AirBnB & Zillow Data Challenge – Visualizations & Insights

File Name	Description
data_vis_1_histograms_properties_neigh.png	Distribution of properties across neighbourhoods

Insights:

- Most of the properties in the observed dataset are in Brooklyn and Manhattan.

File Name	Description
data_vis_1_box_plot_prices_neigh.png	Depicts the ranges of the prices across the neighbourhoods.
data_vis_1_violin_plot_prices_neigh.png	Depicts the ranges of the prices across the neighbourhoods in a violin plot.

Insights:

- By the above plots, we come to know that there is huge variations in the price per night across different neighbourhoods.
- Manhattan region has more number of zipcodes followed by Brooklyn, Staten Island and Queens.
- The prices of houses in the Manhattan region have more outliers than the remaining regions.

File Name	Description
data_vis_2_scatter_plot_ratingsNeigh_prices.png	Scatter plot depicting the correlation between prices and the ratings of the neighbourhoods.

Insights:

- Observing the graph, we can see that if the review about the location of the property is good(rating is high) then the price is high.
- There is correlation between Location Rating and price.

File Name	Description
data_vis_3_plot_sizerank_prices.png	Plot depicting the relation between prices and population density of the zipcode.

Insights:

- Observing the graph, we can see that there is no relation between the SizeRank and price variables.
- For instance, the prices of SizeRank 32, 52, 71, contrast the correlation in any way.
- Therefore, we determine that there is No correlation between SizeRank and price.

File Name	Description
data_vis_4_scatter_plot_mean_prices.png	Plot depicting the costs of the properties across neighbourhoods and zipcodes.
data_vis_4_scatter_plot_neigh_revenue.png	Plot depicting the estimated revenues of the properties across neighbourhoods and zipcodes.

Insights:

- As we can see from the above graph, the cost to buy a house in Manhattan is much higher than the other neighbourhoods.
- The neighbourhoods of Queens and Staten Island have much lesser house prices.
- The revenues generated by Manhattan and Brooklyn are understandably higher than Queens and Staten Island.

File Name	Description
data_vis_5_breakeven.png	Plot visualizing the breakeven period in years of the properties across neighbourhoods and zipcodes.

Insights:

- By the above graph plot, we can observe that the breakeven periods for the properties of the zipcodes that belong to Manhattan region are very high.
- This can be attributed to the high costs of the properties in that area.
- However the break even periods for properties in the zipcodes that belong to Staten Island are noticebly lower. That makes the region a very **good** option for investing.