



EXPLORATORY DATA ANALYSIS

OYO Rooms

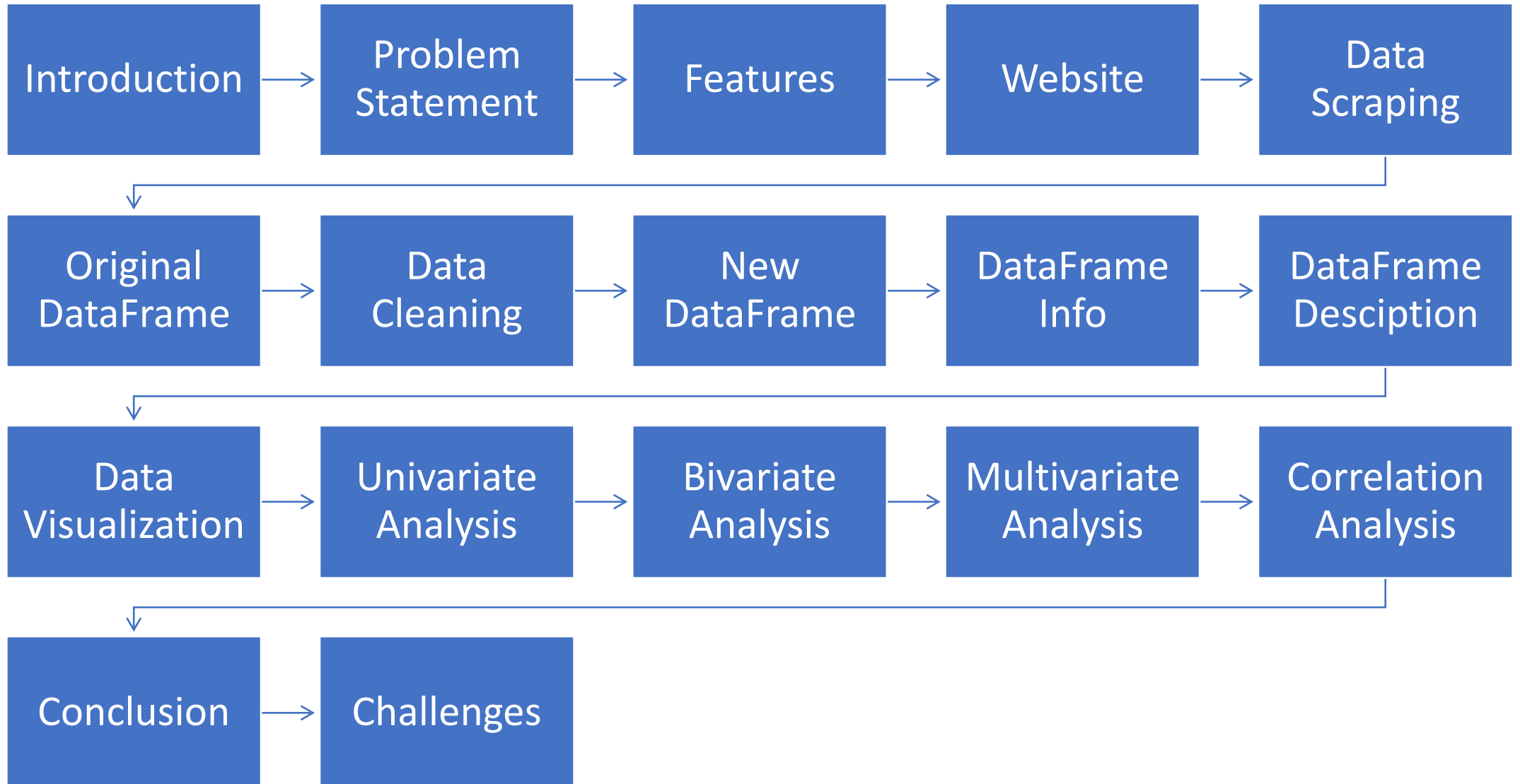
Presented By:

Sourav Kumar Jha



OYO
ROOMS

Coming Up Next..





Problem Statement

Comparative Analysis of different features between two major Cities in terms of OYO Rooms

- Hyderabad
- Delhi



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Major Features for Analysis

- Offer Price
- Discounts
- Categories
- Original Price
- Ratings
- Features of the Hotels



DataFrame

```
df.head()
```

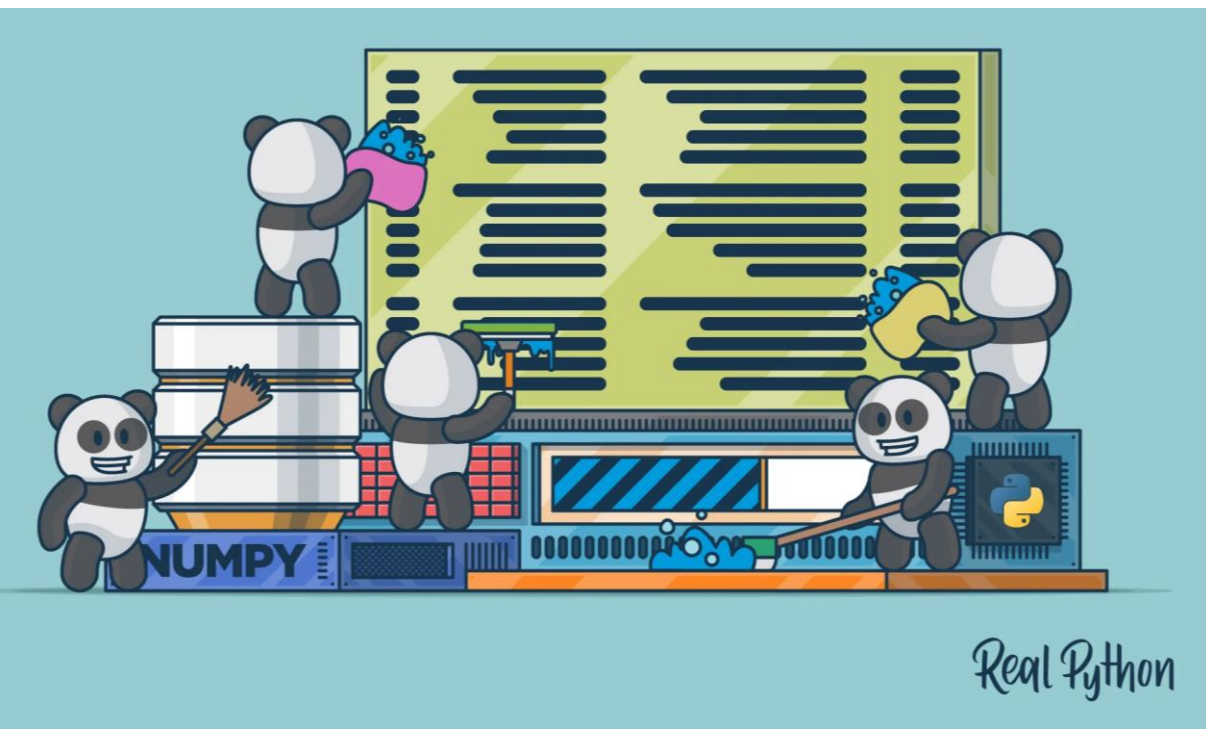
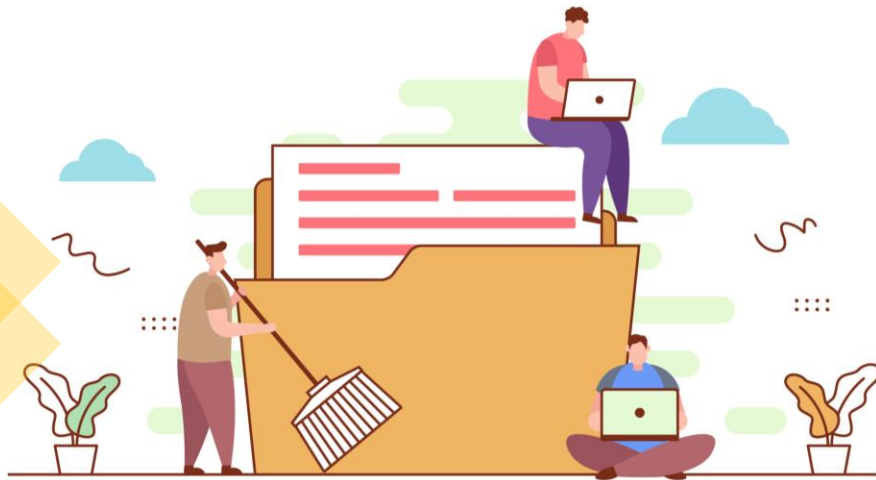
	Hotel Name	Cost Per Night	Rating	Features	Location
0	OYO 28715 Acclaim	₹500₹196374% offper room per nightView Details...	4.5 (6 Ratings)-Excellent	Hair Dryer Reception Free Wifi + 15 more	Near Abdul Gaffar Khan Marg, Vasant Kunj, Delhi
1	Capital O 88089 Hotel Elite	₹549₹254778% offper room per nightView Details...	4.5 (74 Ratings)-Excellent	Parking Facility Reception Free Wifi + 14 ...	India, Delhi
2	OYO 87715 Comfort In	₹541₹202573% offper room per nightView Details...	4.6 (136 Ratings)-Excellent	Elevator Free Wifi Geyser + 7 more	India, Delhi
3	OYO 87875 Krazy Home	₹500₹192574% offper room per nightView Details...	4.5 (15 Ratings)-Excellent	Elevator Free Wifi Geyser + 6 more	India, Delhi
4	OYO 22355 Hotel Istay	₹699₹237170% offper room per nightView Details...	4.6 (176 Ratings)-Excellent	Reception Free Wifi Power backup + 13 more	Near New Delhi Railway Station, Delhi

```
df.head()
```

	Hotel Name	Cost Per Night	Rating	Features	Location
0	SPOT ON 37214 Classic Lodge	₹406₹119065% offper room per nightView Details...	4.5 (870 Ratings)-Excellent	AC Parking Facility Elevator + 8 more	Near Board Of Intermediate Office, Hyderabad- ...
1	OYO 24204 Nav Bharath Residency	₹978₹301767% offper room per nightView Details...	4.4 (988 Ratings)-Very Good	Reception Free Wifi Power backup + 17 more	Near Central Gurudwara Saheb, Gowliguda, Hyder...
2	OYO 35467 Shiridi Residency	₹1014₹222654% offper room per nightView Detail...	4.7 (937 Ratings)-Excellent	Reception Free Wifi Security + 10 more	Near Chermas, Abids, Hyderabad- 1.3 km
3	SPOT ON 75815 Hotel Kanha Residency	₹338₹123372% offper room per nightView Details...	3.8 (394 Ratings)-Good	TV	India, Hyderabad- 3.1 km
4	OYO 74978 Hotel Aadaab	₹646₹231772% offper room per nightView Details...	3.3 (240 Ratings)-Fair	Reception Free Wifi 24/7 Checkin + 12 more	Near Nampally railway station, Mahesh Nagar, H...

Data Cleaning

- Identifying Null Values
- Identifying Missing Values
- Treating rows and columns with null values and missing values using Mean, Median & Mode
- Data Mugging, using regular expressions
- Treating columns and converting required columns from object to int or float datatype



DataFrame

```
In [46]: d3.head()
```

	City	Category	Hotel_Name	Locality	Original Price	Discount	Offer Price	Star Rating	Rating	Remarks	Wi-Fi	CCTV Cameras	Doctor on Call	Parking Facility	Power backup	Elevator	Reception	AC
0	Hyderabad	SPOT ON	ON 37214 Classic Lodge	Near Board Of Intermediate Office	1190.0	65.0	406.0	4.5	870	Excellent	no	no	no	no	no	no	no	no
1	Hyderabad	OYO	24204 Nav Bharath Residency	Near Central Gurudwara Saheb	3017.0	67.0	978.0	4.4	988	Very	yes	yes	yes	yes	yes	yes	yes	yes
2	Hyderabad	OYO	35467 Shiridi Residency	Near Chermas	2226.0	54.0	1014.0	4.7	937	Excellent	yes	yes	yes	yes	yes	yes	yes	yes
3	Hyderabad	SPOT ON	ON 75815 Hotel Kanha Residency	India	1233.0	72.0	338.0	3.8	394	Good	no	no	no	no	no	no	no	no

```
In [97]: d3.shape
```

```
Out[97]: (326, 18)
```

```
d3.info()
```

```
<class 'pandas.core.frame.DataFrame'>
```

```
RangeIndex: 326 entries, 0 to 325
```

```
Data columns (total 18 columns):
```

#	Column	Non-Null Count	Dtype
0	City	326 non-null	object
1	Category	326 non-null	object
2	Hotel_Name	326 non-null	object
3	Locality	326 non-null	object
4	Original Price	326 non-null	float64
5	Discount	326 non-null	float64
6	Offer Price	326 non-null	float64
7	Star Rating	326 non-null	float64
8	Rating	326 non-null	int64
9	Remarks	326 non-null	object
10	Wi-Fi	326 non-null	object
11	CCTV Cameras	326 non-null	object
12	Doctor on Call	326 non-null	object
13	Parking Facility	326 non-null	object
14	Power backup	326 non-null	object
15	Elevator	326 non-null	object
16	Reception	326 non-null	object
17	AC	326 non-null	object

```
dtypes: float64(4), int64(1), object(13)
```

```
memory usage: 46.0+ KB
```

DataFrame Info

DataFrame Description Numerical Columns

```
d3.describe()
```

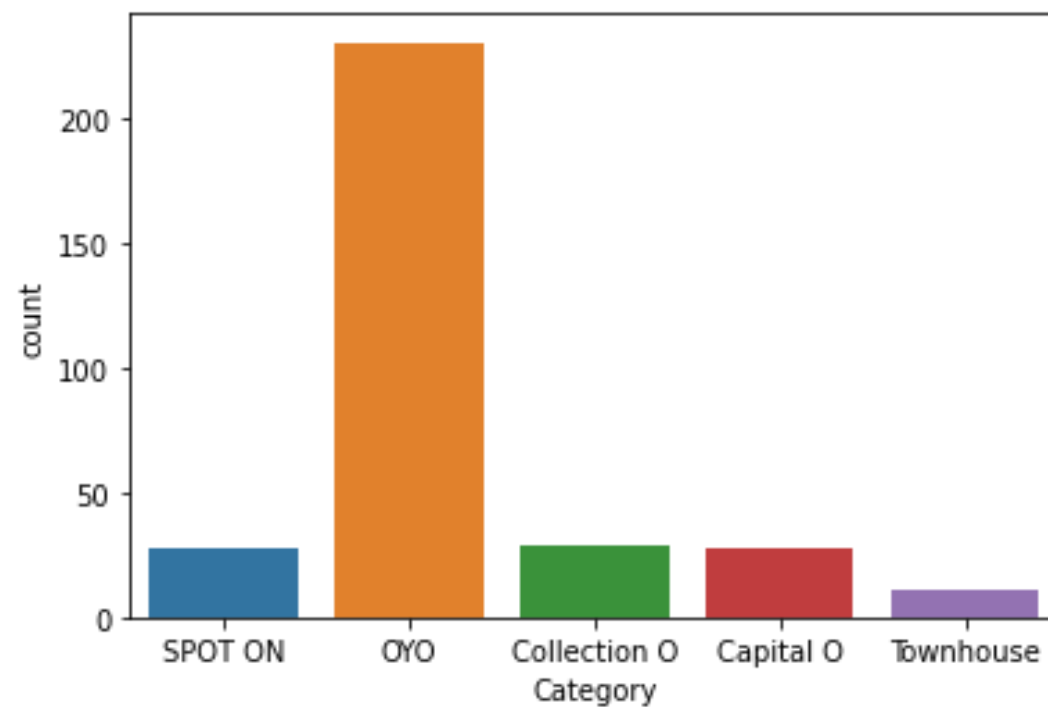
	Original Price	Discount	Offer Price	Star Rating	Rating
count	326.000000	326.000000	326.000000	326.000000	326.000000
mean	2051.950704	61.226481	838.000000	3.846497	420.892638
std	529.206196	9.497575	337.963293	0.597485	811.978930
min	1000.000000	47.000000	266.000000	1.600000	0.000000
25%	1797.000000	54.000000	625.000000	3.400000	4.000000
50%	2051.950704	61.226481	775.000000	3.900000	8.000000
75%	2260.250000	69.000000	947.500000	4.300000	433.750000
max	4441.000000	83.000000	2332.000000	4.900000	5131.000000

Data Visualization



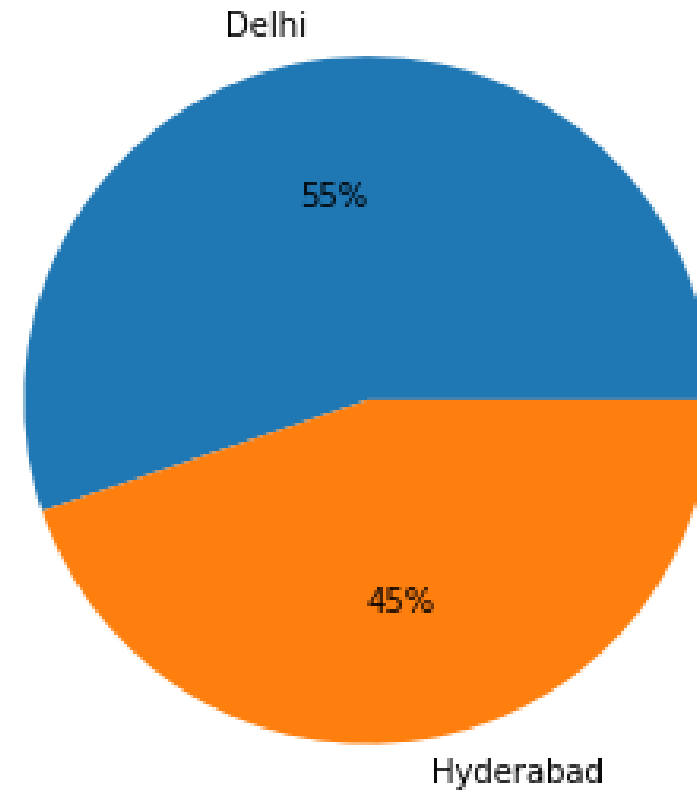
OYO are in Top Category

Category	
OYO	230
Collection O	29
SPOT ON	28
Capital O	28
Townhouse	11



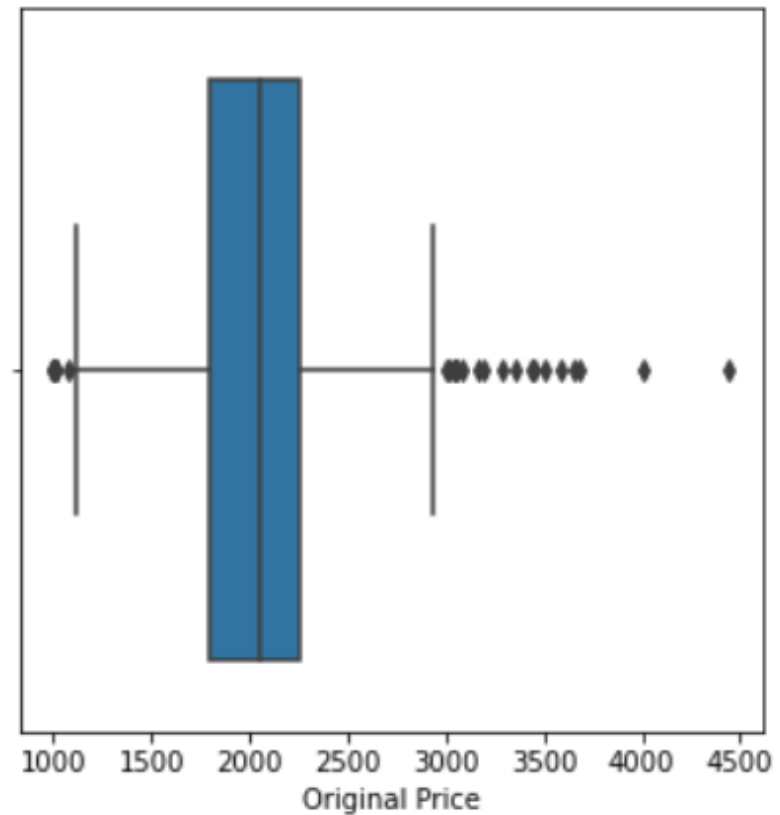
Delhi has a greater number of OYO's

City	
Delhi	180
Hyderabad	146

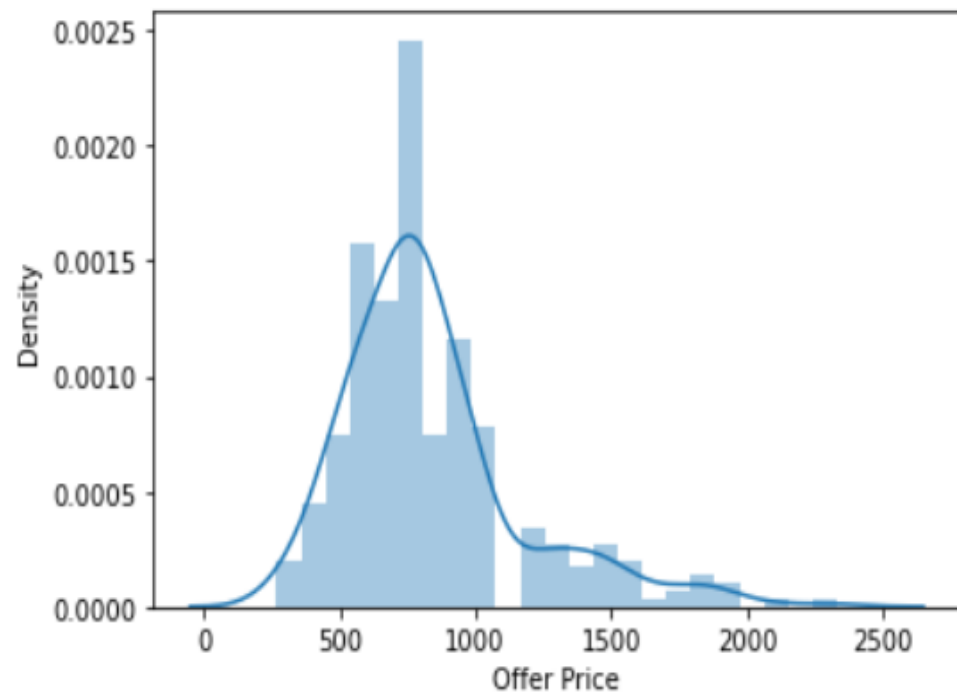


Original Price

```
count    326.000000
mean     2051.950704
std       529.206196
min      1000.000000
25%      1797.000000
50%      2051.950704
75%      2260.250000
max      4441.000000
Name: Original Price, dtype: float64
```

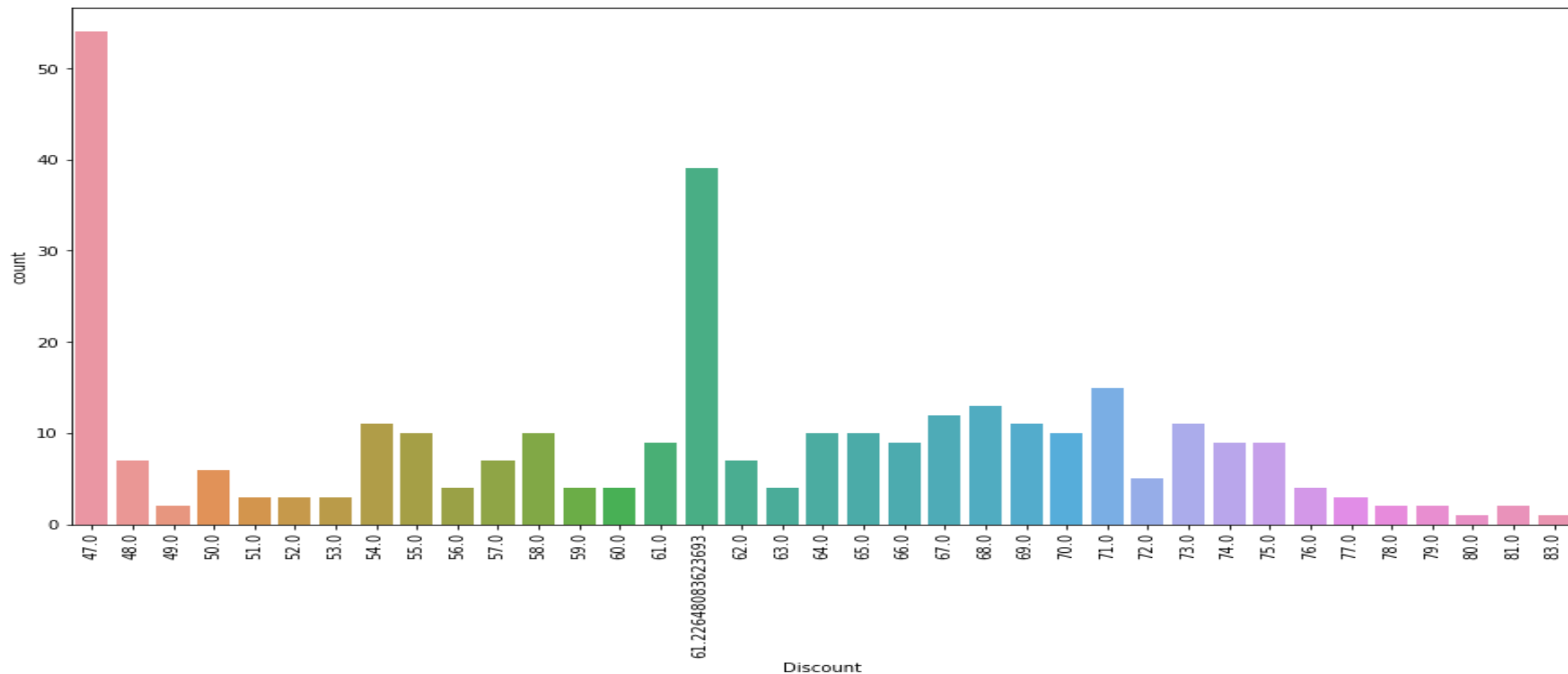


Offer Pricing

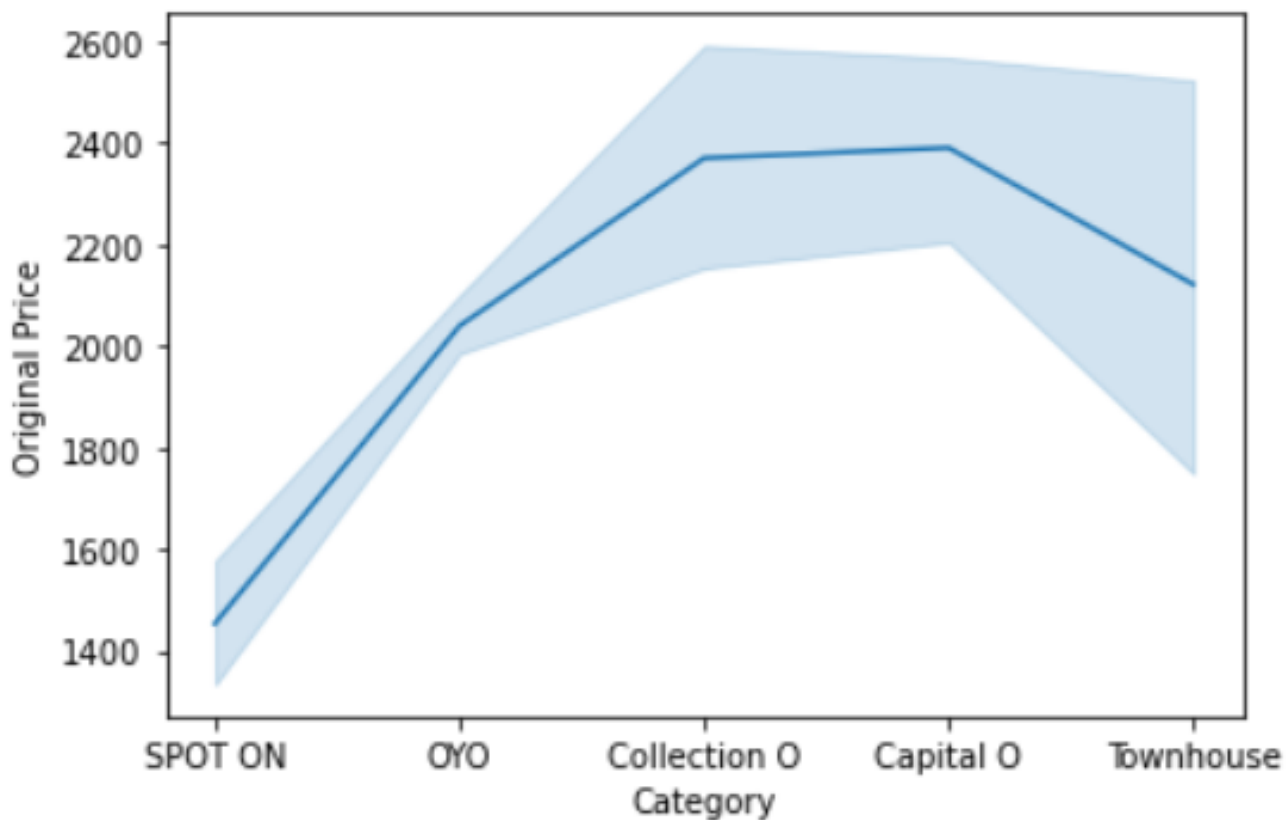


```
count    326.000000
mean      838.000000
std       337.963293
min       266.000000
25%       625.000000
50%       775.000000
75%       947.500000
max       2332.000000
Name: Offer Price, dtype: float64
```

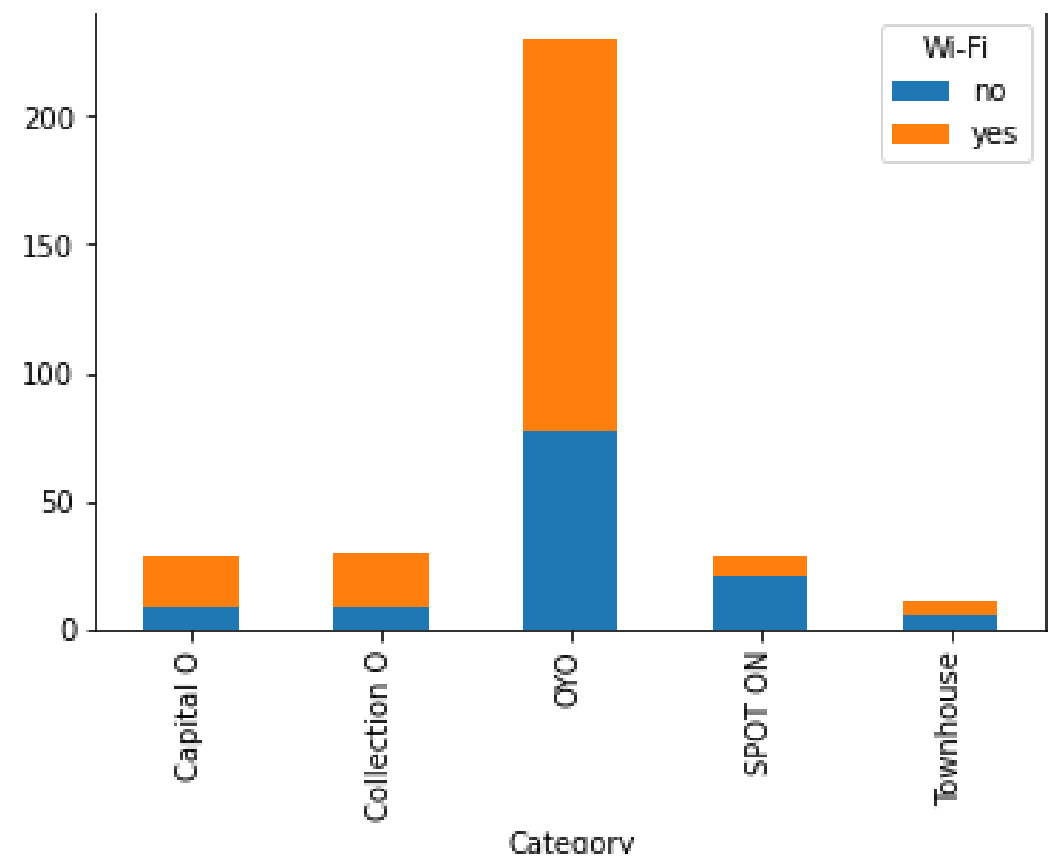
47% is the highest discount given



Collection O
and Capital O
category has
the highest
Original Price

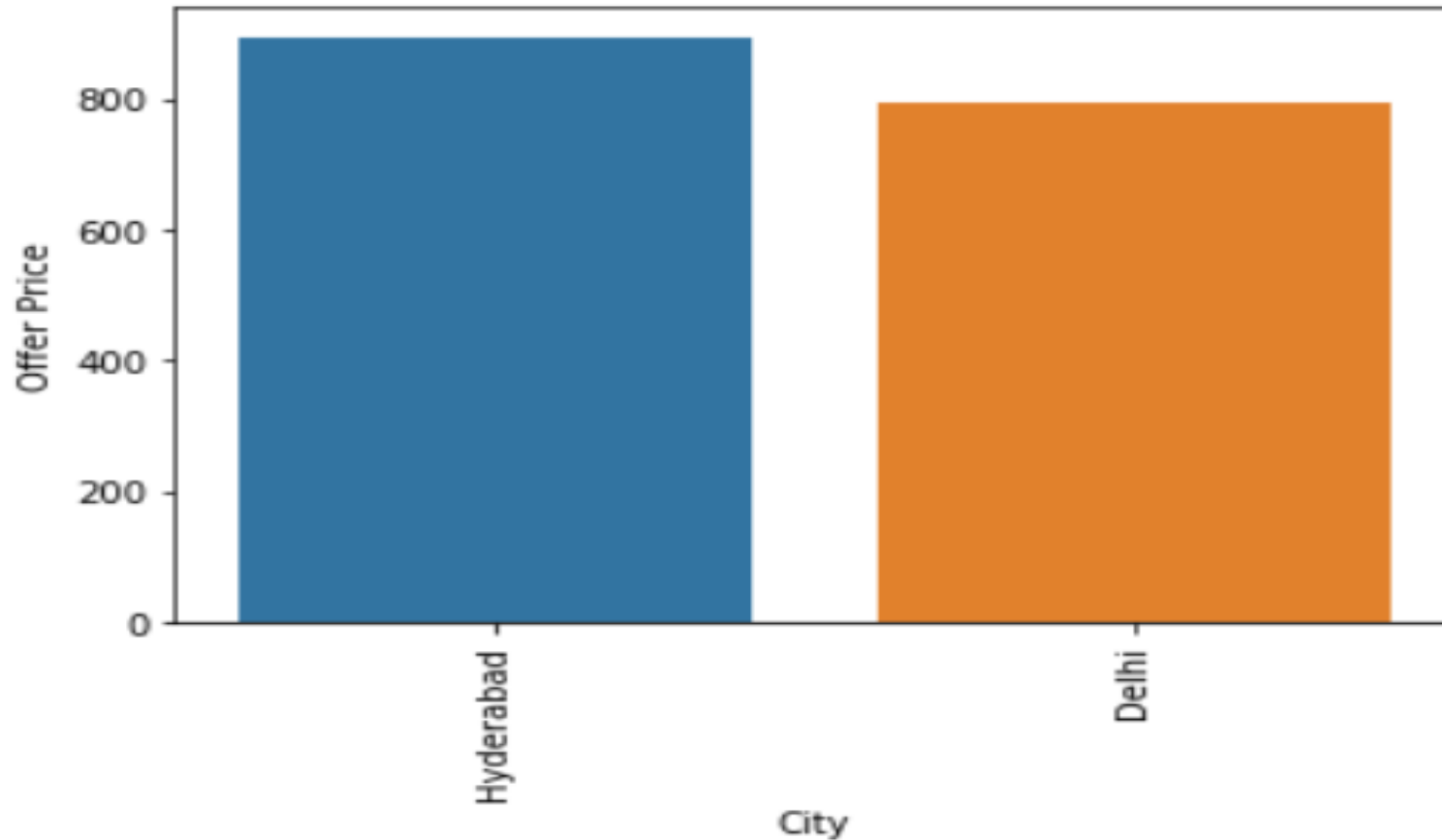


OYO category has WI-FI



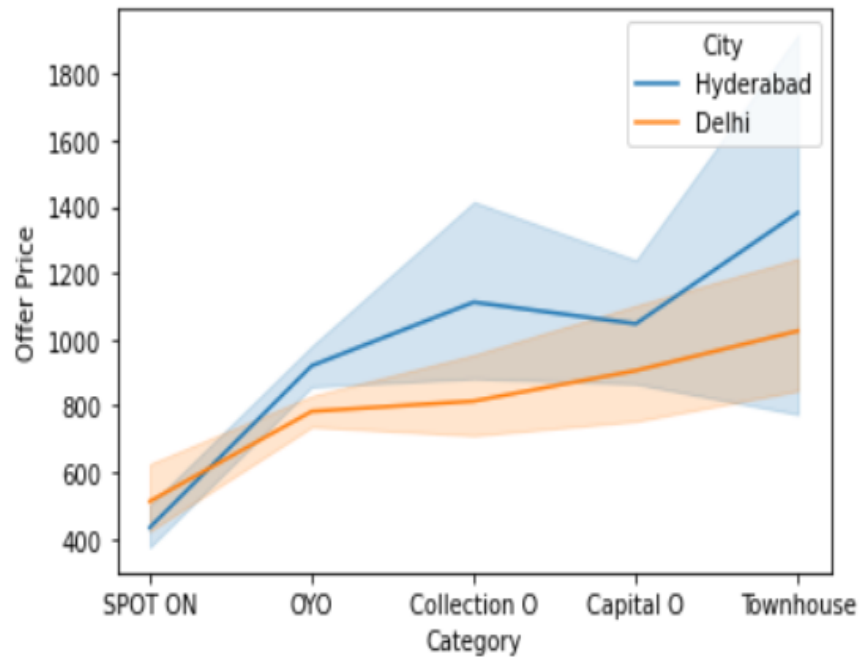
Wi-Fi		
	no	yes
Category		
Capital O	8	20
Collection O	8	21
OYO	77	153
SPOT ON	21	7
Townhouse	5	6

Offer Price of Hyderabad is high as compared to Delhi



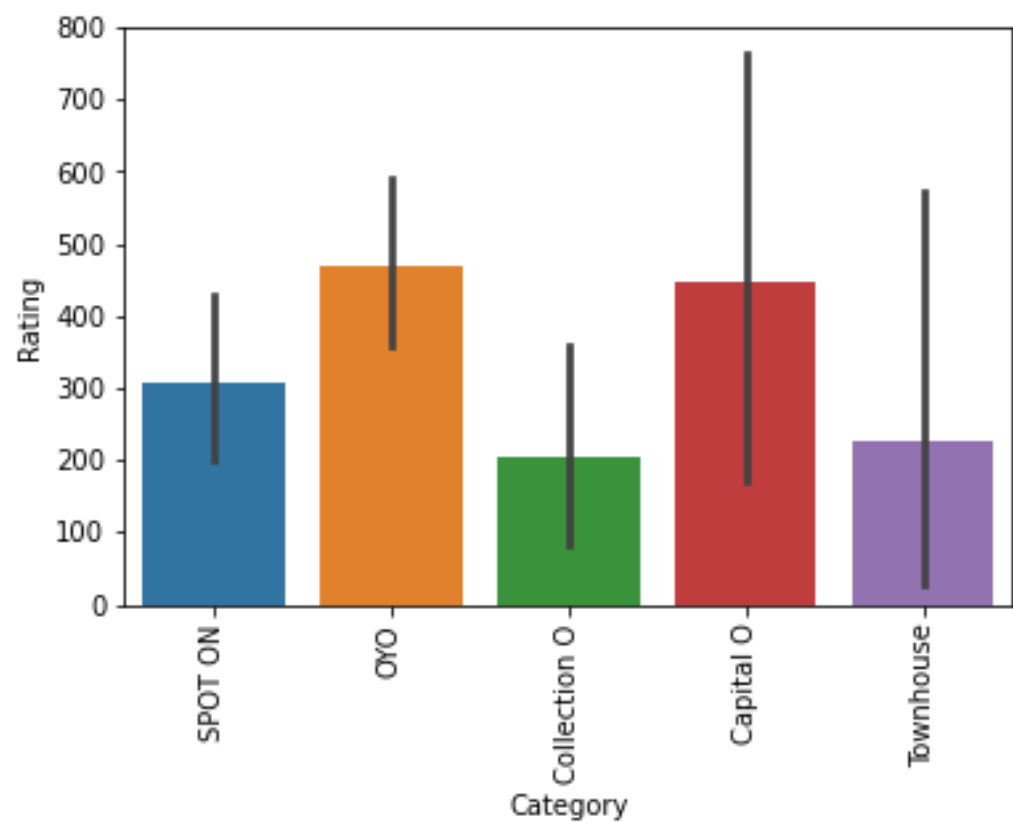
Hyderabad City has more avg offer price OYO than Delhi

Categorical, Numerical & Categorical Data



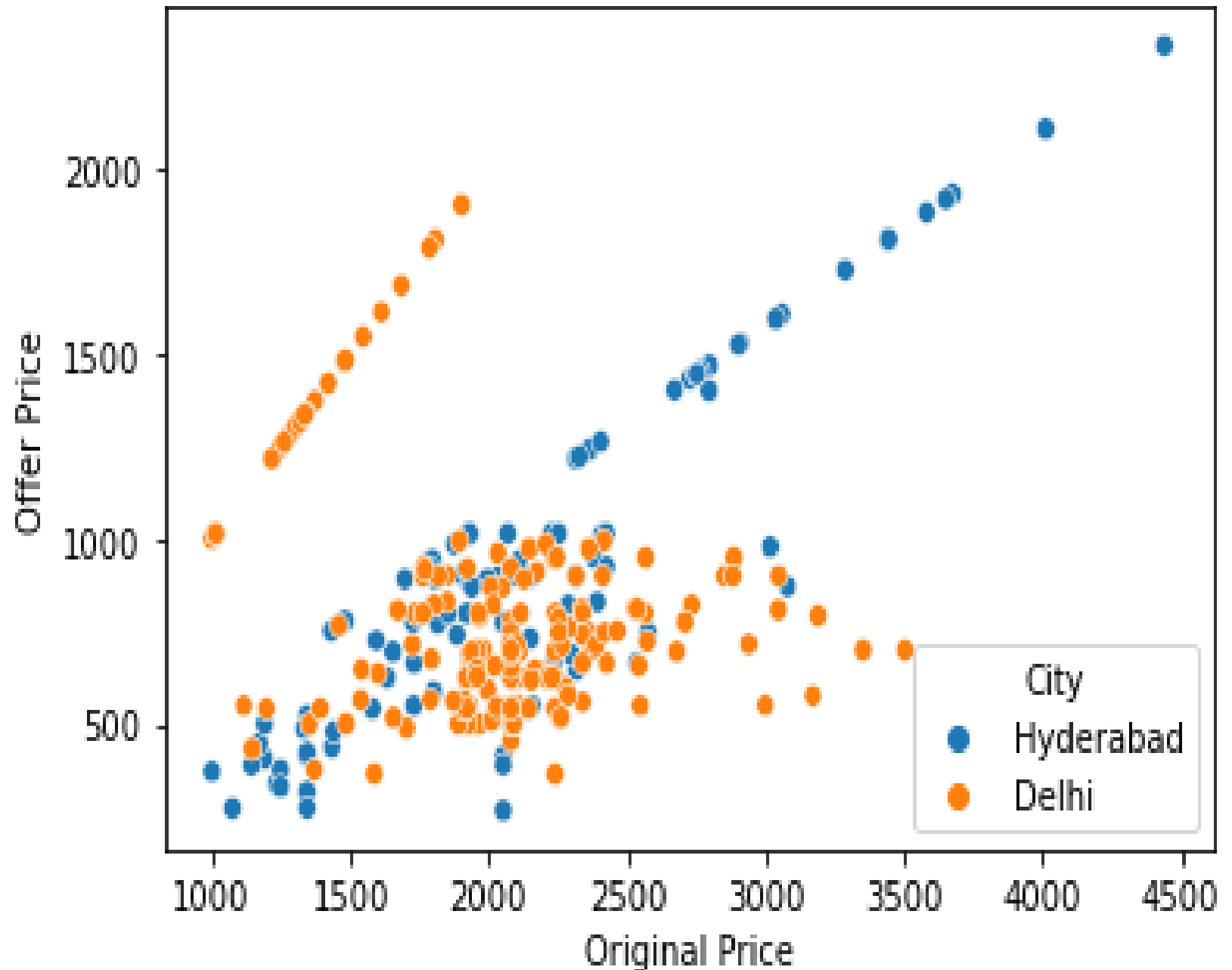
		max	median	mean	min
Category	City				
Capital O	Delhi	1902.0	801.5	905.642857	549.0
	Hyderabad	1726.0	942.5	1046.642857	549.0
Collection O	Delhi	1684.0	740.0	813.705882	559.0
	Hyderabad	2332.0	902.0	1111.750000	664.0
OYO	Delhi	1807.0	699.0	782.787879	489.0
	Hyderabad	2107.0	775.0	920.244898	330.0
SPOT ON	Delhi	799.0	454.0	511.666667	364.0
	Hyderabad	778.0	406.0	432.631579	266.0
Townhouse	Delhi	1612.0	930.0	1025.125000	715.0
	Hyderabad	1917.0	1452.0	1381.333333	775.0

OYO has maximum ratings in comparison Collection O



		median	mean	max	min
Category	City				
Capital O	Delhi	4.0	4.642857	9	0
	Hyderabad	516.0	887.071429	3194	8
Collection O	Delhi	2.0	3.882353	9	0
	Hyderabad	439.5	492.000000	1331	19
OYO	Delhi	5.0	5.030303	9	0
	Hyderabad	746.0	1091.153061	5131	8
SPOT ON	Delhi	4.0	4.000000	8	0
	Hyderabad	370.0	453.736842	1172	56
Townhouse	Delhi	6.5	5.875000	9	1
	Hyderabad	308.0	818.666667	1889	259

Hyderabad is positively related, as the offer price is constantly increasing as compared to original price



Correlation



Conclusions

Offered Pricing

Hyderabad, exceeds Delhi in the above data analysis.

Category wise

If we talk about other individual Variable Comparison, then Category wise, Oyo Rooms out of all its segments are in the highest profitable line.

Discount

Rating

Original Price

Number of Oyo Rooms is higher in Delhi as Hyderabad and it has got maximum Ratings

Features

Thank You!!!

