ABC Company Property Listings

RevoU Full Stack Data Analytics
Week 2 - Week 3, January 2023

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Company Brief

The company mission is to provide various available choices of property to their users. They are providing property listings around Kuala Lumpur and other big cities in Malaysia. As the data analyst of this company, you are expected to deliver insights for the company which can help the company to maximize their profit while helping users and tenants at the same time.

Brief

Mrs. Wang, as your head of Data, gives you the task to perform end-to-end analysis (cleaning, EDA, and regression) and provide insights from the dataset provided. She also recommends you to study about the domain knowledge of Property in Malaysia before you deep dive to analyze the dataset

Understand Business Problem

Given data will help us to answer business problem by create descriptive analysis to give insight to company and customer candidate to help them buying the rights property

Data Cleaning

The data must be clean first before examine to prevent bias and determine the quality of the data

EDA, Findings and Recommendation

We can start from do Descriptive statistics to see data distribution, then we continue to Exploratory Data Analytics to see the pattern and give recommendation

We do the data cleaning steps by remove and replace

Data Cleaning Steps		
Steps	Reason	Notes
Replace	Studio with 1 rooms because studio it has to have a room	
	value addition in Rooms column	
	fixed in column size	Blanks, 0 measure, Unnecessary Character, Multiple operation to exact number
Remove	(:) in property character	character uniformity
	price 1800 in KLCC Location	
	sq.m value in property column	Character uniformity
	RM, Kuala Lumpur, sq ft	redundant steps (splite text to coulumn > Delete)
	value 17 in size column	

Property Listings - Descriptive Statistics

Price (in RM)	
Mean	2,058,814
Standard Error	230,796
Median	1,400,000
Mode	630,000
Standard Deviation	1,802,572
Sample Variance	3,249,264,915,011
Kurtosis	2
Skewness	2
Range	7,630,000
Minimum	370,000
Maximum	8,000,000
Sum	125,587,650
Count	61
Largest(1)	8,000,000
Smallest(1)	370,000
Confidence Level(95%)	461,660

Findings :

- There's an small outlier if we see mean and median
- Slightly positive skewed
- Minimum price cost 370000
- Maximum price cost 8000000
- There's 61 property avaiable in ampang

Property Listings - Descriptive Statistics

Rooms	
Mean	4.00
Standard Error	275,990,054.00
Median	4.00
Mode	4.00
Standard Deviation	2,028,104,422.00
Sample Variance	4,113,207,547.00
Kurtosis	-1,061,876,809.00
Skewness	-14,092,721.00
Range	7.00
Minimum	1.00
Maximum	8.00
Sum	216.00
Count	54.00
Largest(1)	8.00
Smallest(1)	1.00
Confidence Level(95,0%)	553,565,946.00

Findings :

- Base on mean and median, we can assumed no negative outlier
- Highly negative skewed
- Minimum room at the property is 1 which is studio room
- Maximum room at the property is 8
- Average room available on the property is 4

Property Listings - Descriptive Statistics

Bathrooms	
Mean	3,777,777,778
Standard Error	291,585,543
Median	4
Mode	1
Standard Deviation	2,142,707,392
Sample Variance	4,591,194,969
Kurtosis	-1,171,571,415
Skewness	276,478,752
Range	7
Minimum	1
Maximum	8
Sum	204
Count	54
Largest(1)	8
Smallest(1)	1
Confidence Level(95,0%)	584,846,536

Findings :

- Average property which available have 4 bathroom
- Minimum bathroom available at studio/1 room
- 8 bathroom available at the highest price property

**Property Listings - Descriptive Statistics**

Car Parks	
Mean	1,259,259,259
Standard Error	127,287,415
Median	1
Mode	2
Standard Deviation	935,367,654
Sample Variance	874,912,648
Kurtosis	-1,023,763,375
Skewness	23,778,176
Range	3
Minimum	0
Maximum	3
Sum	68
Count	54
Largest(1)	3
Smallest(1)	0
Confidence Level(95,0%)	255,306,223

Findings :

- Average car parks available is 1
- The most property have 2 car parks
- Property which doesnt have car parks dominate by bungalow, condominium and service residence
- Highly positive skewed

Property Listings - Luxury Property (Q3-Q4)

Rooms	Property Count
4	666
5	663
6	368
3	199
7	156
2	155
1	44
8	43
9	10
10	3
20	1
14	1
13	1
12	1
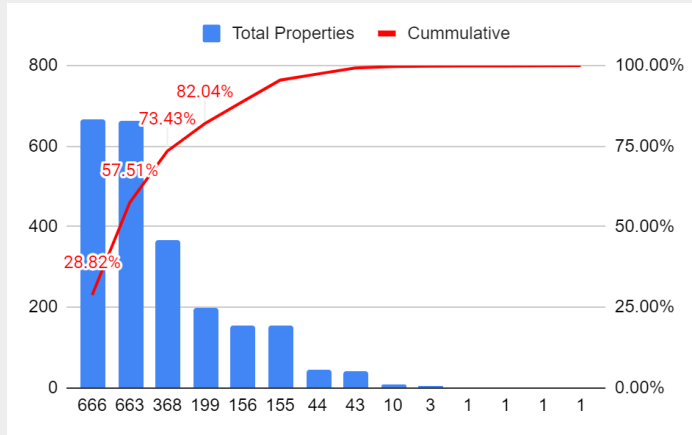
Based on EDA, we find

- Property with 4 rooms have the most unit available
- Property with 3,4,5,6 is dominate by 82,04% properties availability
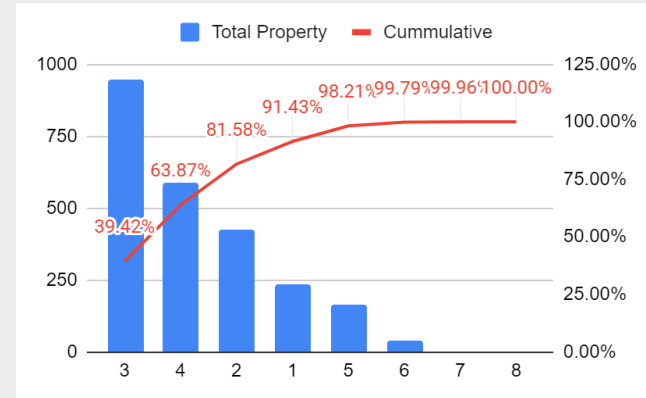
Property Listings - Luxury Property (Q3-Q4)

Property Type	Property Availability	Ratio Unit Availability	Total Size (sq ft)	Price (in RM)
Condominium	541	23.41%	1,523,110	2,150,000
Condominium (Corner)	315	13.63%	882,814	2,180,000
Serviced Residence	206	8.91%	378,353	2,390,000
Bungalow	159	6.88%	1,405,935	6,680,000
Serviced Residence (Corner)	112	4.85%	256,660	2,700,000

Findings

- Top 3 property is dominate by condominium with 23,41%, followed by condominium (corner) 13.63% and serviced residence by 8.91%
- Bungalow (corner) is the most expensive at company listings by 50 million RM price
- Condominium corner is the cheapest property at range Q3-Q4 at 1303000 RM price
- Condominium have the most availability units at listings as much as 541 units

Property Listings - Affordability Property (Q1-Q2)

Rooms	Property Count
3	948
4	588
2	426
1	237
5	163
6	38
7	4
8	1

Findings

- Property is dominate by 2,3,4 rooms availability
- Property with 2 - 4 rooms is dominate with 81.58% availability
- There's property with 8 room's is studio type

Property Listings - Affordability Property (Q1-Q2)

Property Type	Property Availability	Property Size (sq ft)	Property Price (in RM)
Condominium	575	1,228	765,000
Serviced Residence	424	906	670,000
Condominium (Intermediate)	279	1,224	680,000
Townhouse (EndLot)	1	2,336	1,250,000
Flat (Corner)	1	550	130,000

Findings

- Our property type is dominate by condominium by 575 units availability followed by serviced residence with 424 and condominium (intermediate) with 279 units
- Townhouse (Endlot) is the most expensive property in Q1-Q2 range (Median 1250000 RM)
- Flat (Corner) is the most affordable property in Q1-Q2 range (Median 130000 RM)
- Both townhouse (endlot) and flat (corner) only have 1 unit each

Insight

- Affordability property are intended for newly married couple or small family with 3 members
- This property is suitable for people with salary 1500 - 4500 RM per month

Property Listings - Insights

Insight

- Affordability property is suitable for people with salary 1500 - 4500 RM per month
- Based on room availability, the most affordable properties available at Q1-Q2 listings, this property we can maximized market penetration to whoever people which just about to buy a properties. Also people just getting married and about to start living
- Luxury Property Q3-Q4 properties is aimed to rich people who needs privacy and more rooms for their family and rooms for working space for example they need at least 4 rooms
- We can arrange our strategiest to aimed the righ people to buy properties based on age and salary, make the property is the right solution and we can maximized our profit instead to push selling the most expensive properties to anyone
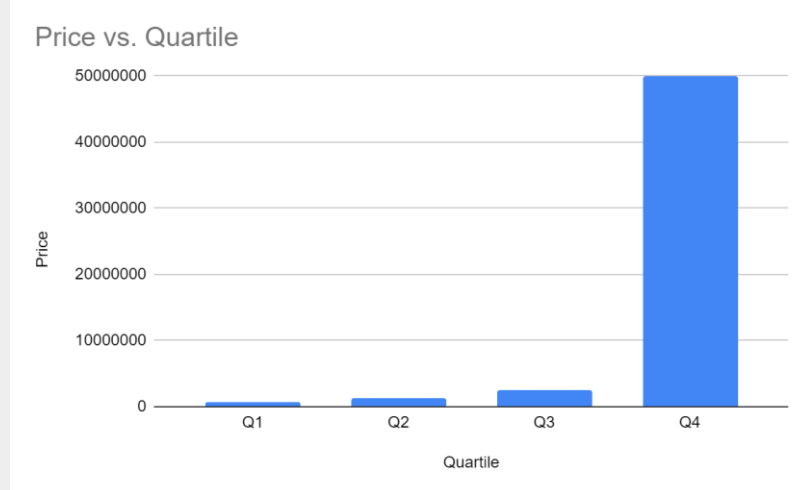
Statistics

Thanks

Intermediate Assignment
Week 2&3 - RevoU FSDA JAN23