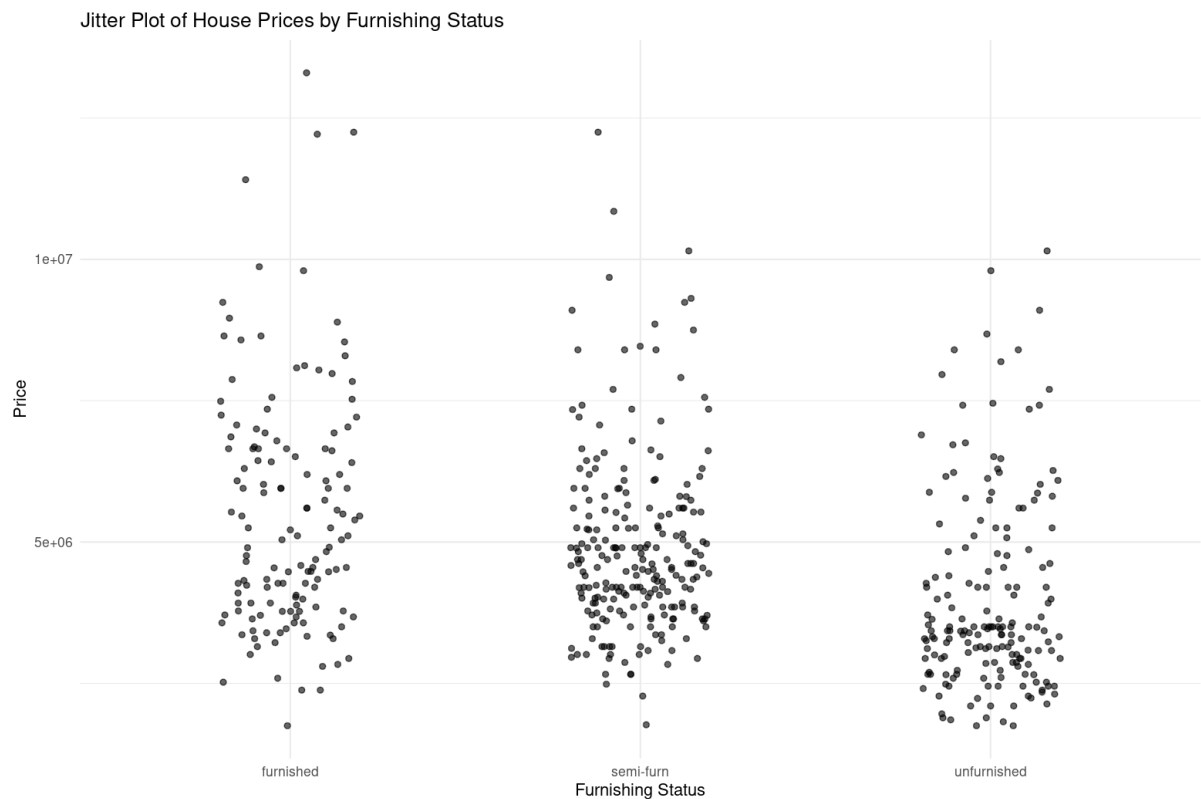


Name – Anusha maniar

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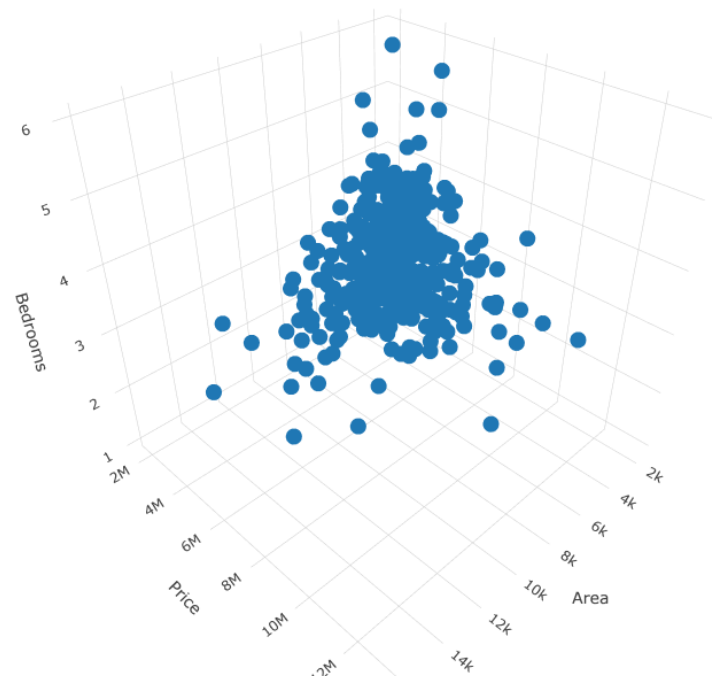
Batch- CSE(DS)



1. The plot shows three categories of furnishing status: furnished, semi-furnished, and unfurnished.
2. There doesn't appear to be a significant difference in the overall price distribution among the three furnishing statuses, as the spread and concentration of points are similar across categories.
3. All three categories show a wide range of prices, with most houses clustered between approximately 2.5 million and 7.5 million (based on the y-axis scale).
4. Each category has several high-priced outliers, with some houses priced above 10 million regardless of furnishing status.
5. The density of points seems slightly higher for semi-furnished houses, suggesting this might be the most common category in the dataset.

6. The jittering effect (horizontal spread of points within each category) helps visualize the distribution of prices within each furnishing status, revealing areas of higher and lower concentration.

3D Scatter Plot of Price, Area, and Bedrooms



Clustered Data Points: The majority of the data points are clustered around a central region, suggesting that most properties share similar characteristics in terms of price, area, and number of bedrooms.

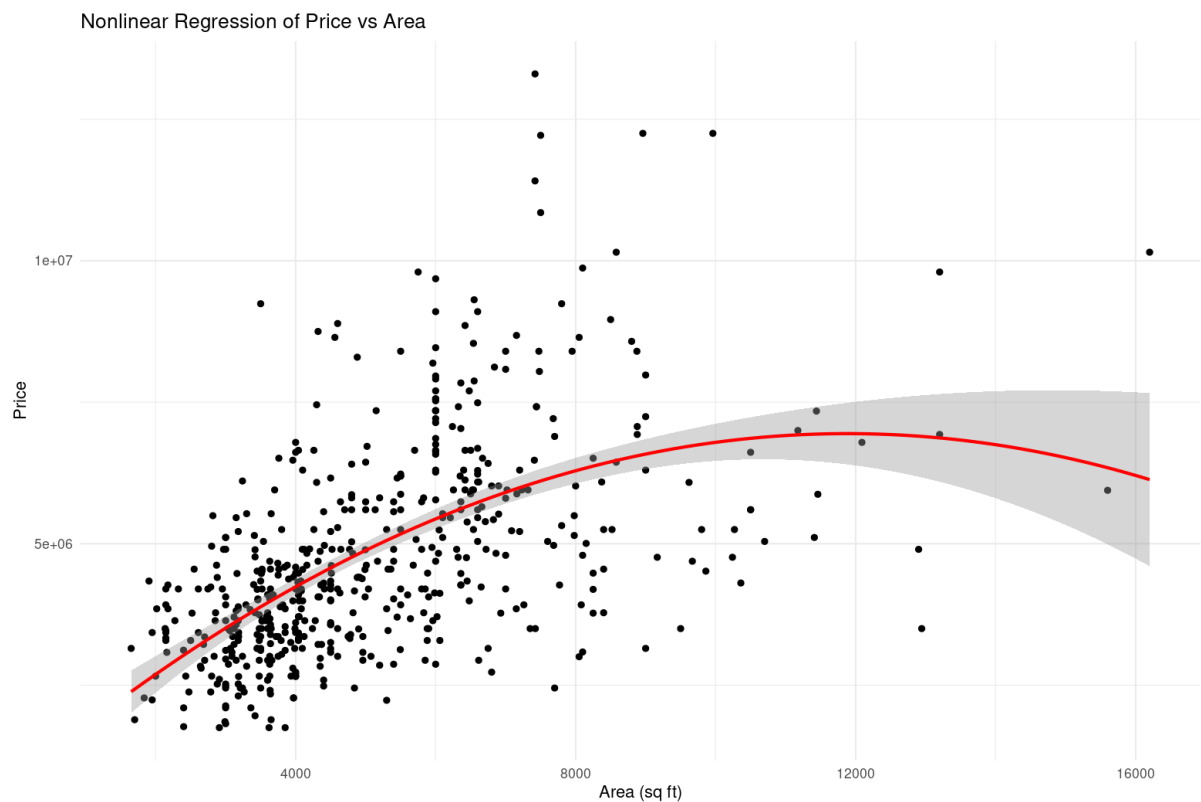
Bedroom Range: The number of bedrooms for most properties appears to range from 2 to 5, with fewer properties having 1 or 6 bedrooms.

Price Range: Prices generally range between 2M to 12M, but a concentration is observed around the middle of this range.

Area Distribution: Most properties seem to have an area between 2k to 10k, with very few having an area beyond 12k.

No Clear Linear Correlation: While there is a dense cluster, there doesn't appear to be a clear linear relationship between price, area, and bedrooms, suggesting multiple factors could be influencing property prices.

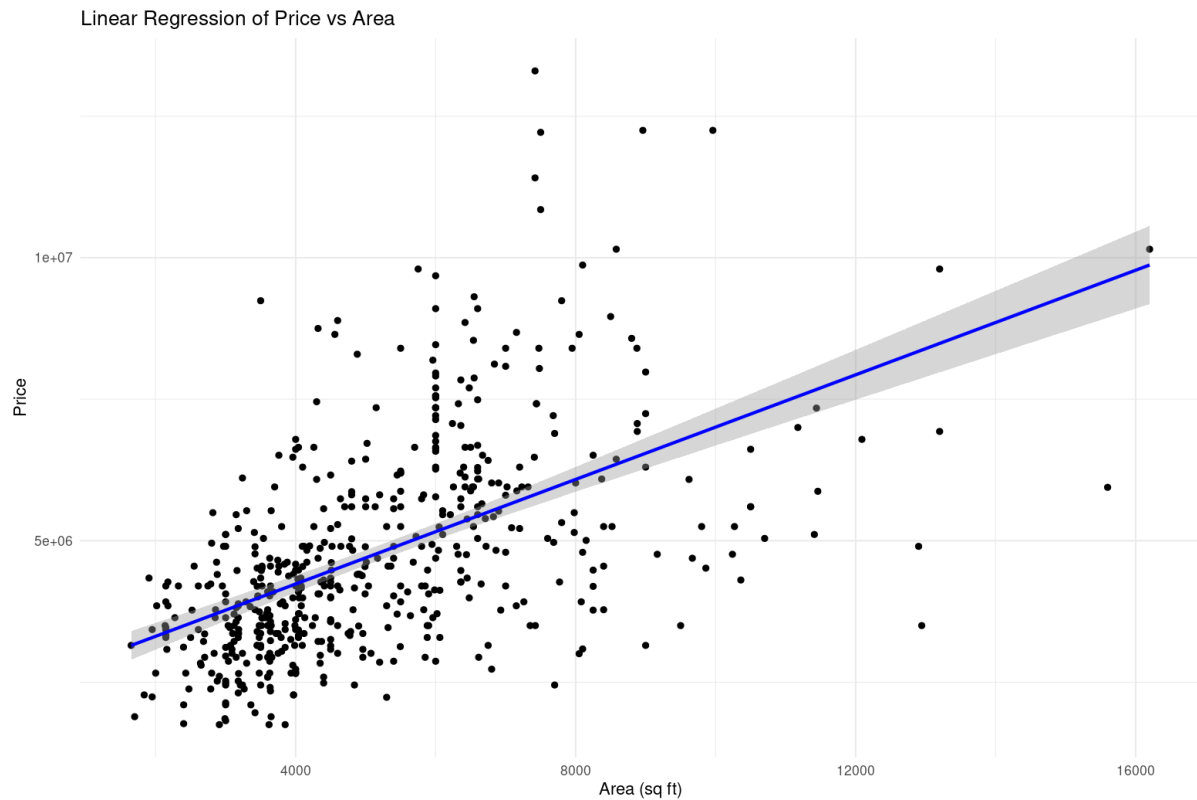
Outliers: A few data points are spread out away from the main cluster, which might represent unusual or premium properties with higher prices, more bedrooms, or larger areas.



1. The relationship between price and area is nonlinear, as shown by the curved red regression line.
2. There's a positive correlation between house price and area up to around 12,000 sq ft, after which the trend appears to plateau and slightly decrease.
3. The rate of price increase is steeper for smaller houses (up to about 8,000 sq ft) and then starts to level off for larger homes.
4. The confidence interval (gray shaded area) widens significantly for houses larger than about 10,000 sq ft, indicating increased uncertainty in price predictions for very large homes.

5. As with the linear regression, there's considerable scatter around the regression line, suggesting other factors beyond area influence house prices.

6. The nonlinear model seems to better capture the relationship between price and area compared to the linear model, especially for larger homes where the price increase slows down.



1. There's a clear positive correlation between house price and area, as indicated by the upward slope of the regression line.

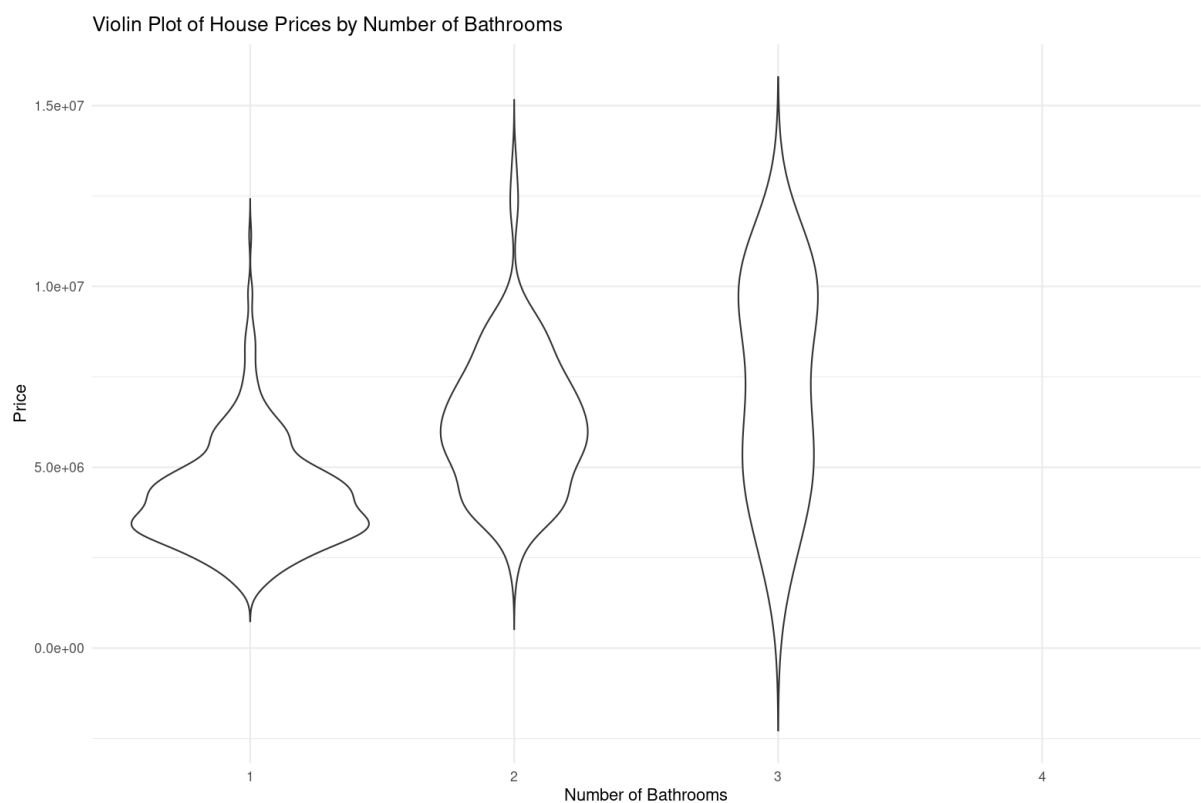
2. The relationship appears to be roughly linear, though there's considerable scatter around the regression line.

3. The density of data points is highest for houses between 2000-6000 sq ft, suggesting this is the most common size range in the dataset.

4. There are several high-priced outliers, particularly for houses around 8000 sq ft, which are priced significantly above the regression line.

5. The confidence interval (gray shaded area) widens at both extremes of the area range, indicating less certainty in the price prediction for very small or very large houses.

6. Despite the overall trend, there's significant price variation for houses of similar sizes, implying other factors beyond area influence house prices.



1. The median house price generally increases as the number of bathrooms increases from 1 to 3.

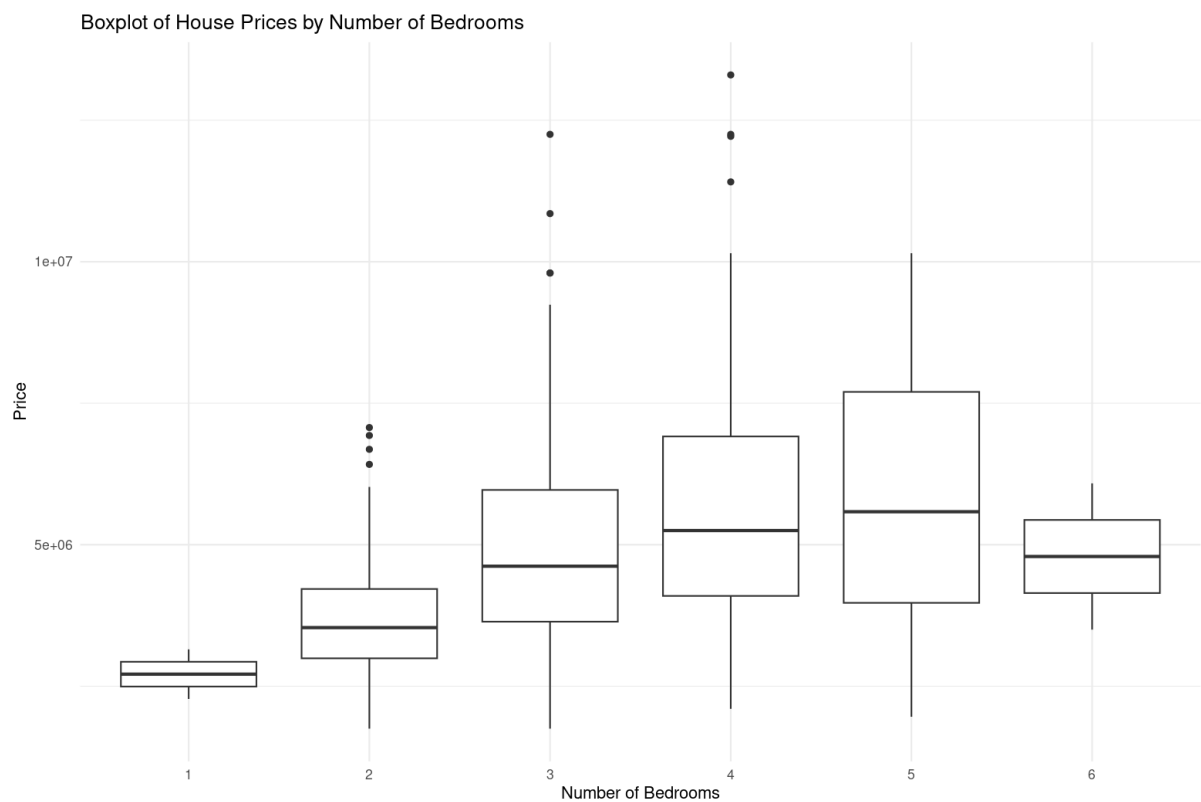
2. Houses with 1 bathroom show the widest price range, with a significant concentration of lower-priced homes.

3. The distribution for 2-bathroom houses is more symmetrical compared to the others, with a clear central tendency.

4. Houses with 3 bathrooms have the highest median price and show a bimodal distribution, suggesting two distinct price clusters.

5. There's a notable absence of data for 4-bathroom houses, which could indicate they are rare in this dataset or there's missing data.

6. All three distributions show long upper tails, indicating the presence of some very high-priced outliers in each bathroom category.



1. Generally, house prices tend to increase as the number of bedrooms increases, with median prices rising from 1 to 5 bedrooms.
2. There's a wide range of prices for each bedroom category, indicated by the height of the boxes and whiskers, suggesting factors beyond just bedroom count affect pricing.
3. The price range and median appear to plateau somewhat between 4, 5, and 6 bedrooms, with less dramatic increases compared to the jumps from 1 to 4 bedrooms.
4. Houses with 3 or more bedrooms show more price outliers on the high end, as indicated by the dots above the whiskers.
5. The smallest price range is for 1-bedroom properties, while 4 and 5-bedroom properties show the largest price ranges.

unfurnished
semi-furn
furnished

1. There are 3 types of furnishing status – unfurnished, semi furnished and furnished
2. Furnished is the least