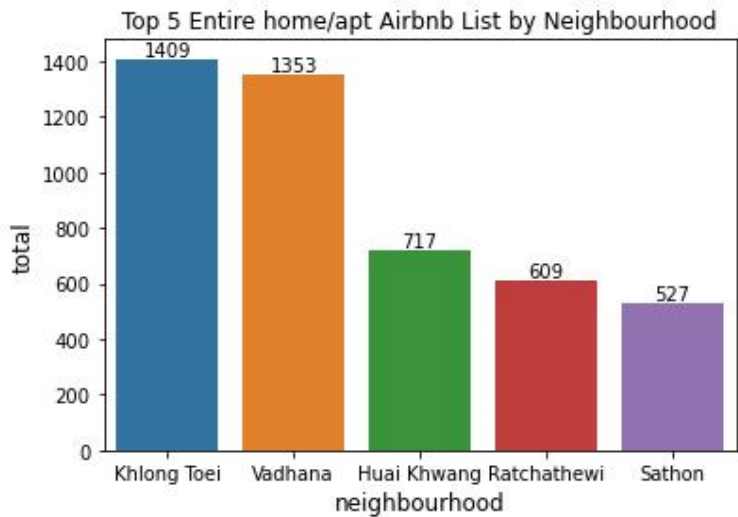
Word Title Analysis

Top 25 Words Used in Bangkok Airbnb Names

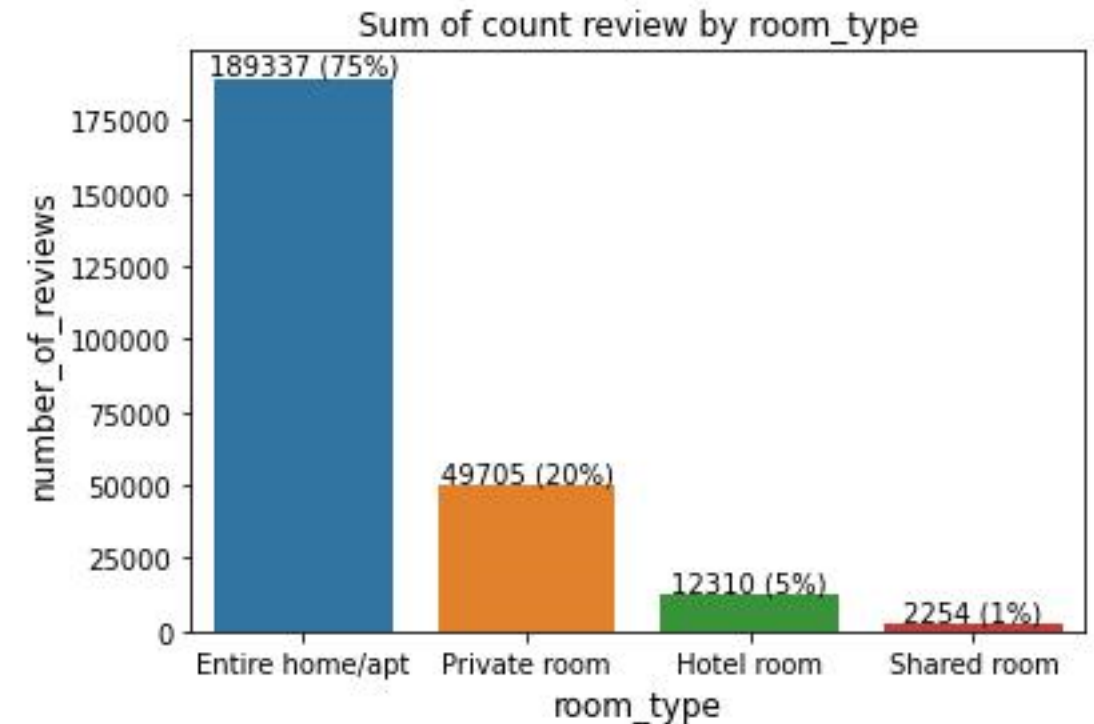
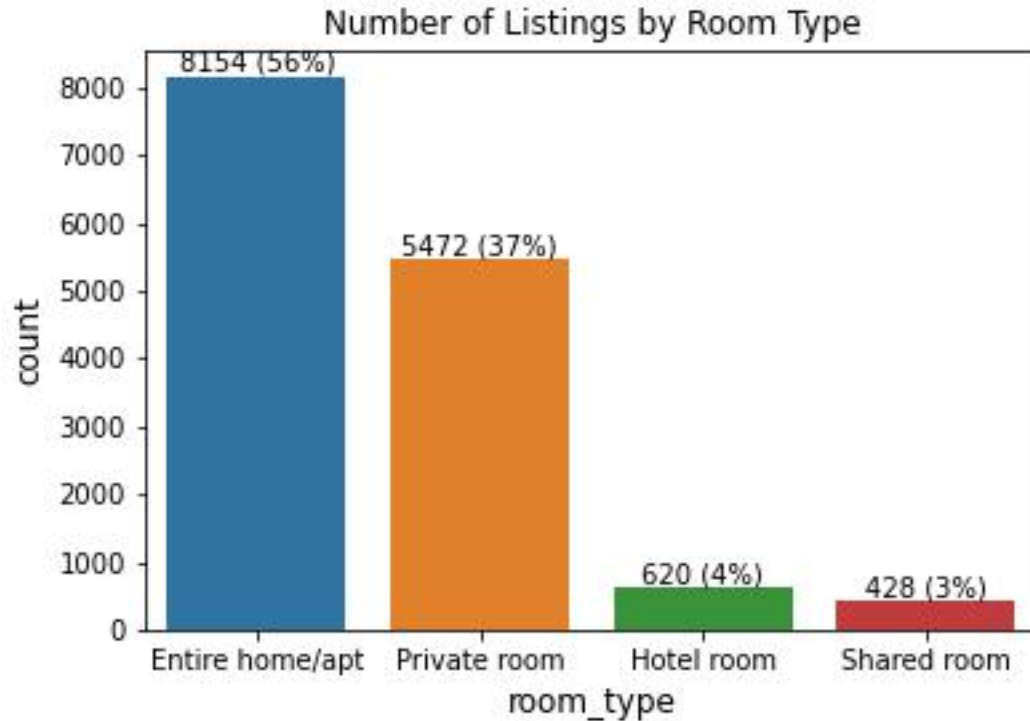


Usually host AirBnb in Bangkok use 'bts, room, near, Bangkok, Sukhumvit, bedroom' in their title names. From the word we can know where is the place of host AirBnb and what they want to show to customer.

Top 5 Neighbourhood by Room Type



Customer Behavior on Fill Review



If we assumption that most of the customer fill the review, entire home/apt is will the sexiest AirBnb room and the most sold type room based on review count.

Business Recommendation

Business Recommendation

1

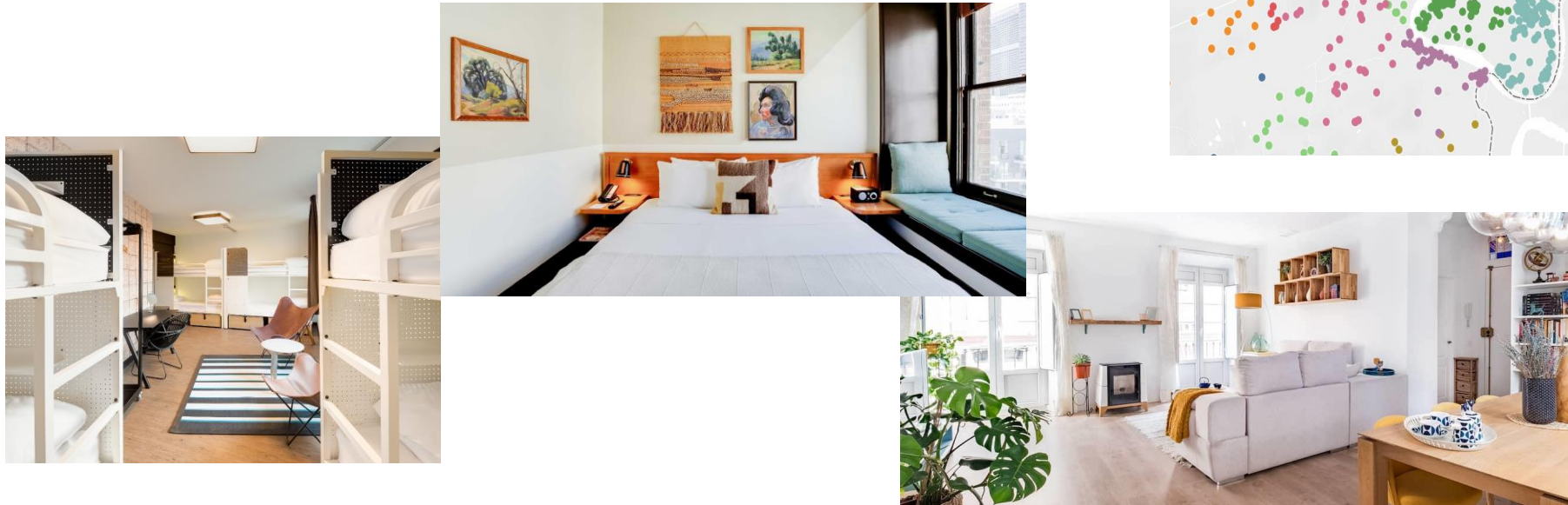
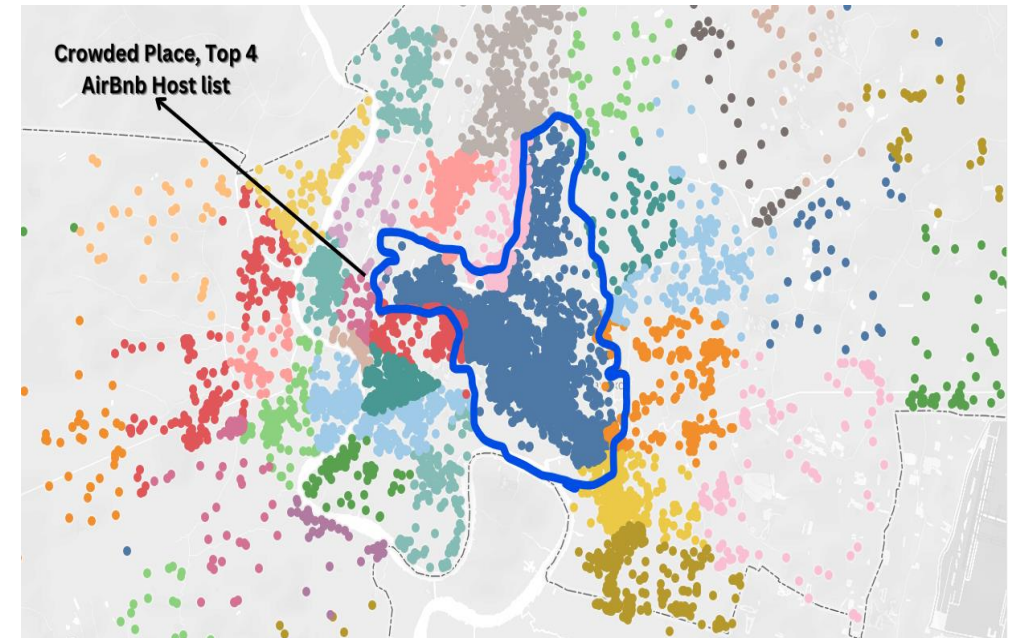
- The new applicant that want to join as a host for AirBnb in Bangkok, we suggest you to should have the AirBnb arround sukhumvit road either in **vadhana** or **khlong toei**.
- ❑ It is busy city to shopping hub with huge malls offering luxury fashion and artisanal goods, plus food courts and posh international dining. **Vadhana and khlong toei also is in sukhumvit area.** Which is the tourist most visit area. Sukhimvit is the best neighborhood overall. The public transportation and the vibes is awsome there ([1] thenomadvisor).
- **Ratchadewi** and **huai khwang** are the best option place after vadhana area to built a new AirBnb.
- ❑ **They are near to the central tourist visit. Huwaikwang** is very famous with their **night market**[[4] Pillay, D]. Besides that the **Ratchathewi** city is a popular destination for **medical tourism**, with several world-class hospitals located in the area offering affordable medical treatments and procedures([2] travelodium).



Business Recommendation

2

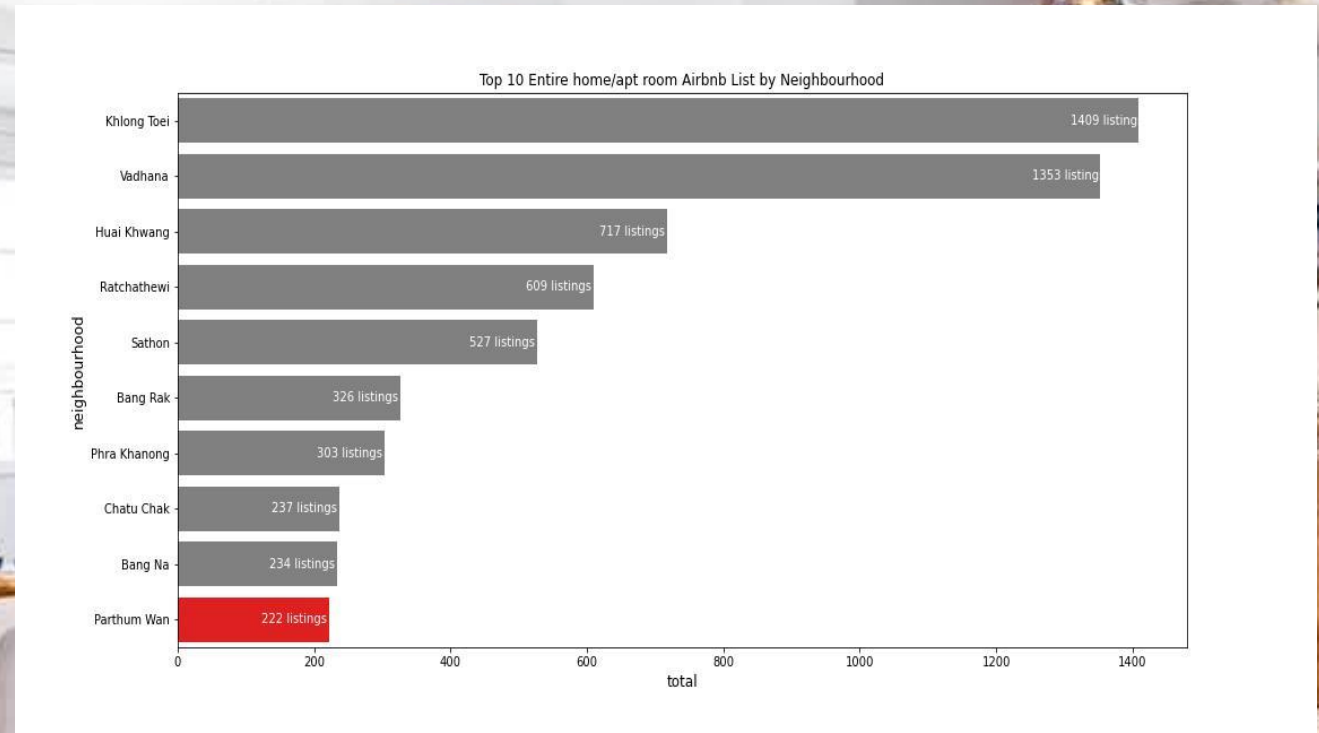
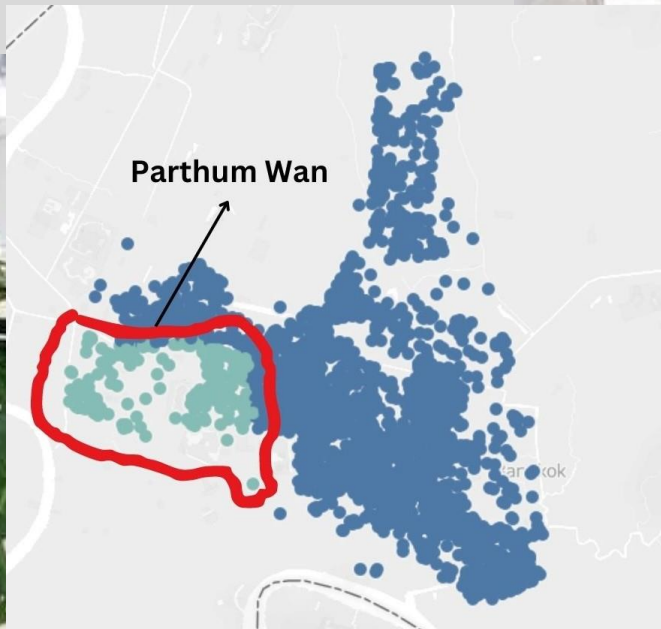
- Based on review fill, **Entire home room type is the most tourist review**. So, we suggest the highest opportunity investment by roomtype for **new AirBnb host** should have room more than 50% with the type room is entire home/apt.
- If you want to build **entire home/apt or hotel room or private room**, **Khlong toei and vadhana** is the great place for your AirBnb's room because of their traffic of busy city.



Business Recommendation

2

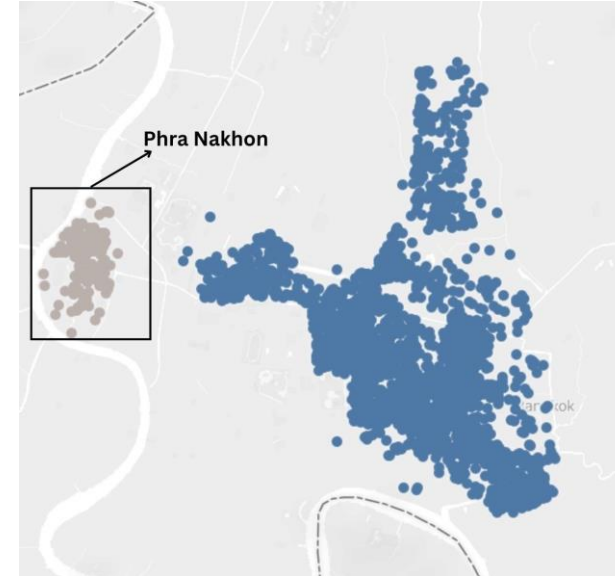
- *There is a large opportunity to build entire home/apt room at Siam area in Parthum Wan district, Siam at Parthum Wan is the commercial centre of Bangkok and one of the city's safest neighbourhoods, making it one of the best areas to stay for families([3] Cathryn, C.). But There are not much entire home/apt in Parthum Wan.*



Business Recommendation

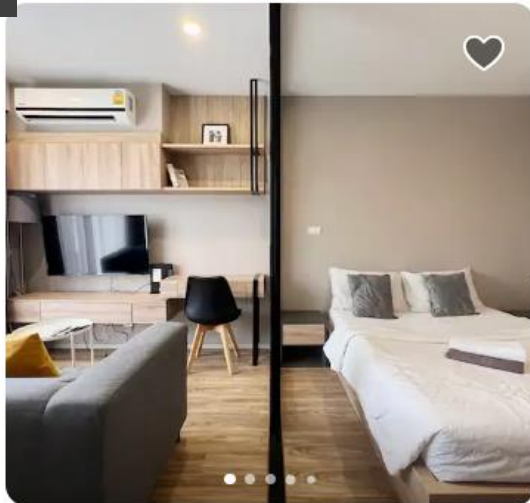
2

- If you want to build **budget AirBnb, Bang Lamphu in Phra Nakhon District** is the great place. Banglamphu is the heart and soul of Bangkok. Centrally located, this neighbourhood is where you'll find an excellent mix of historic and beautiful temples and a vibrant and lively party scene ([3] Cathryn, C.).

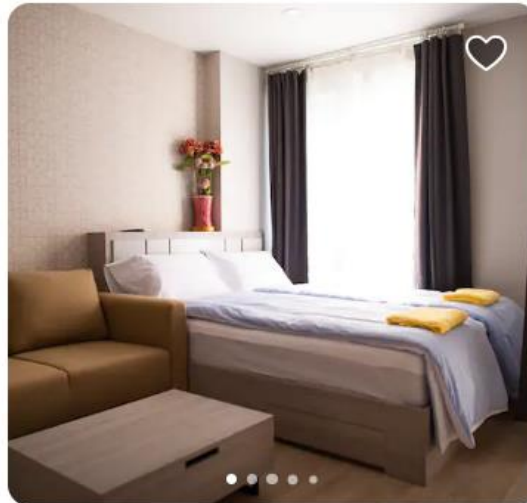


Business Recommendation

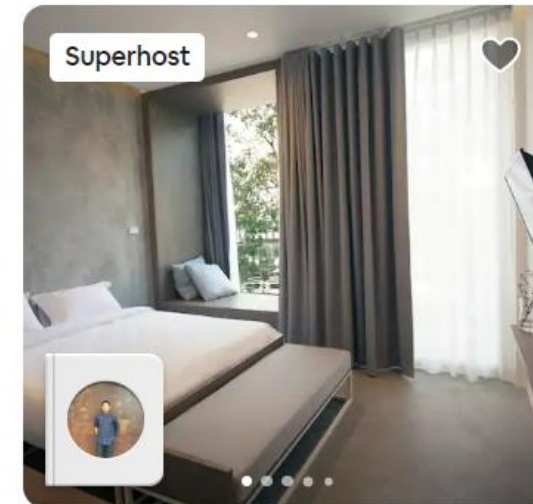
3



Condo in Khet Sathon ★ 4.7 (63)
Mid-town condo/Surasak **BTS...**
1 bed
May 18 – 23
\$41 SGD night



Condo in Khet Samphanth... ★ 4.65 (55)
MRT subway Wat Mangkon COZY...
1 queen bed
May 17 – 22
\$39 SGD night



Room in Khet Pom Prap Sat... ★ 4.84 (97)
Stay with Oaklek · Hosting for 7 years
Y3 · Private Minimalist-Style Room in Old...
May 15 – 20
\$52 SGD night

To make it easier for your Airbnb title to be easily found by customers, we suggest you to use **word 'bts, room, near, Bangkok, bedroom, 1(room), 2(room), view, new, city, MRT'** in your title names. But it depends what your asset provide to AirBnb's Customer.

Reference

Handling Outliers:

[1]Royal, C. (2021, 05 19). Outlier Detection & Removal | How to Detect & Remove Outliers (Updated 2023). Retrieved from analyticsvidhya. [Handling Outliers](#)

Recommendation:

[1] thenomadvisor. (n.d.). Where to Stay in Bangkok: 10 Best Areas. Retrieved from thenomadvisor: [Bangkok Stay](#)

[2]travelodium. (n.d.). Things to do in Ratchathewi – Bangkok – Thailand. Retrieved from travelodium.com: [Bangkok Stay](#)
[Travelodium](#)

[3]Cathryn, C. (2023, 04 28). Where to Stay in Bangkok (COOLEST Areas • 2023). Retrieved from thebrokebackpacker: [Backpacker Stay Bangkok](#)

[4]Pillay, D. (n.d.). 5 Reasons to visit Huai Kwang Night Market in Bangkok. Retrieved from thailand.tripcanvas.co: [Huai Kwang Night Market](#)