

EFFECT OF LOCAL SERVICES ON RENTAL PRICES IN BANGALORE CITY

Final Project for Applied Data Science Course

BACKGROUND

- ◉ Since several people migrate to Bangalore, it is essential to maintain a database containing details of rental prices and local venues in all neighborhoods of the city.
- ◉ Since Bangalore is a lucrative spot to put up properties for rental purposes, I would also like to analyze the correlation between locally available services and rental price.
- ◉ This would help people interested in building guest houses etc. to choose suitable locations for their endeavors.

QUESTIONS ADDRESSED

- ◉ What is the correlation between different types of services (food, shopping, sports/recreational etc.) and rental prices?
- ◉ Is the correlation strong enough to compensate for the higher land prices associated with localities that have more services?

DATA ACQUISITION AND PROCESSING

◉ Sources of data:

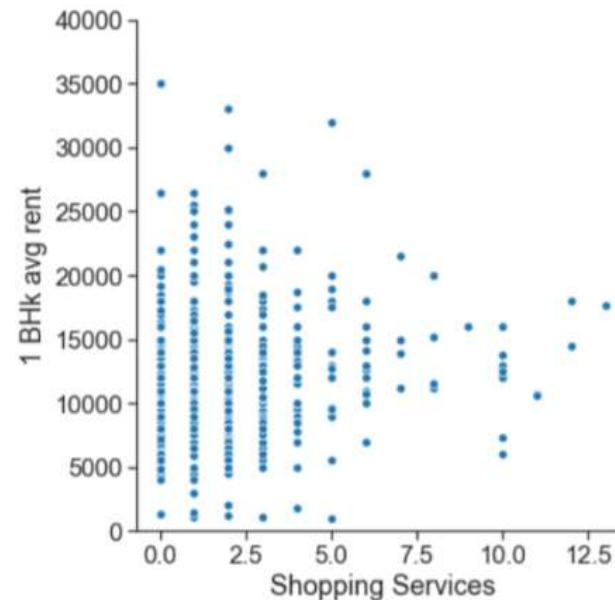
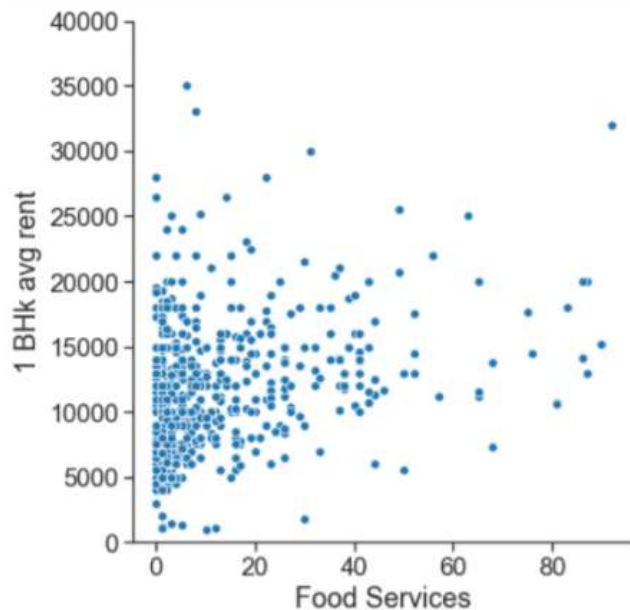
- Data containing all neighborhoods of Bangalore city with the rental prices, available on url: <https://www.makaan.com/price-trends/property-rates-for-rent-in-bangalore>
- Coordinates of neighborhoods acquired via Google
- Venues Lists acquired using FourSquare API

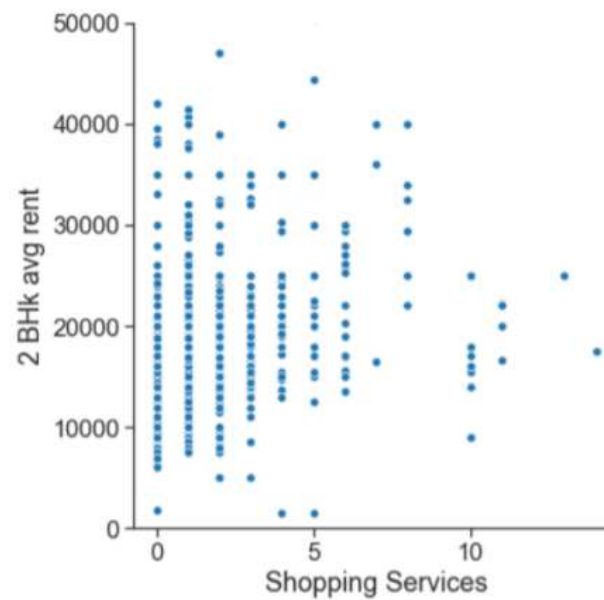
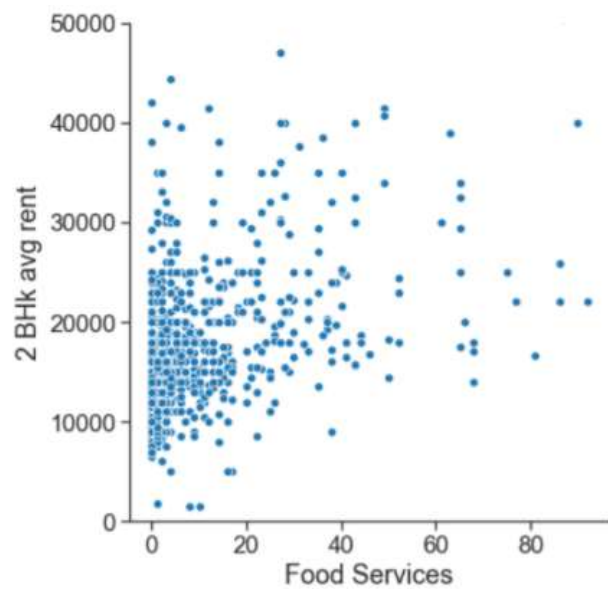
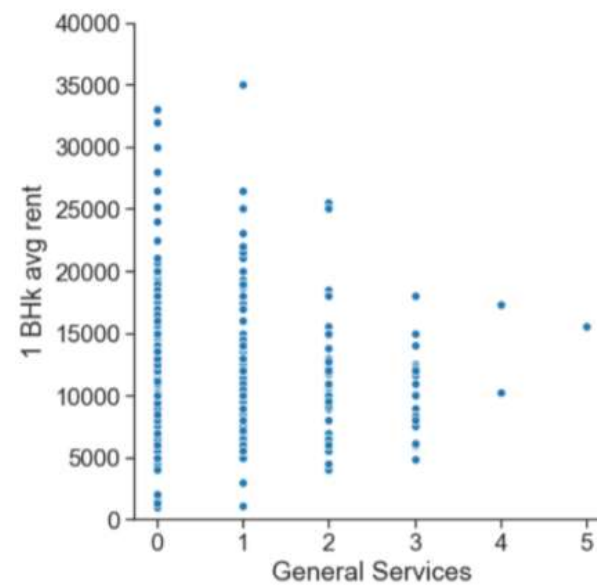
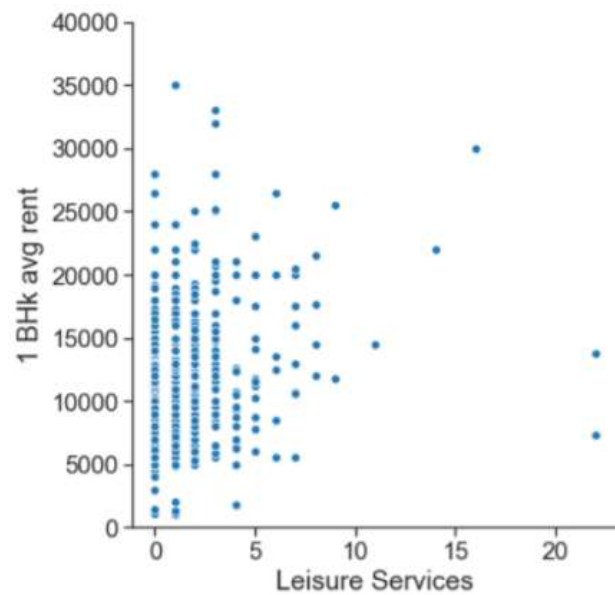
STATISTICAL INFERNCE USED

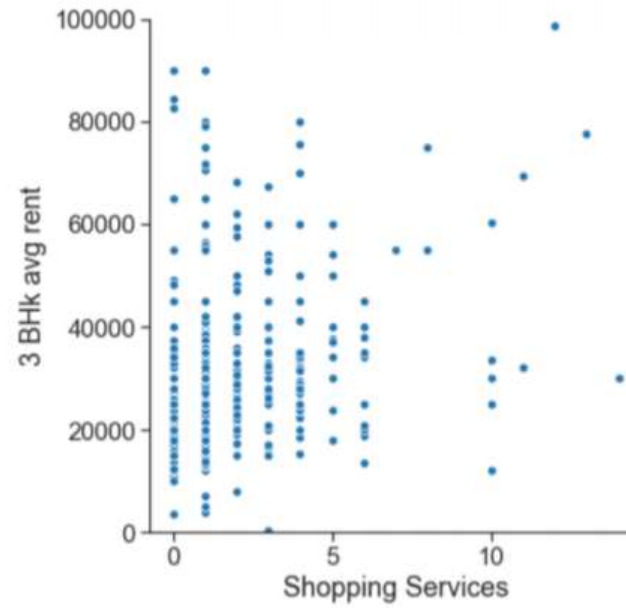
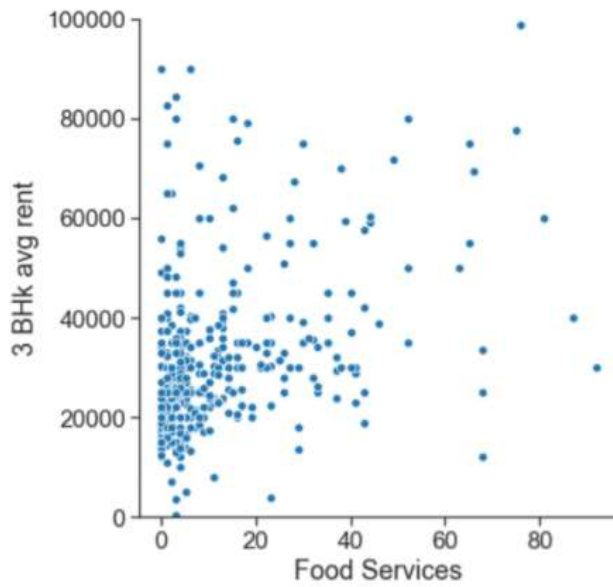
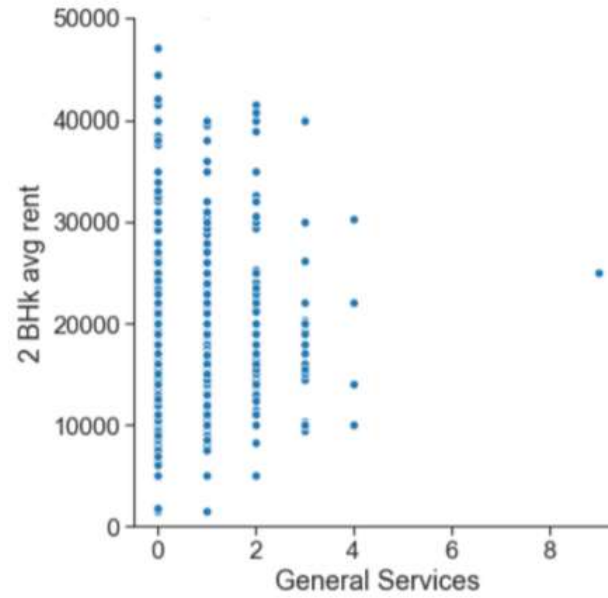
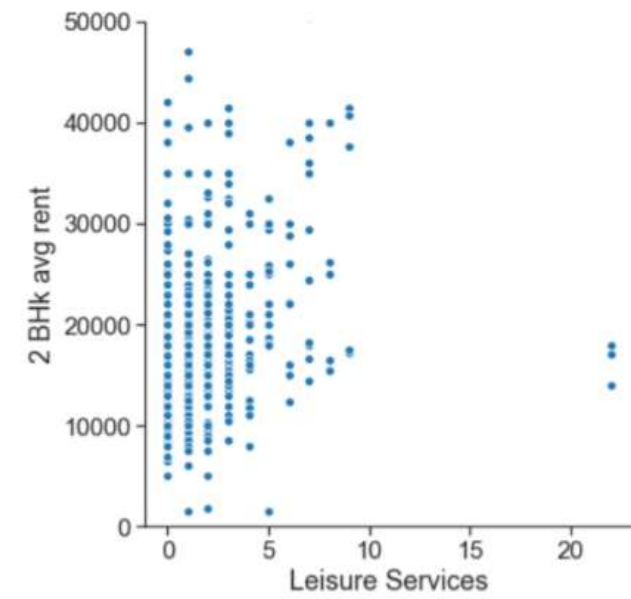
- ◉ First, we observe the correlation between the rental prices and the number of each type of service available using scatter plots.
- ◉ Then, we extract the minimum rental price for each group of number of services available (for example, we group all neighborhoods with 10 food service providing venues and take the minimum rental price from them). This minimum price reflects the price of the most bare rental homes (i.e. with least number of in-home services like air conditioning, laundry, cooking service etc). This gives a picture of the rental prices which reflect cost due to location only. We take the regression plots for these.

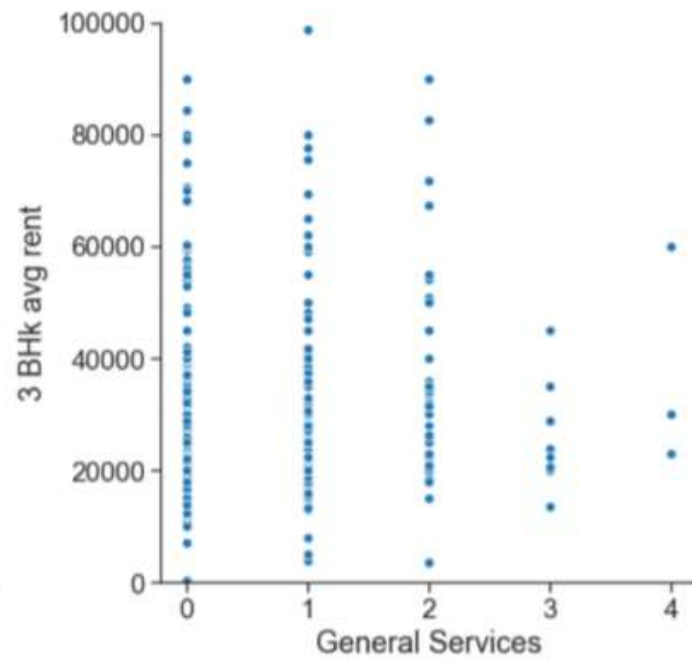
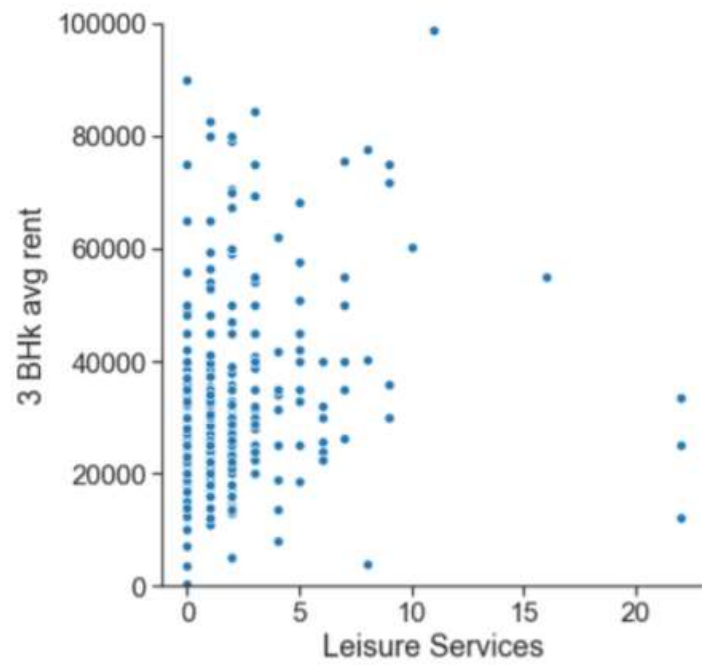
RESULTS

- Seemingly, no correlation between any of the services and the rental prices if we directly look at the scatter plots:



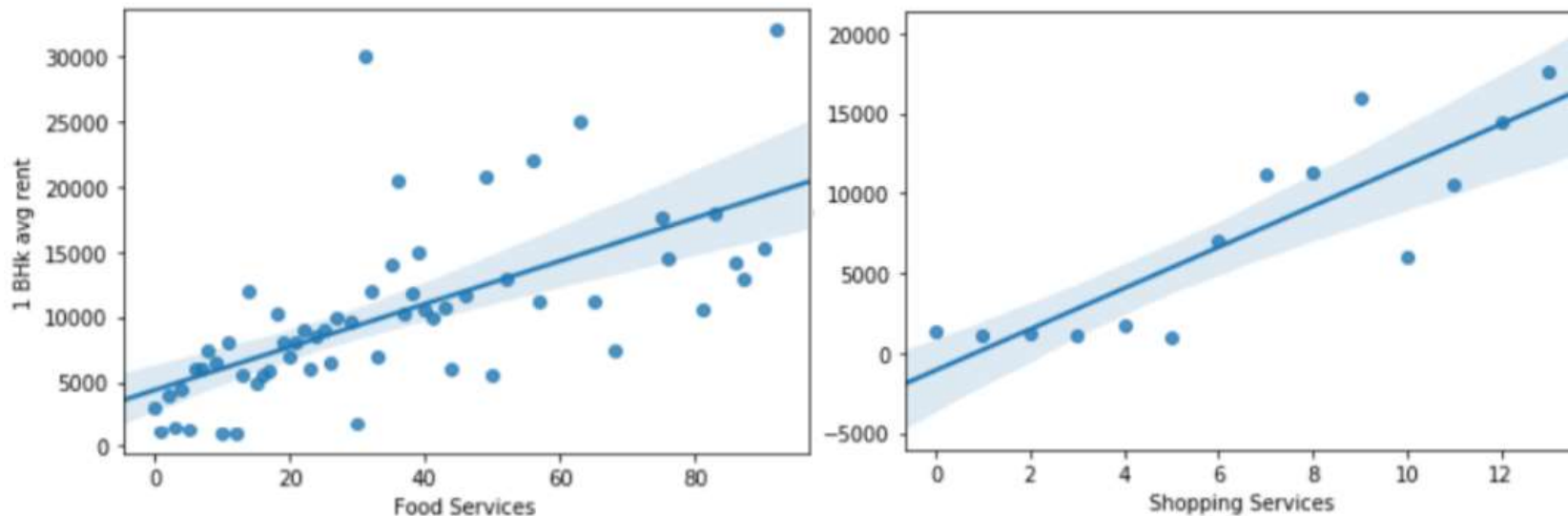


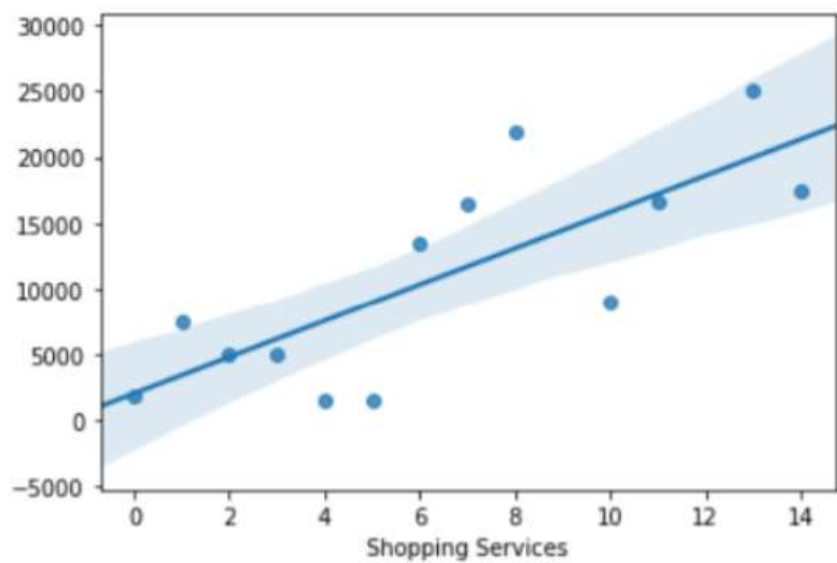
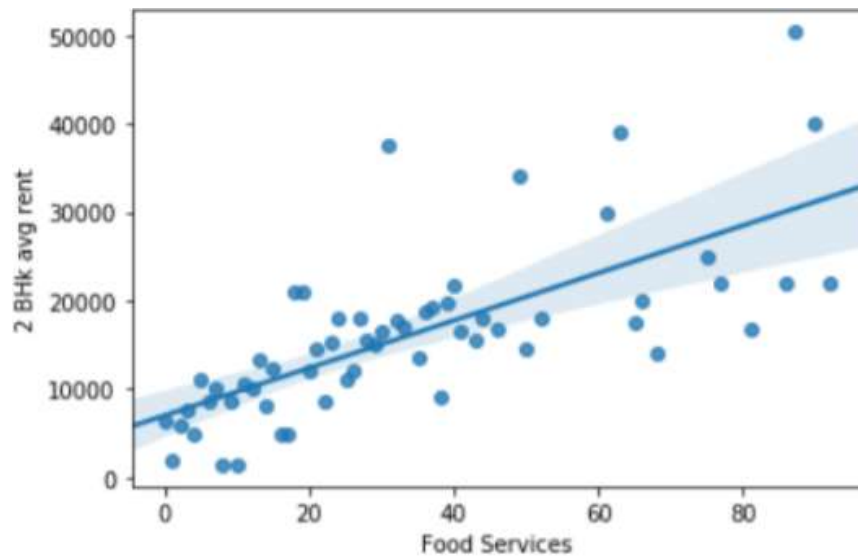
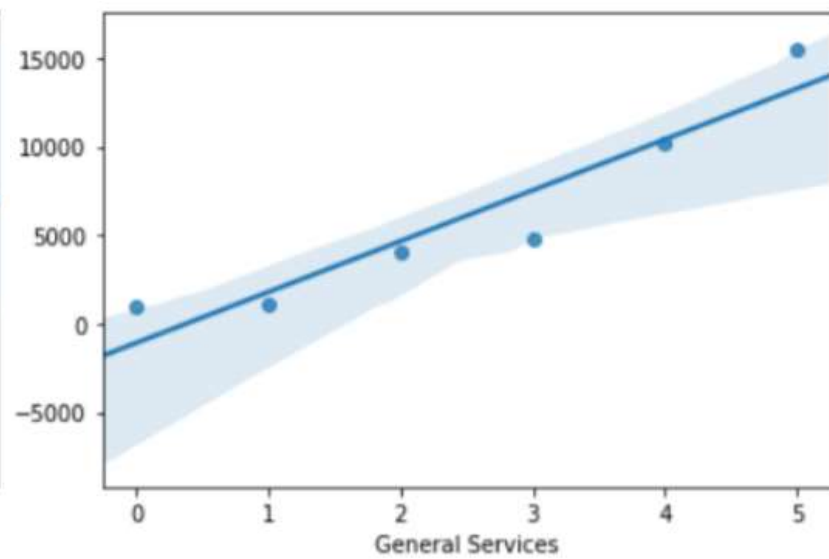
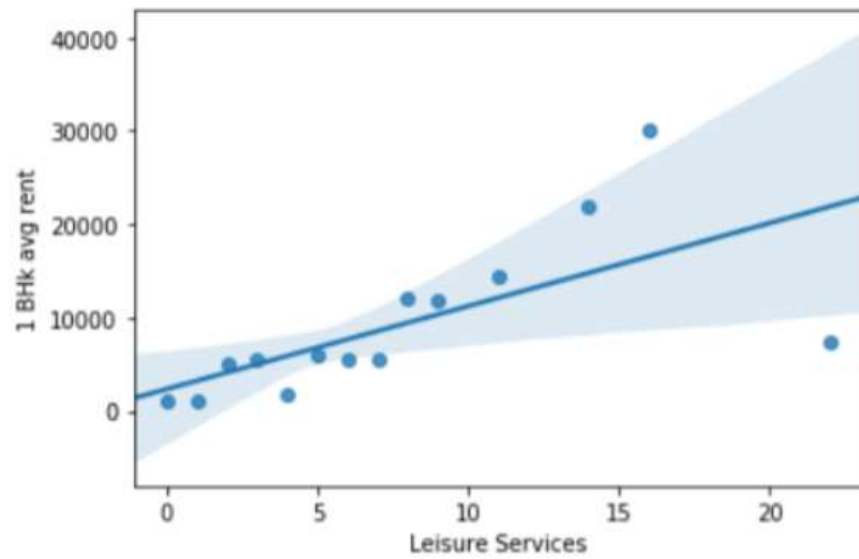


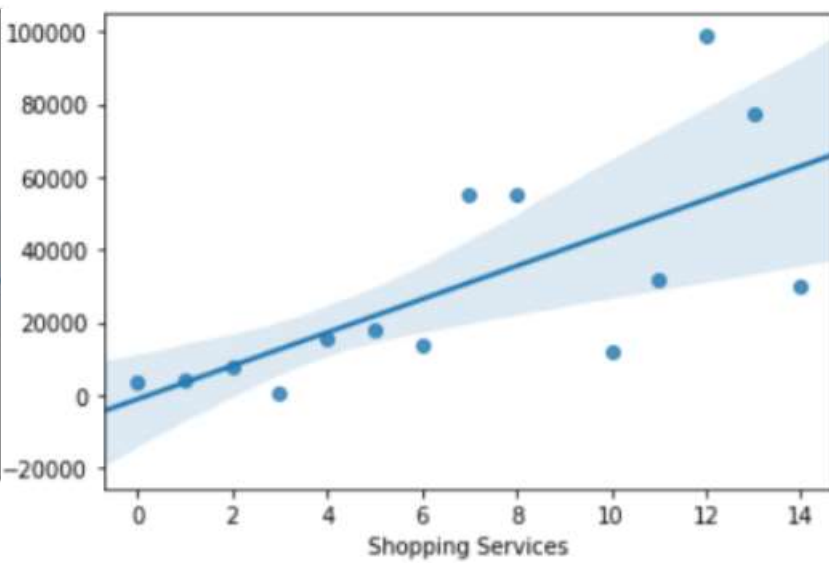
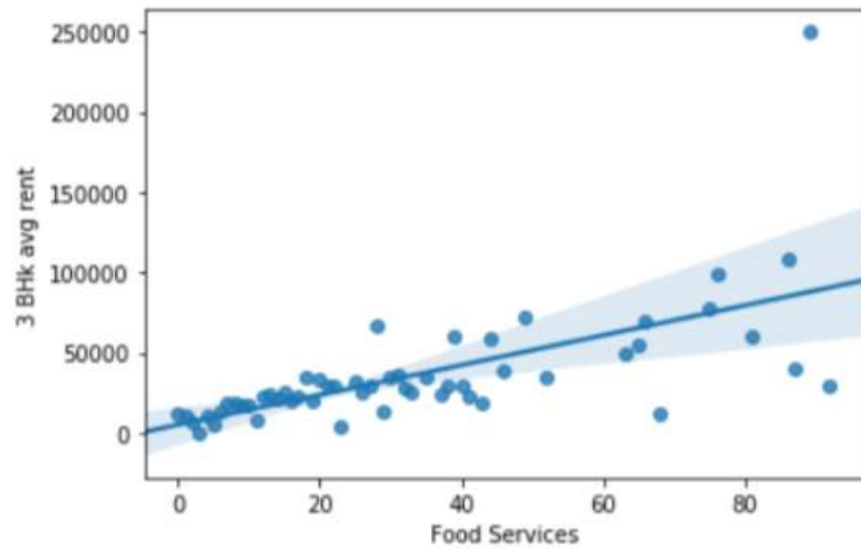
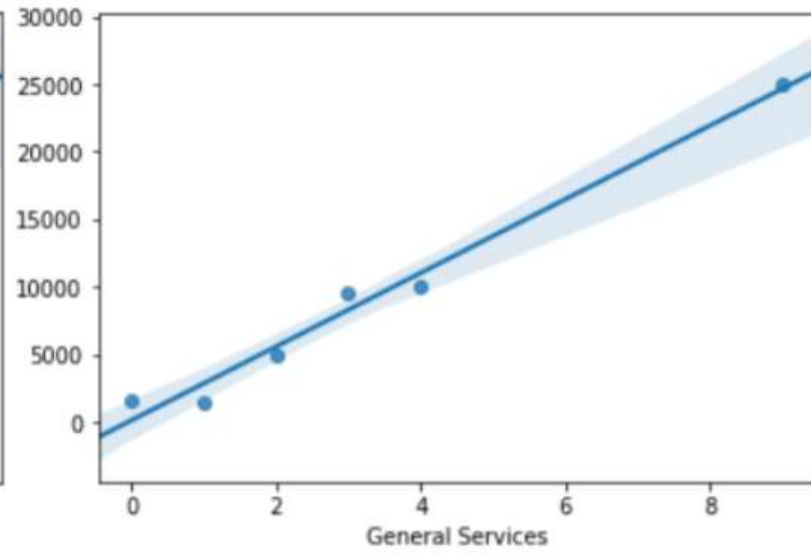
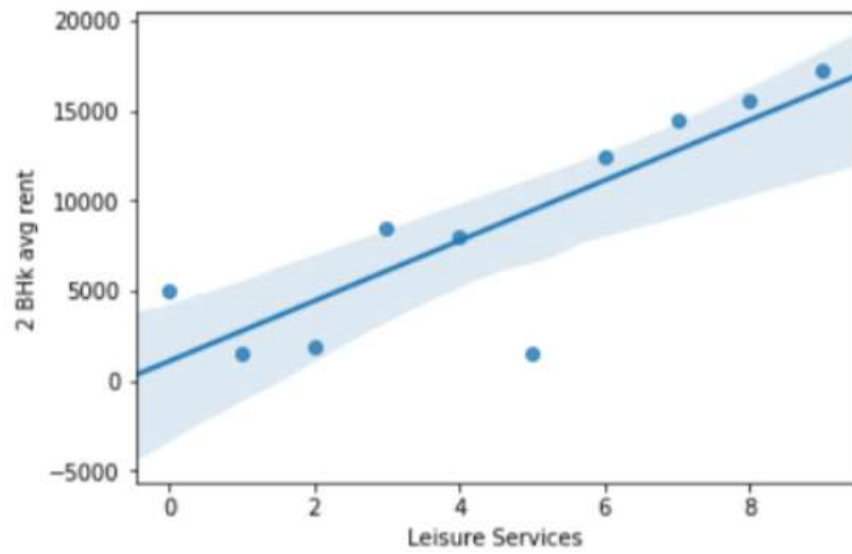


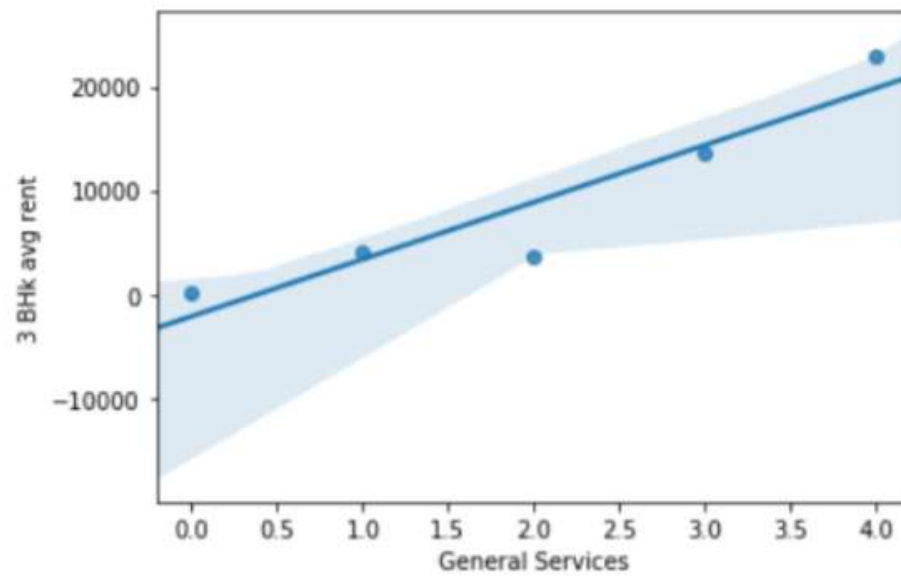
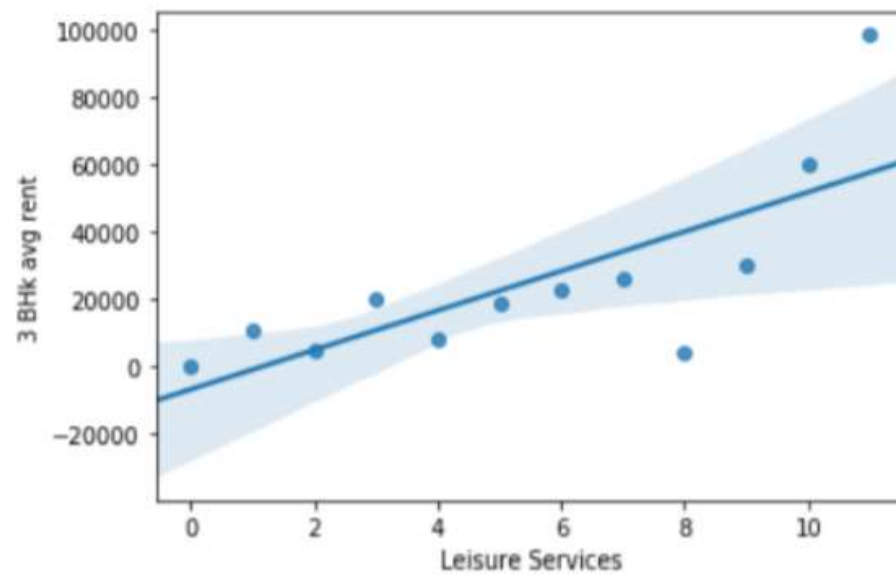
RESULTS CONTD..

- There is a small positive correlation between rental prices and the availability of each service locally. However, from the previous section of results it is clear that the effect of these services is much smaller compared to other factors which determine the rental prices.









CONCLUSION AND FUTURE DIRECTIONS

- ◉ There is a moderate positive correlation between availability of each service and the rental cost.
- ◉ Other factors like housing facilities have a much greater impact on rental prices and hence, locally available services are inconsequential.
- ◉ Thus, property dealers need not rely heavily on availability of local services while choosing rental property
- ◉ Similar studies for other bigger cities can be made richer by incorporating housing facilities as another factor and analyzing different levels of housing separately.