

airbnb

Increasing Airbnb Profit: Listing Segmentation and Recommendations in the Central Songkran Festival District

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Overview



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Background

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Analysis

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Conclusion

Background



Songkran Festival

13-15 April 2023

Bang Rak, Parthum Wan, dan Phra Nakhon



Problems



Problem

1

How is the segmentation based on grades for Airbnb listings?

Problem

2

What marketing strategies can be implemented to increase Airbnb profits after segmentation?

Problem

3

What strategies can be implemented to improve the quality of lower-grade listings so that they can compete better and contribute more to the company's profit?

Objective



Objective **1**

Segmenting Airbnb listings based on grade



Objective **2**

Finding the right marketing strategies to increase Airbnb profits after segmentation



Objective **3**

Identifying strategies to improve the quality of lower-grade listings



Data Set



Bangkok, Thailand



2014-2022

Data Cleaning



	name	district	latitude	longitude	room_type	price	minimum_nights	number_of_reviews
10	Sathorn Terrace Apartment(61)	Bang Rak	13.719340	100.517600	Private room	1150	2	27
71	Inn Saladaeng - Superior hotel room	Bang Rak	13.728250	100.537740	Entire home/apt	1589	1	36
79	Near Bangkok more space than urban!	Phra Nakhon	13.751350	100.494470	Shared room	5195	1	0
166	Elegant 2-Brm Condo in Heart of Bangkok	Bang Rak	13.725430	100.538380	Entire home/apt	5195	3	95
186	วราวดา น้อวยพันธ์	Bang Rak	13.731800	100.523510	Private room	980	1	0
...
15739	Economy room for a solo traveler	Phra Nakhon	13.754990	100.502250	Private room	681	1	0
15746	Standard Private Room for 2 Near BTS	Bang Rak	13.726509	100.527823	Private room	1014	1	0
15748	Unique room with Landmark view	Bang Rak	13.727081	100.525809	Private room	1200	2	0
15796	Stunning river view in the heart of BKK 5min/train	Bang Rak	13.719792	100.515910	Entire home/apt	3304	2	2
15808	Boutique room near Khaosan Road	Phra Nakhon	13.756073	100.501863	Private room	1500	1	0

1506 rows × 8 columns



From this dataset, 8 columns were selected to be used for the analysis.



The Neighbourhood column was changed to District to better reflect the actual conditions.

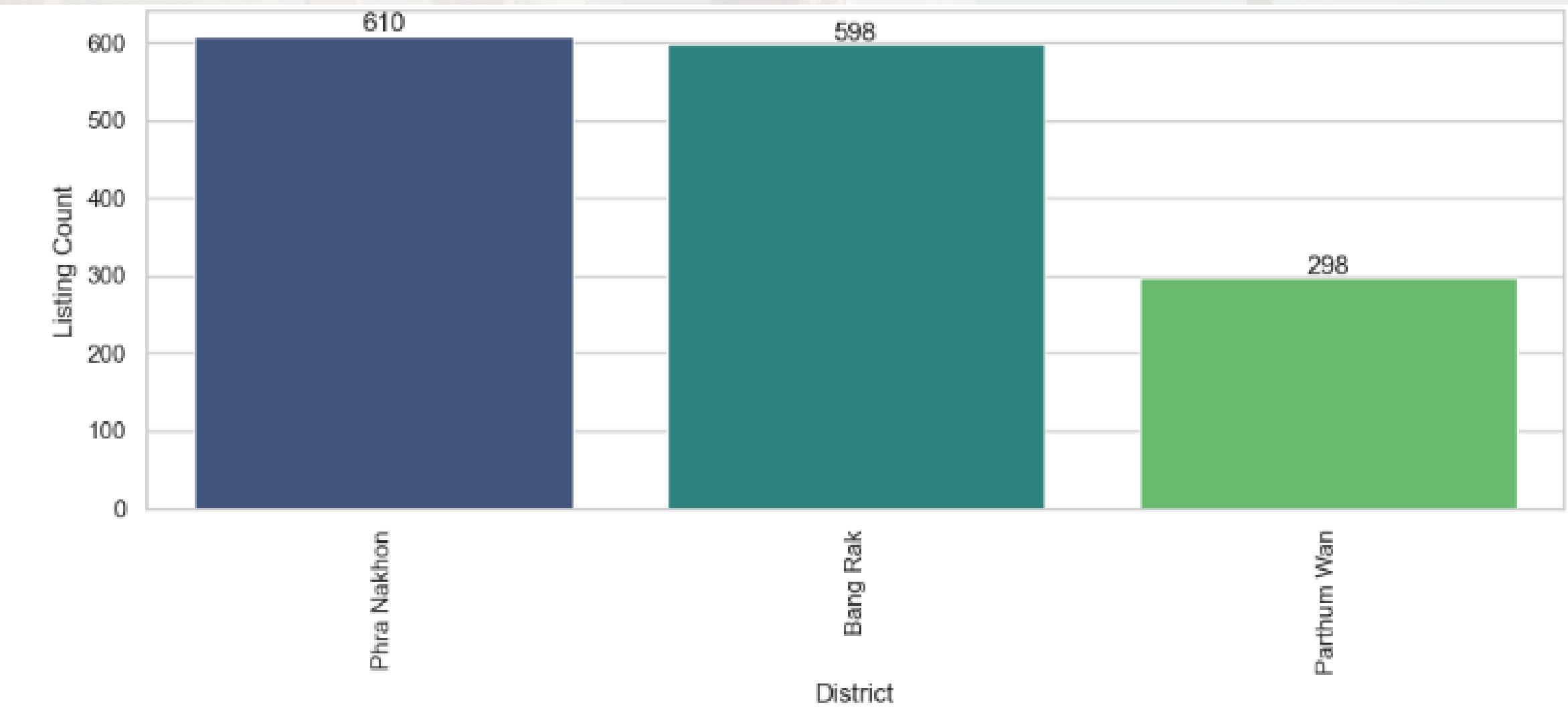


The listings considered are only those with a minimum nights value less than or equal to 3.



The listings are focused only on those located in the central areas of the Songkran festival celebrations, namely Bang Rak, Pathum Wan, and Phra Nakhon.

Analysis of Listing Count in the Songkran Festival Central Area



Bang Rak

Parthum Wan

Phra Nakhon

598
(39.71%)

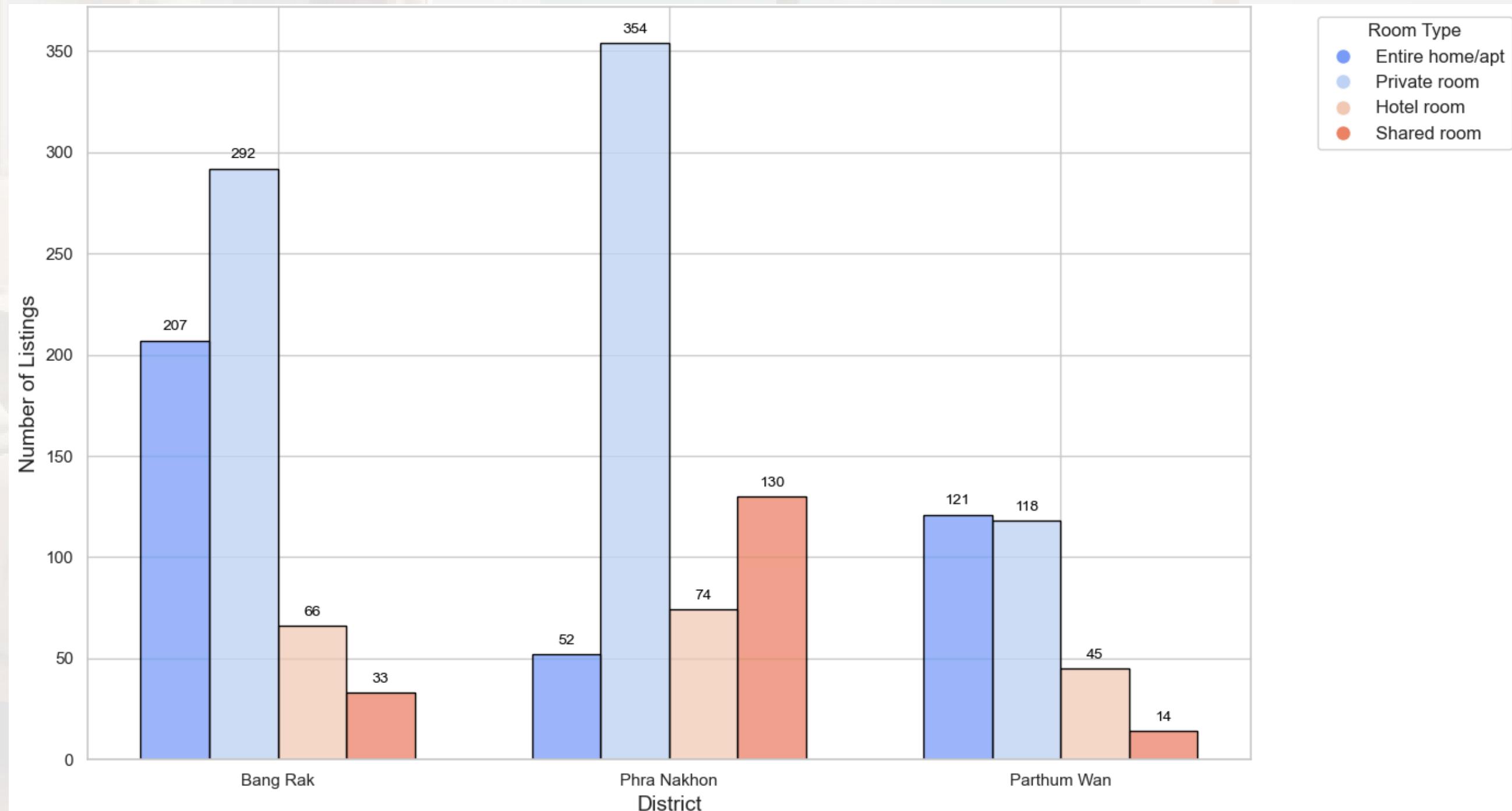
610
(40.50%)

298
(19.79%)

Total

1506

Analyze the Number of Listings in the Central Area of the Songkran Festival Based on Room Type.



Analyze the Average Listing Price in the Central Area of the Songkran Festival.



Bang Rak

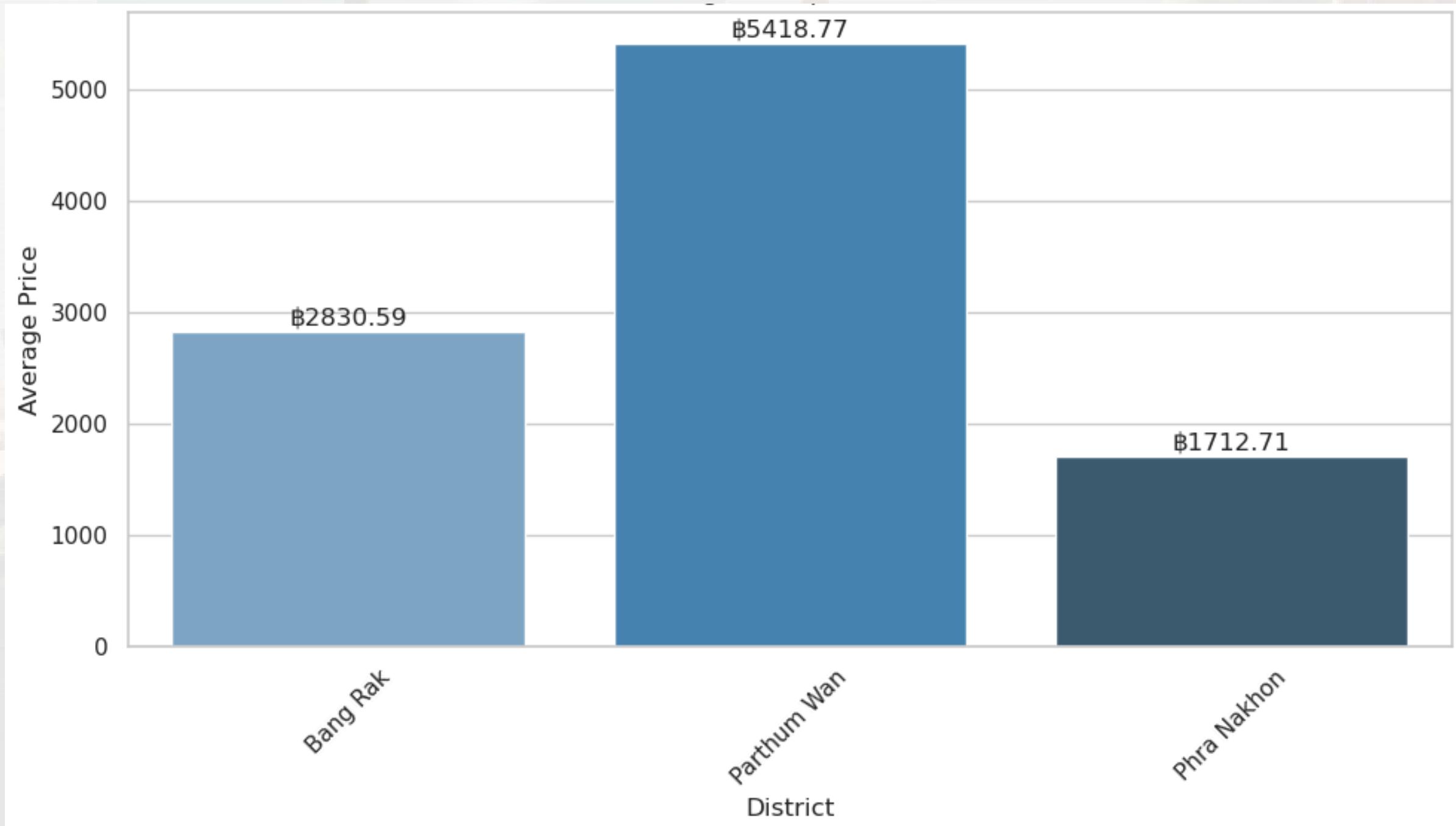
฿2830.59

Parthum Wan

฿5418.77

Phra Nakhon

฿1712.71



Keywords Segmentation



Accessibility

bts, mrt, near,min, walk,
mins, station,
airport,close,skytrain

Promotion

free, breakfast

Facility

pool, wifi, gym,rooftop,park

Aesthetics

new,cozy, luxury, view,
spacious, modern,big, 'clean',
lovely, comfy,nice

Segmentation

Price



Number of review



Keyword

Segmentation Grade



A dan B

High Price and High Reviews: When both price and reviews are high, the listing tends to receive a higher grade (A or B) depending on the additional criteria met.

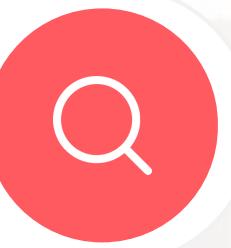
C dan D

Medium Price and Medium Reviews: When both price and reviews are moderate, the listing is generally given a middle grade (C) or lower (D), depending on the number of additional criteria met.

E

Low Price and Low Reviews: Listings with both low price and low reviews tend to receive the lowest grade (E), as their quality is considered inadequate in terms of both pricing and reviews.

Maximum Capacity for room type



1

Entire home/apt

8-12 guests



2

Private room

1-2 guests



3

Shared room

2-6 guests



4

Hotel room

1-4 guests



Segmentation at District Bang Rak



Total Listing each Grade

	Grade_BangRak	count
0	A	19
1	B	24
2	C	105
3	D	280
4	E	170

After the grade **segmentation process**, listings were classified into different grades.

	name	district	latitude	longitude	room_type	price	minimum_nights	number_of_reviews	keywords	maximum_capacity	Grade_BangRak
10	Sathorn Terrace Apartment(61)	Bang Rak	13.719340	100.517600	Private room	1150	2	27	tidak memakai keywords	(1, 2)	D
71	Inn Saladaeng - Superior hotel room	Bang Rak	13.728250	100.537740	Entire home/apt	1589	1	36	tidak memakai keywords	(8, 12)	D
166	Elegant 2-Brm Condo in Heart of Bangkok	Bang Rak	13.725430	100.538380	Entire home/apt	5195	3	95	tidak memakai keywords	(8, 12)	B
186	วรรณา น้อยพันธ์	Bang Rak	13.731800	100.523510	Private room	980	1	0	tidak memakai keywords	(1, 2)	E
227	Large 2 bedrooms apartment, Silom	Bang Rak	13.720040	100.518600	Entire home/apt	5500	2	25	tidak memakai keywords	(8, 12)	B
...
15661	Deluxe Private Room for 2 near BTS	Bang Rak	13.725475	100.528877	Private room	1262	1	0	aksesibilitas	(1, 2)	E
15693	Astounding view on river bank	Bang Rak	13.721984	100.516085	Entire home/apt	12000	1	0	estetika	(8, 12)	D
15746	Standard Private Room for 2 Near BTS	Bang Rak	13.726509	100.527823	Private room	1014	1	0	aksesibilitas	(1, 2)	E
15748	Unique room with Landmark view	Bang Rak	13.727081	100.525809	Private room	1200	2	0	estetika	(1, 2)	E
15796	Stunning river view in the heart of BKK 5min/train	Bang Rak	13.719792	100.515910	Entire home/apt	3304	2	2	aksesibilitas, estetika	(8, 12)	D

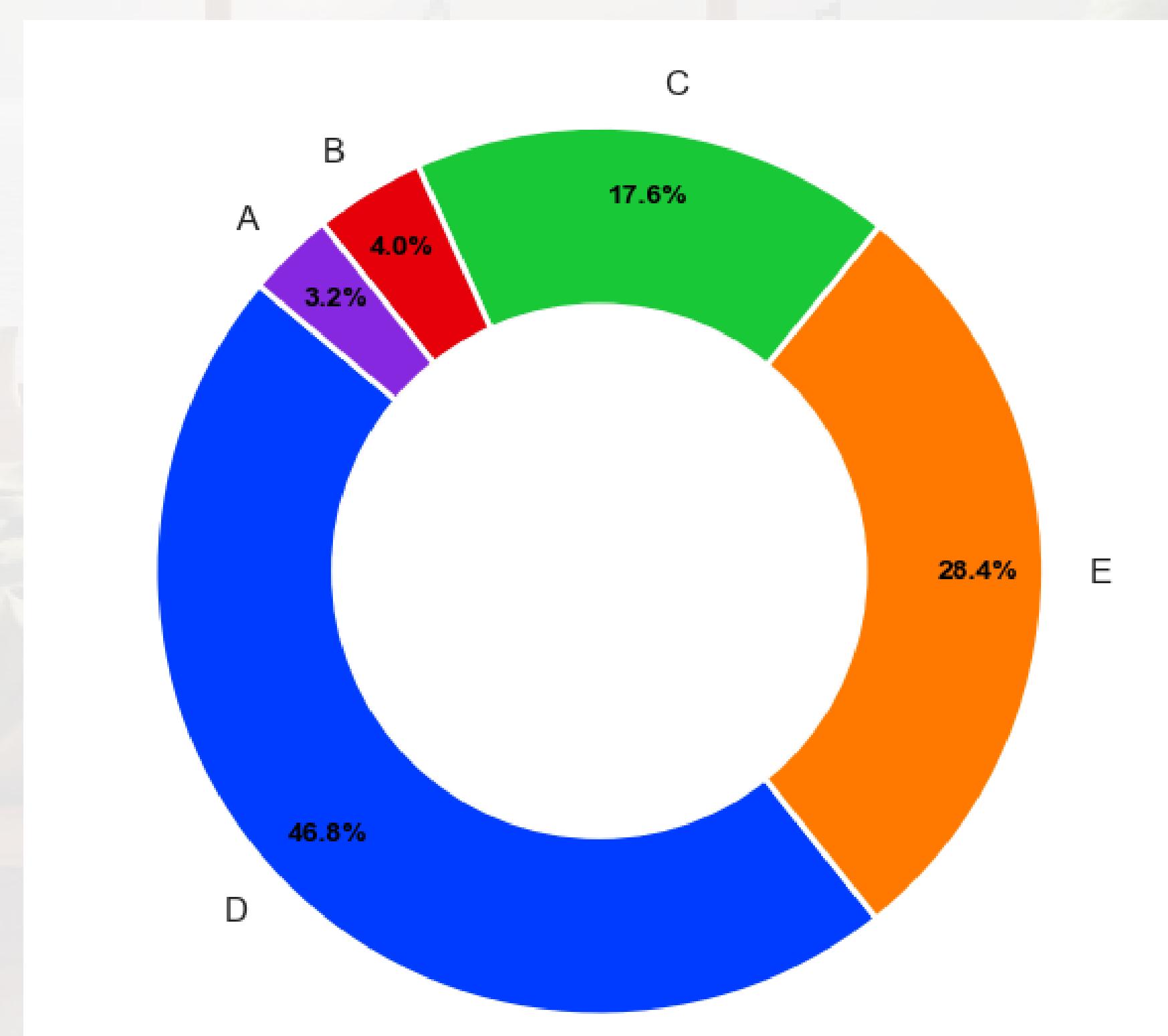
598 rows × 11 columns

Segmentation at District Bang Rak



Proportion listing each Grade Segmentation

The proportion of each grade (A, B, C, D, and E) in the Bang Rak district shows that Grades D and E account for the largest share. This indicates that a significant number of listings in this district are still of relatively low quality.



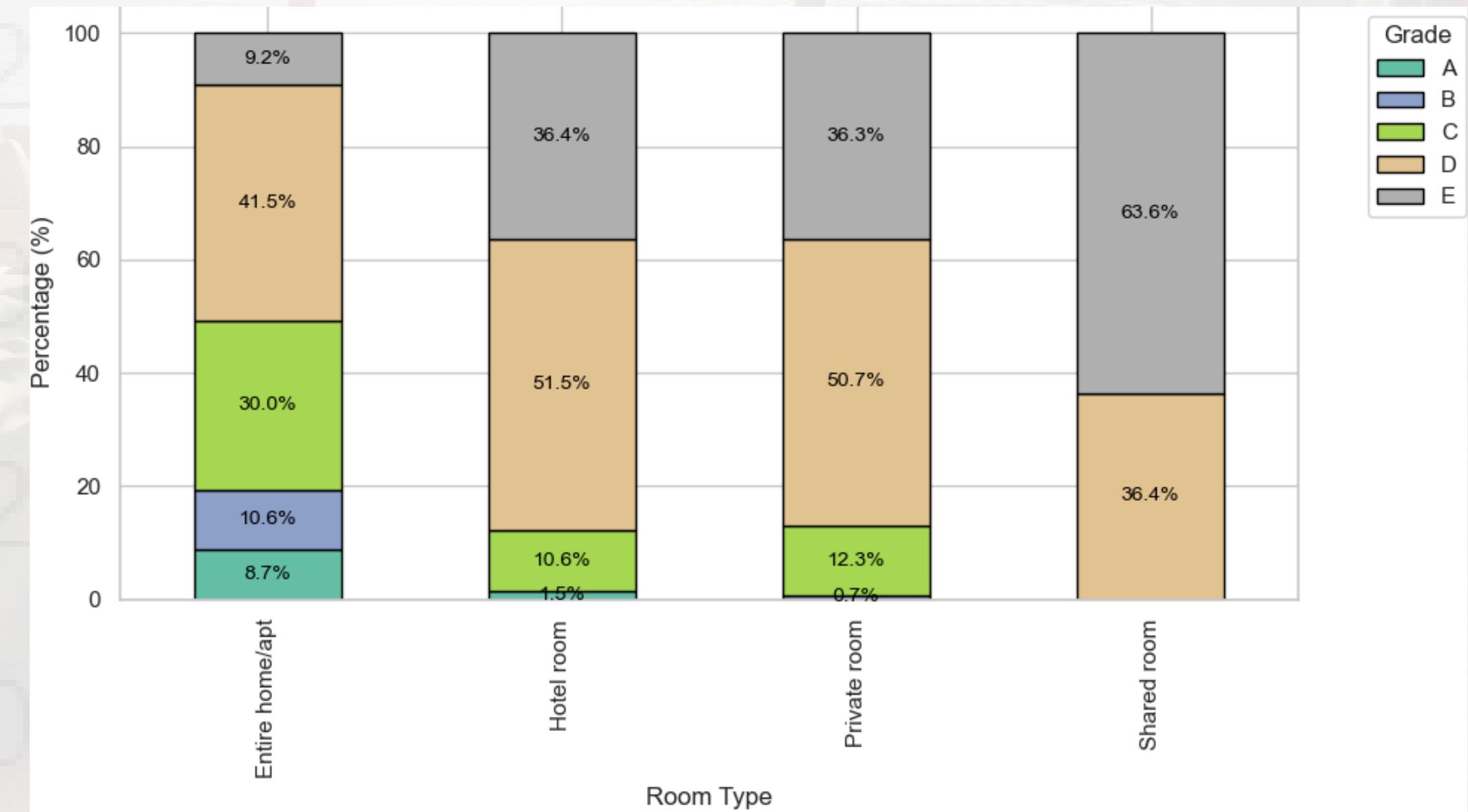
Segmentation at District Bang Rak



Total Listing Grade Segmentation each room type

Grade_BangRak	A	B	C	D	E	Total Listings
room_type						
Entire home/apt	18	22	62	86	19	207
Hotel room	1	0	7	34	24	66
Private room	0	2	36	148	106	292
Shared room	0	0	0	12	21	33

Proportion Grade Segmentation each room type



Segmentation at District Parthum Wan



Total Listing each Grade

	Grade_ParthumWan	count
0	A	3
1	B	20
2	C	57
3	D	108
4	E	110

After the grading **segmentation process**, the listings were classified into different grades, reflecting varying levels of quality and performance.

	name	district	latitude	longitude	room_type	price	minimum_nights	number_of_reviews	keywords	maximum_capacity	Grade_ParthumWan
327	Prime location,near BTS Ratchadamri	Parthum Wan	13.739540	100.539540	Entire home/apt	1351	1	53	aksesibilitas	(8, 12)	D
352	Cozy 1BR freeWifi at BTSChidlom near Erawan shrine	Parthum Wan	13.744440	100.544090	Entire home/apt	3436	1	19	aksesibilitas, promosi, fasilitas, estetika	(8, 12)	C
360	68sqm Cozy city view 1BR 2mins walk BTS Chidlom	Parthum Wan	13.743730	100.542570	Entire home/apt	3343	1	25	aksesibilitas, estetika	(8, 12)	C
385	Clean Comfy at Chidlom 2 mins toBTS	Parthum Wan	13.744680	100.543000	Private room	1586	1	15	aksesibilitas, estetika	(1, 2)	D
409	The AETAS Hotels & Residences	Parthum Wan	13.741240	100.533520	Entire home/apt	4258	1	0	tidak memakai keywords	(8, 12)	D
...
15625	Ci home 5	Parthum Wan	13.739350	100.519420	Private room	1100	1	1	tidak memakai keywords	(1, 2)	E
15626	Ci home 6	Parthum Wan	13.739260	100.519640	Private room	1236	1	0	tidak memakai keywords	(1, 2)	E
15679	Ci Home four	Parthum Wan	13.737240	100.519760	Private room	1350	1	0	tidak memakai keywords	(1, 2)	E
15699	4F Deluxe Room 2/3 Beds\nBy the Station	Parthum Wan	13.747444	100.529396	Private room	960	1	0	aksesibilitas	(1, 2)	E
15735	The Residences at Kempinski Hotel	Parthum Wan	13.739279	100.544462	Entire home/apt	5900	3	0	tidak memakai keywords	(8, 12)	E

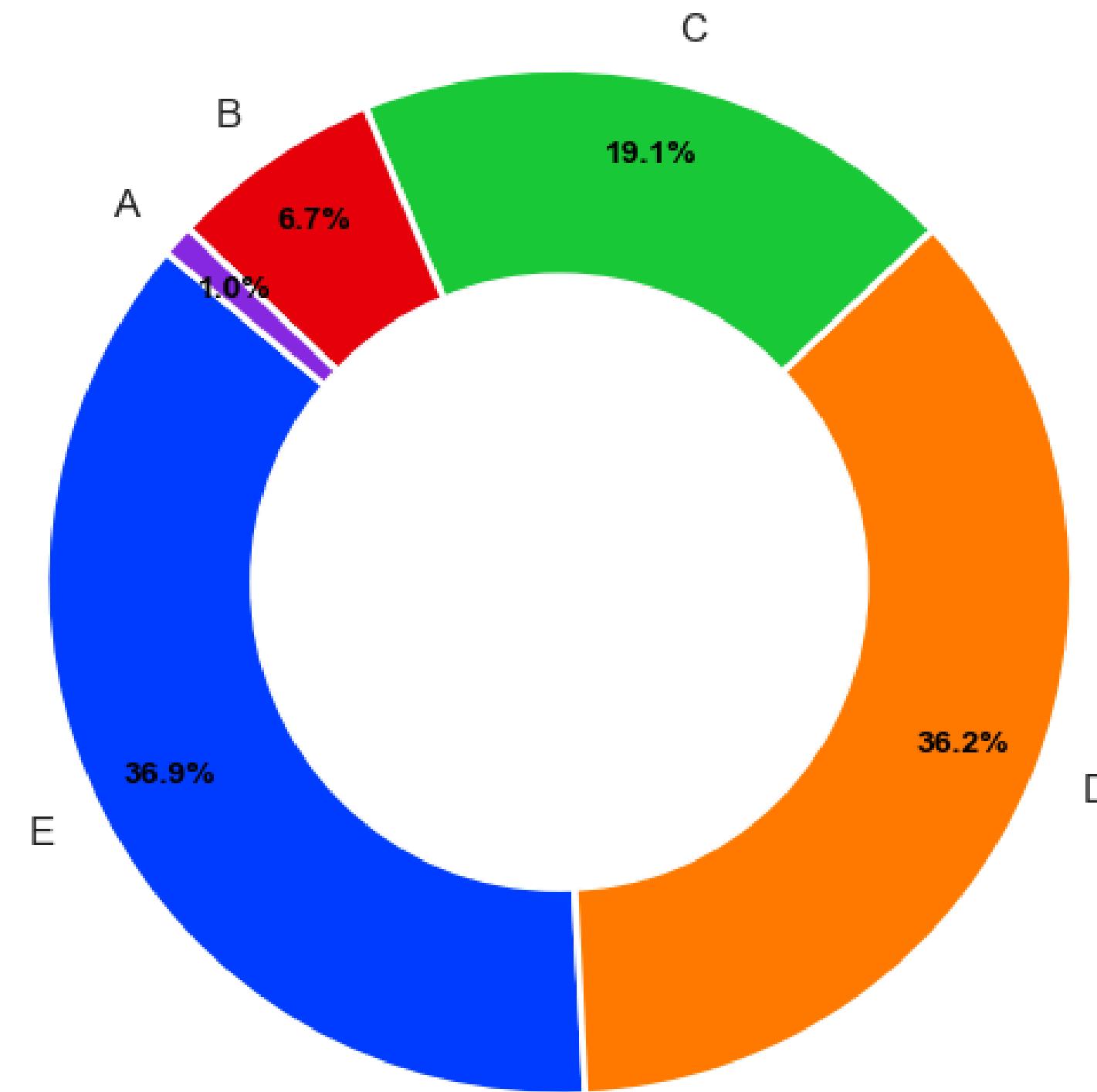
298 rows × 11 columns

Segmentation at District Parthum Wan



Proportion listing each Grade Segmentation

The proportion of each grade (A, B, C, D, and E) in the Bang Rak district shows that Grades D and E dominate the listings, indicating that a significant number of accommodations in this area are still of relatively low quality.

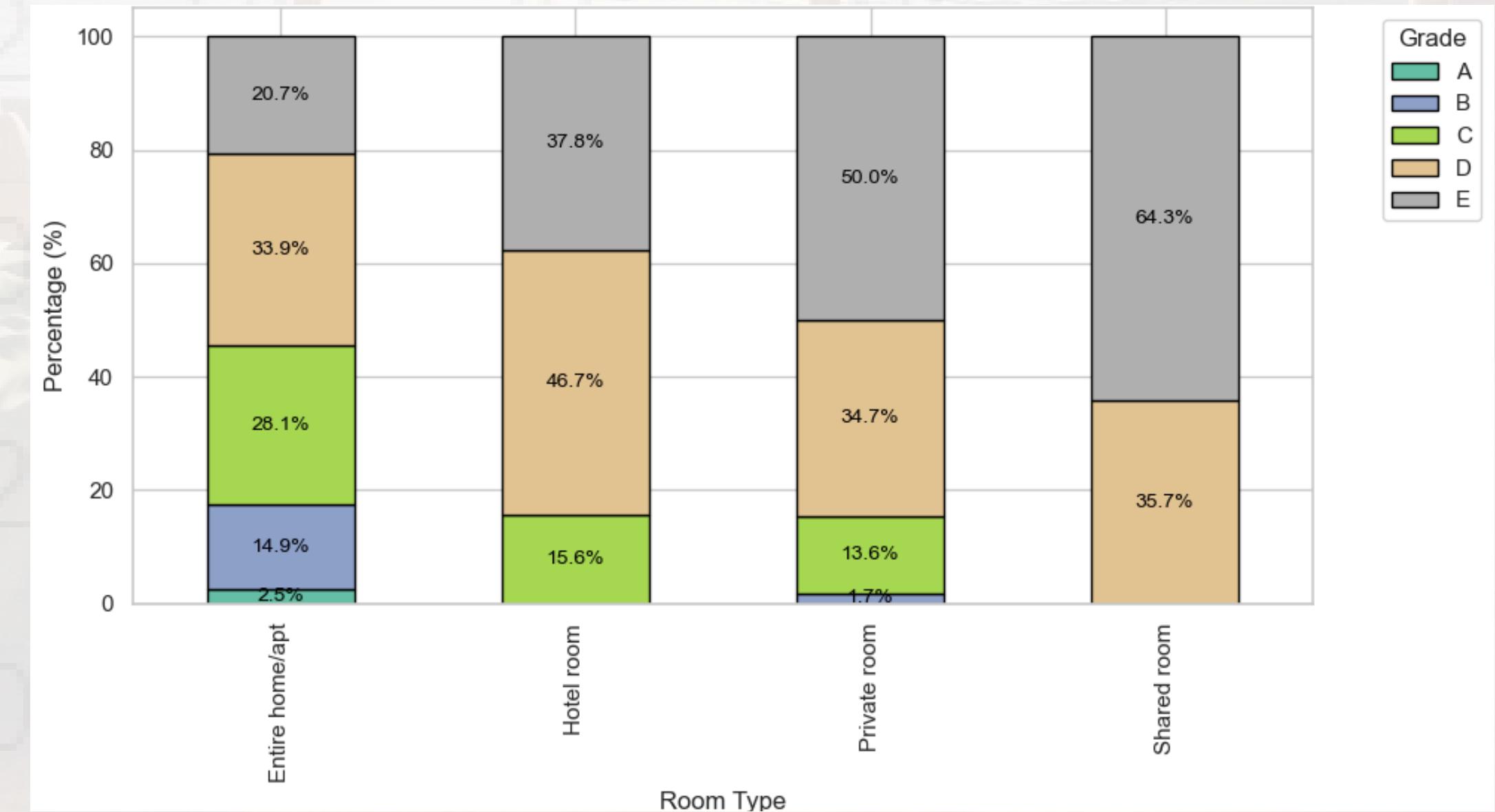


Segmentation at District Parthum Wan

Total Listing Grade Segmentation each room type

Grade_ParthumWan	A	B	C	D	E	Total Listings
room_type						
Entire home/apt	3	18	34	41	25	121
Hotel room	0	0	7	21	17	45
Private room	0	2	16	41	59	118
Shared room	0	0	0	5	9	14

Proportion Grade Segmentation each room type



Segmentation at District Phra Nakhon



Total Listing each Grade

	Grade_PhraNakhon	count
0	A	3
1	B	28
2	C	120
3	D	253
4	E	206

After the grading **segmentation process**, the listings were categorized into different grades.

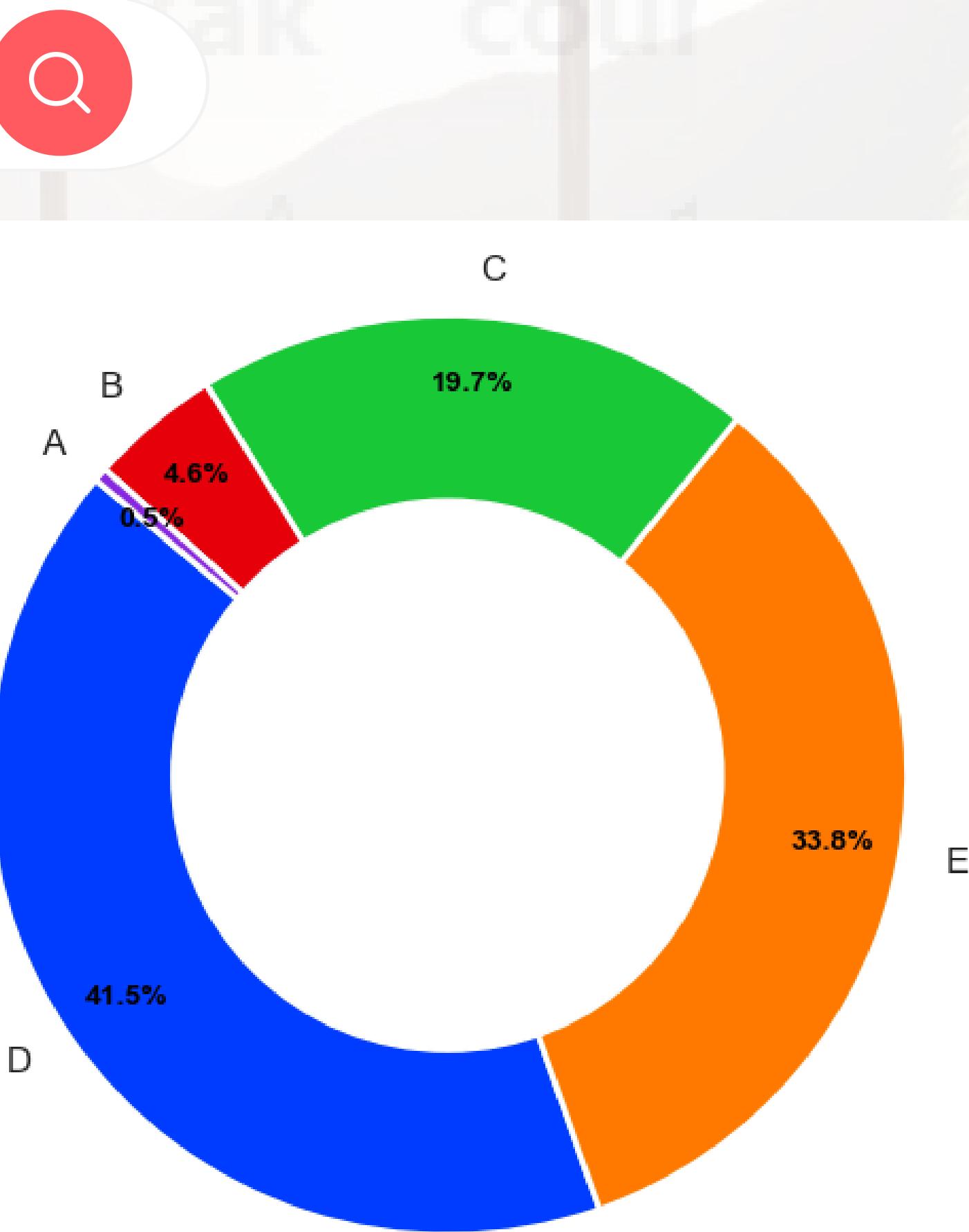
name	district	latitude	longitude	room_type	price	minimum_nights	number_of_reviews	keywords	maximum_capacity	Grade_PhraNakhon
Near Bangkok more space than urban!	Phra Nakhon	13.751350	100.494470	Shared room	5195	1	0	aksesibilitas	(2, 6)	D
Feung Nakorn Room with Breakfast in Old town BKK	Phra Nakhon	13.747710	100.499310	Private room	3545	1	61	promosi	(1, 2)	B
2BR Family friendly B&B in old town BKK	Phra Nakhon	13.749410	100.497190	Private room	3892	1	2	tidak memakai keywords	(1, 2)	C
Triple room,Near Grand Palace	Phra Nakhon	13.747700	100.497830	Hotel room	3910	1	10	aksesibilitas	(1, 4)	B
Suneta Hostel Khaosan - 1 bed in Cabin Dormitory	Phra Nakhon	13.759890	100.499900	Shared room	496	1	31	tidak memakai keywords	(2, 6)	D
...
Cozy space for solo traveler	Phra Nakhon	13.755829	100.501180	Private room	638	1	0	estetika	(1, 2)	E
Khaosan DD Standard Bangkok	Phra Nakhon	13.760287	100.497238	Private room	1078	1	0	tidak memakai keywords	(1, 2)	E
Khaosan DD Superior BKK'	Phra Nakhon	13.758009	100.497058	Private room	1112	1	0	tidak memakai keywords	(1, 2)	D
Economy room for a solo traveler	Phra Nakhon	13.754990	100.502250	Private room	681	1	0	tidak memakai keywords	(1, 2)	E
Boutique room near Khaosan Road	Phra Nakhon	13.756073	100.501863	Private room	1500	1	0	aksesibilitas	(1, 2)	D

610 rows × 11 columns

Segmentation at District Phra Nakhon

Proportion listing each Grade Segmentation

The proportion of each grade (A, B, C, D, and E) in the Bang Rak district shows that Grades D and E have the highest number of listings, indicating that many accommodations in this district are still of relatively low quality.



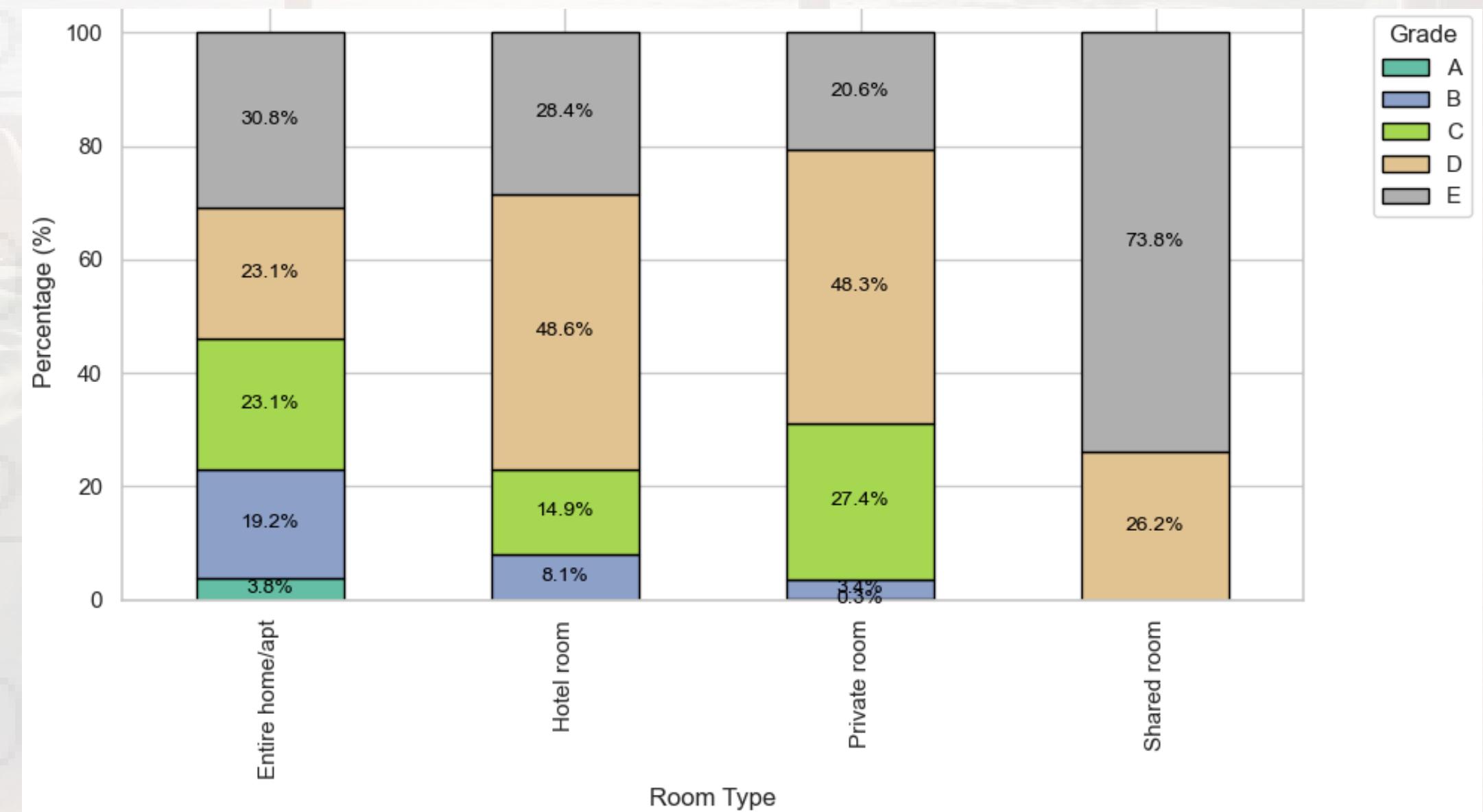
Segmentation at District Phra Nakhon



Total Listing Grade Segmentation each room type

Grade_PhraNakhon	A	B	C	D	E	Total Listings
room_type						
Entire home/apt	2	10	12	12	16	52
Hotel room	0	6	11	36	21	74
Private room	1	12	97	171	73	354
Shared room	0	0	0	34	96	130

Proportion Grade Segmentation each room type



Proportion of Tourist Distribution and Number of Listings

The estimate of over 400,000 international tourists attending the 2023 Maha Songkran World Water Festival can be pieced together from several sources discussing the scale of tourism during Songkran in 2023. The Tourism Authority of Thailand (TAT) had anticipated a strong recovery in tourism due to the easing of travel restrictions, with Bangkok and other popular tourist destinations seeing a significant influx of visitors during the Songkran holiday.

Articles on platforms such as Thai PBS World and Nation Thailand reported the festival's impact on boosting tourism and local businesses, as well as preparations for increased arrivals. The reopening of borders and resumption of festivities were highlighted as key factors contributing to the large turnout

source: <https://thaiest.com/blog/water-festival-bangkok>

Based on the data above, it is estimated that around **300,000 tourists** will visit Bangkok, the most popular destination. The following chart shows the proportion of tourist distribution and the number of listings available for the Songkran festival across the main districts where the celebrations take place.

Proportion of Tourist Distribution and Number of Listings

Proportion Tourist Distribution Each Room Type

10% prefer entire home/apt

35% prefer private room

35% prefer hotel room

20% prefer shared room

Total Occupied Listings : 1505
without Accommodation: 199 Tourists

Estimated Distribution of Tourists and Listings by Room Type

Room Type	Tourist	Total Listing
Entire home/apt	30000	150
Private room	105000	527
Hotel room	105000	527
Shared room	60000	301

Conclusion



1. Segmentation

Listings in the **higher price range** tend to receive higher grades (A or B), while more affordable listings are mostly concentrated in the lower grades. **The keywords** used in the segmentation serve as distinguishing factors that highlight the quality differences across listings.

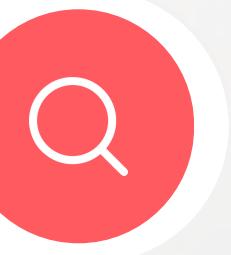
2. Marketing Strategy

After the segmentation, listings were classified into **grades A, B, C, D, and E**. The appropriate marketing strategy is to **provide recommendations** on the Airbnb website based on each grade and room type.

3. Strategi Peningkatan Kualitas

Listings in the three districts are largely concentrated in grades D and E. **To improve quality**, training sessions or the provision of information can be implemented to help hosts enhance their listings.

Bussiness Recommendations



Guidelines Peningkatan Kualitas

Guidelines on the Airbnb website for improving listing quality

GUIDELINES



Kampanye Pemasaran Terarah

Targeted campaigns based on each grade in the segmentation (email, social media, or advertisements)



Penawaran Bundling

Collaboration with tour service and vehicle rental providers, along with special discounts for bundled users.

BUNDLE OFFER

Program Berbayar

A paid subscription scale that offers additional benefits for hosts, such as improved search rankings or listing optimization tools.





thank
you