

HOUSING REALITY SECTOR BANGALORE

SECTION 1: EXECUTIVE SUMMARY

The primary objective of this project is to conduct a detailed analysis of the housing market of Electronics City in Bangalore and estimate the house price based on factors such as house type, number of bedrooms, bathrooms, furnishing status among others. To better understand the various characteristics of the market we visualize the data using Python and Tableau.

Electronic city in Bangalore, India, regarded as the IT (Information technology) capital of India. It is home to many software professionals, mainly due to the abundance of software organizations setting up their office spaces here. It is one of the most expensive places to live in the city.

Electronic city is divided into four zones called phases - Phase I, Phase II, Phase III, Phase IV. This business report aims to shed light on the pricing patterns in the area and understand which factors affect the price of a house, focusing mainly on Phase I and Phase II.

The exploratory data analysis helped us understand that the carpet area of the house is one of the key factors which drives the price. An increase in the area causes an increase in the price of the house. Villas on an average cost much more than apartments, both phases combined have a higher quantity of apartments, which is natural given the high demand for such houses by nuclear families.

Unfurnished houses dominate the market, furnished houses are scarce in the region and thus demand a much higher price. Surprisingly, unfurnished houses cost pretty much the same in both locations.

In terms of number of bedrooms, a 4 bedroom house demands a much higher price in comparison to houses with fewer bedrooms. There is a steep increase in the price as the number of bedrooms increases. The houses with 3 bedrooms have the highest range of prices from 35 Lakh INR to more than 150 Cr INR.

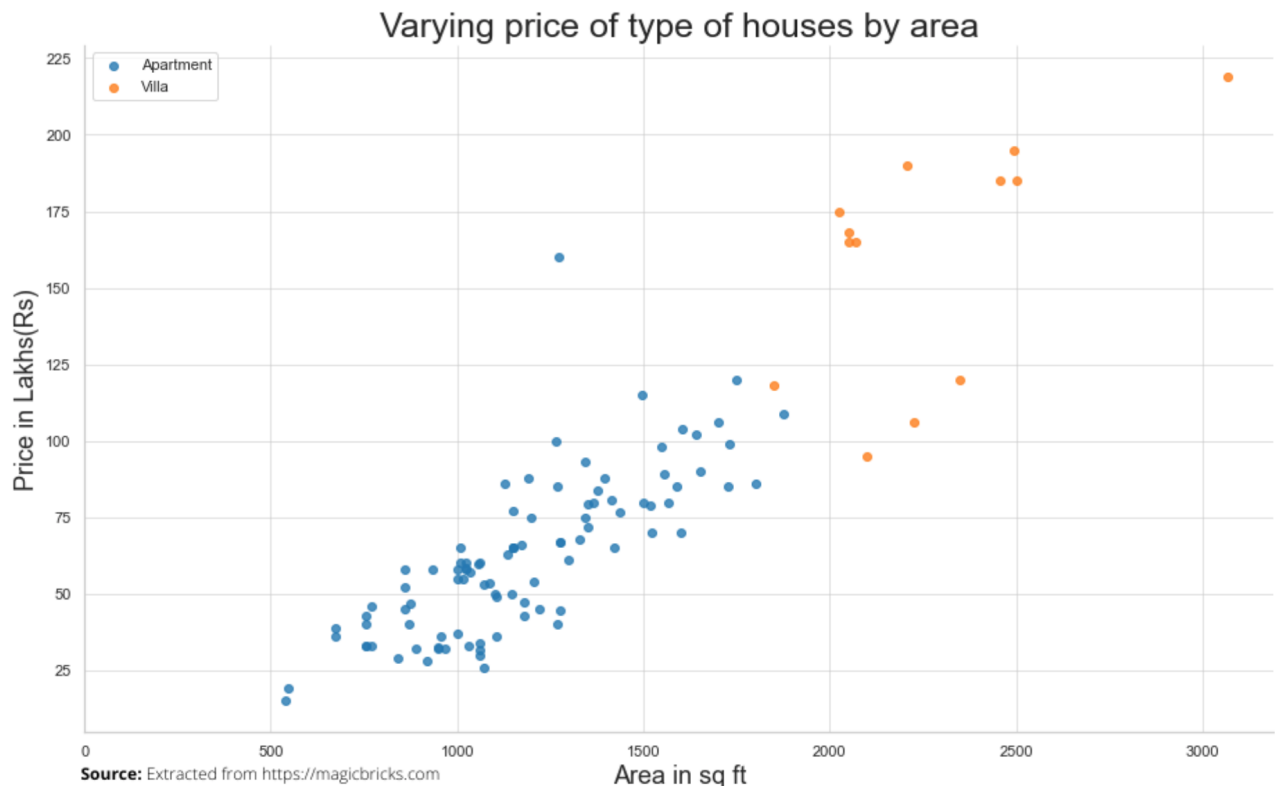
A majority of the houses have a carpet area in the range of 1000 - 1500 square feet. Phase 1 has more houses than phase 2 does.

SECTION 2: VISUALIZATION INSIGHTS

We now proceed towards visualizing the data to better understand and find relevant insights from the data.

VISUALIZATION 1: Variation of Price of Area

It is quite evident that the area of the house is a major contributing factor for the price. We plot a scatter plot of the price with area and factor in the type of house as well, apartment or villa.



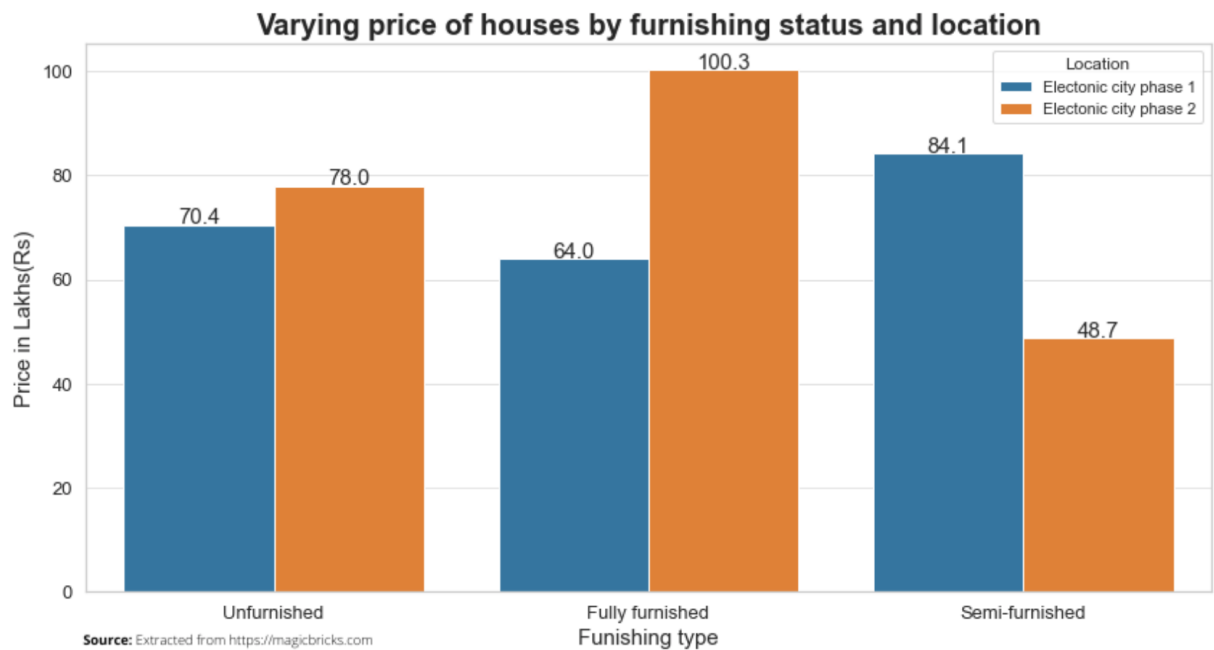
The following can be derived from the graph:

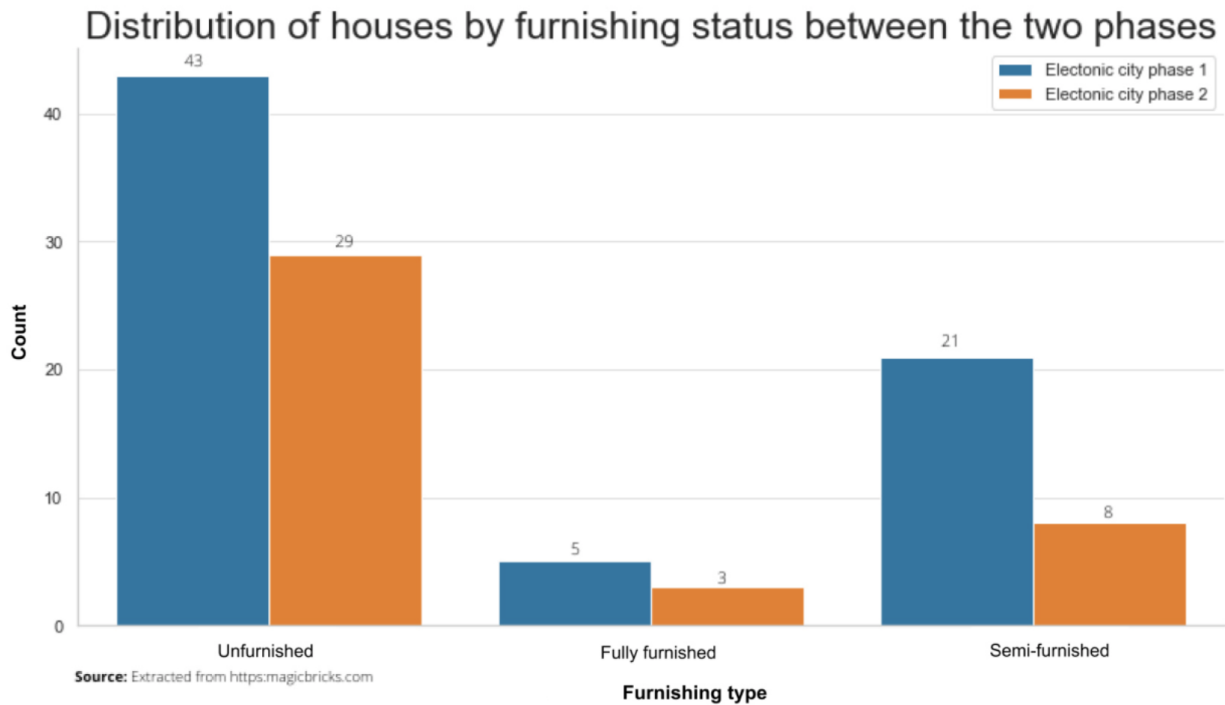
- We observe that with an increase in the area the price increases in an upward trend, providing evidence of our assumption that area is one of the driving factors
- Prices of the villas are higher than those of apartments, the starting range of villas is greater than the maximum values for those of the apartments. This could mainly be due to the larger area of occupancy of villas and other amenities provided.
- There seems to be a high number of flats in the region as suggested by the graph in comparison to Villas. Given the high number of software companies in the vicinity, it would be suitable to rent or own an apartment in this area.

- Some villas exceed 2 Crore INR as well, the area definitely caters to the needs of the rich and affluent.
- The graph also reveals that apartments in this area start from 50 Lakh INR, thus for anyone having a budget of less than that, would need to rethink the decision of buying a house here.

VISUALIZATION 2: Understanding how furnishing status and location impact price

We have data regarding the furnishing type of the house, in this section we try to gain more insights on this factor and learn how it affects the price.



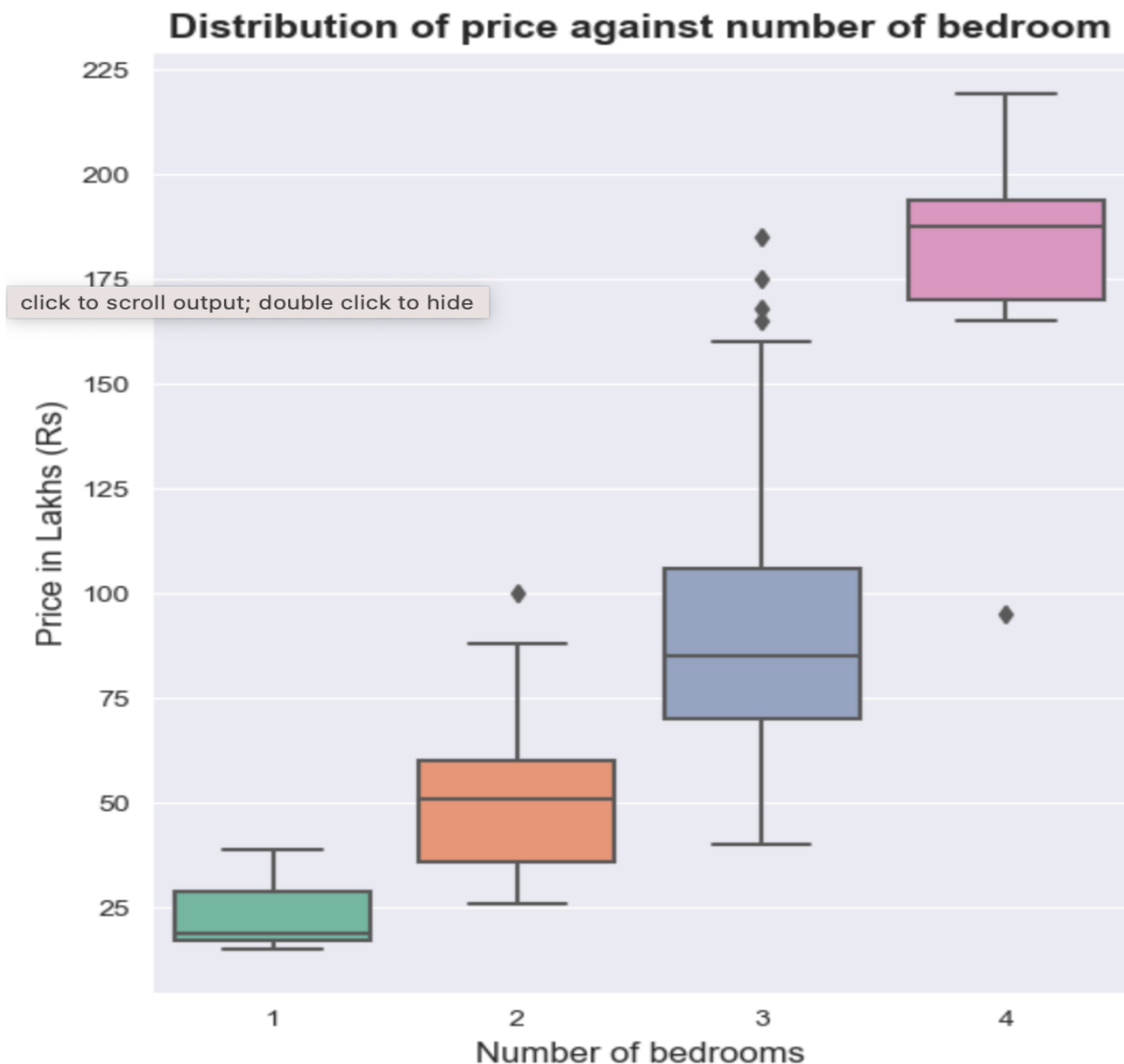


Insights gained from the above graphs:

- Looking at the number of houses of each furnishing type (graph 2), we notice in both locations unfurnished type houses are the highest. Second is semi furnished and the last fully furnished type.
- An unfurnished house in both phases costs approximately the same, thus if location is not of prime importance, a buyer can explore options in both locations.
- Fully furnished houses demand the highest price among the other categories. Given a lack of such houses, it is evident that fully furnished houses are on the expensive side.
- In phase 1, a semi furnished house is available at nearly the same price as that of an unfurnished house, hence if the buyer is willing to spend a little more, it would be better to go for a furnished house in phase 2.

VISUALIZATION 3: Distribution of house prices vs number of bedrooms

We now analyze, probably the second most important factor in the decision of choosing a house, that is the number of bedrooms available.

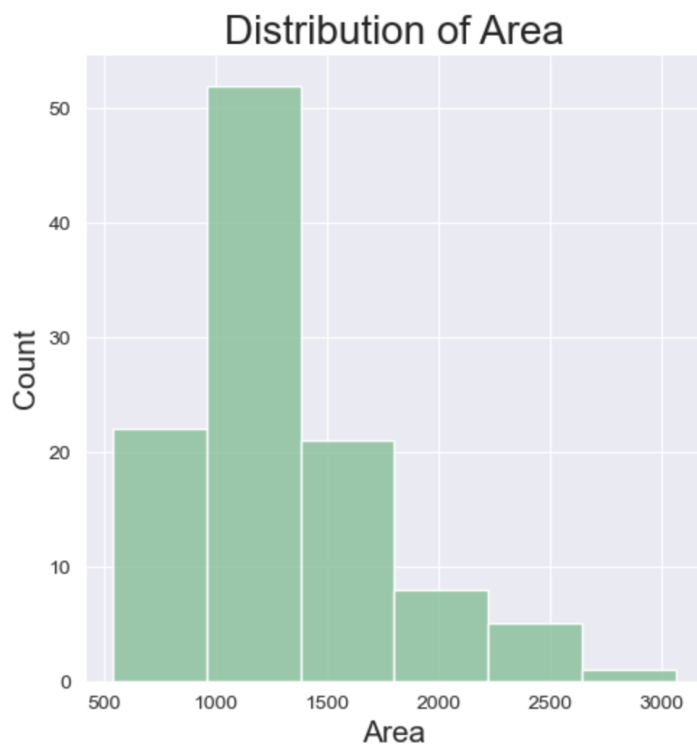


Obtained results of analysis:

- We see that houses with 4 bedrooms are the highest priced. The median value (indicated by the line inside the box) is very close to the 3rd quartile indicating that we have a high concentration of values here. Which implies that more than half of the prices for a 4BHK house are priced at more than 180 Cr INR approximately.

- The 1BHK houses are the least inexpensive, but have a very limited range in terms of pricing. They are available from nearly 18 to 35 Lakh INR.
- In contrast, the 3BHK houses have the highest range, from 45 lakh INR to slightly more than 1.5 Cr INR. Some of the 3BHK's are available at approximately the same price as that of a 2BHK. Thus a buyer looking for a 2BHK can extend their search and hope to find a 3BHK at the same price range.

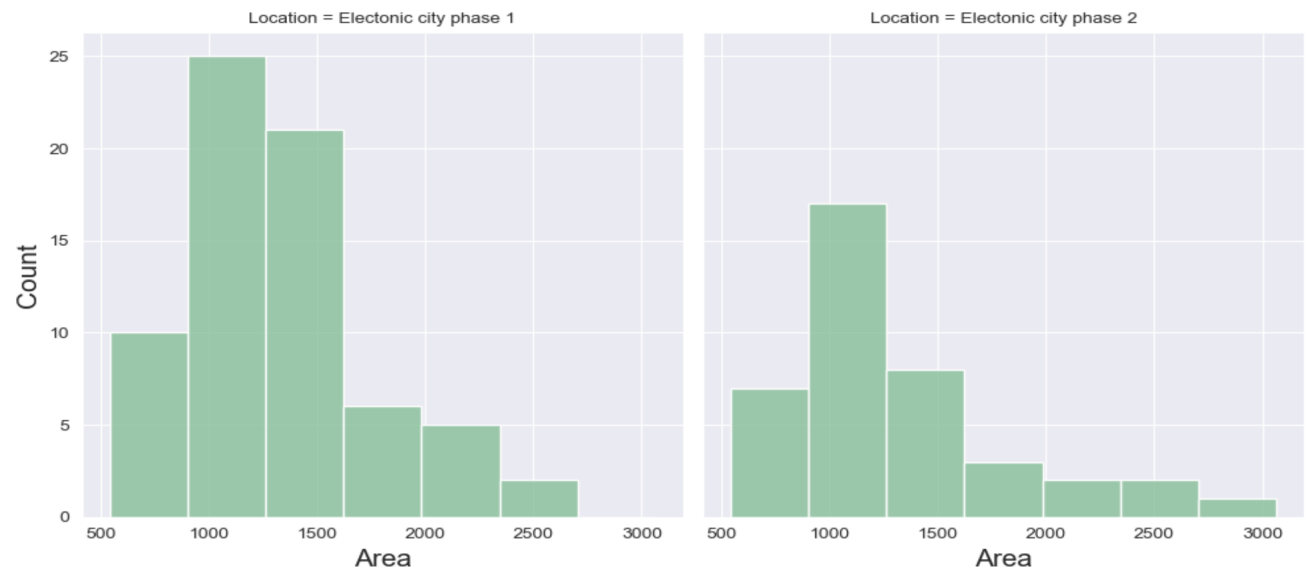
VISUALIZATION 4: Distribution of Area



We analyze the histogram for Area, a histogram depicts the distribution of values for the chosen variable.

- We infer that a majority of the houses in the region have an area in the range of 1000 to 1500 square feet.
- There are very few houses with an area of more than 2700 feet.

To further explore this aspect of the houses, we plot the histograms for each location.



- Phase 2 has fewer houses with an area in the range of 1000 to 1500 square feet.
- Overall phase 1 seems to have more number of houses in comparison to phase 2