Data Science SQL Mini-Project – 2

Insight-1: Locality wise average prices. To find out which locality is more costly on average

Query-

```
#Insight-1 : Locality wise average prices. To find out which locality is more costly on average
Select Locality,avg(price) as average_price
from ny #Selecting locality, and average price from ny table
Group by Locality # Grouping by locality
Order by average_price desc; # Ordering by the price in the decsending order to see the highest on top.
```

Output-

Locality	average_price
New York	3190146.4978
New York County	2579619.2298
Brooklyn	1426166.6667
United States	1327848.3243
Kings County	864643.5065
Flatbush	650000.0000
Queens	517333.3333
Richmond County	447581.9492
Queens County	443008.5422
Bronx County	337656.5385
The Bronx	330600.0000

Explanation- New York has the highest average price and The Bronx has the lowest average price. It is more economical to live in The Bronx locality as compared to New York.

Insight 2: Property type wise average prices. To find out which property type costs more on average.
Query-

```
# Insight 2: Property type wise average prices. To find out which property type costs more on average.
Select Type,avg(price) as average_price
from ny #Selecting Type, and average price from ny table
Group by Type # Grouping by Type
Order by average_price desc; # Ordering by the price in the decsending order to see the highest on top.
```

Output-

Type	average_price
Townhouse for sale	6365924.5485
House for sale	3684215.5208
Condo for sale	2630710.0774
For sale	1954535.9500
Multi-family home for sale	1680427.6699
Foreclosure	1343010.3571
Pending	1340867.2469
Mobile house for sale	1288000.0000
Coming Soon	1172000.0000
Co-op for sale	1100417.6966
Land for sale	1073021.3878
Condop for sale	998600.0000
Contingent	882571.6591

Explanation- On average Townhouse for sale is more expensive to live in than any other property types, contingent is the least expensive to live in.

Insight 3: Which type of property is most prevalent among the listed properties.
Query-

```
# Insight 3- Which type of property is most prevalent among the listed properties.
Select Type, count(Type) as count, concat(round(((count(Type) / 4801) * 100 ),2), '%')  as percentage
From ny #Getting a count of the Property type , and the percentage
Group by Type #Grouping by type
Order by count DESC  #Ordering by the count in the descending order
```

Output-

Type	count	percentage
Co-op for sale	1450	30.20%
House for sale	1012	21.08%
Condo for sale	891	18.56%
Multi-family home for sale	727	15.14%
Townhouse for sale	299	6.23%
Pending	243	5.06%
Contingent	88	1.83%
Land for sale	49	1.02%
For sale	20	0.42%
Foreclosure	14	0.29%
Condop for sale	5	0.10%
Coming Soon	2	0.04%
Mobile house for sale	1	0.02%

Explanation- Co-op for sale is the most listed property and Mobile house for sale is the least listed property.

Insight 4: How many properties are listed from each locality?
Query-

```
# Insight-4 , How many properties are listed from each locality-
Select Locality, count(Type) as count, concat(round(((count(Type) / 4801) * 100 ),2), '%')  as percentage
From ny #Getting a count of the properties in the localities, and the percentage
Group by Locality #Grouping by locality
Order by count DESC  #Ordering by the count in the descending order
```

Output-

Locality	count	percentage
New York	2505	52.18%
New York County	979	20.39%
Queens County	557	11.60%
Kings County	464	9.66%
Bronx County	182	3.79%
Richmond County	59	1.23%
United States	37	0.77%
Brooklyn	6	0.12%
Queens	6	0.12%
The Bronx	5	0.10%
Flatbush	1	0.02%

New York has the highest number of properties listed, and Flatbush has the least number of properties listed.

Insight 5: Relationship between the number of beds and the price
Query-

```
# Insight-5 Relationship between the number of beds and the price

Select Beds,avg(price) as average_price, max(price) as maximum_price , min(price) as minimum_price

from ny #Selecting Beds, and average price from ny table

Group by Beds # Grouping by Beds

Order by average_price desc; # Ordering by the price in the decsending order to see the highest on top.
```

Output-

Beds	average_price	maximum_price	minimum_price
7	27174496.6476	2147483647	400000
50	11000000.0000	11000000	11000000
42	10700000.0000	10700000	10700000
40	5980000.0000	5980000	5980000
20	5698000.0000	7999000	2100000
10	5539555.4286	29950000	1299000
8	5443654.4048	60000000	659000
11	5129838.8000	56000000	747000
35	4380000.0000	4380000	4380000
5	4150147.7417	48000000	250000
32	4000000.0000	4000000	4000000
30	3500000.0000	3500000	3500000
6	3337153.7528	50000000	309000
36	3099000.0000	3099000	3099000
24	3066666.6667	3500000	2700000
12	2998478.1304	29200000	825000
4	2653452.4632	39995000	187000
18	2499000.0000	2499000	2499000
15	2137777.4000	2999999	1188888
9	2080871.7436	12500000	199999
13	2027800.0000	3750000	1215000
19	1998000.0000	1998000	1998000
16	1993500.0000	2800000	1195000
14	1650000.0000	2780000	1195000
3	1462132.5275	65000000	3225
2	1046006.2653	16500000	2494
1	533782.1573	7250000	69000

Explanation- The more the number of bedrooms the more the average price.
The least costly properties are the one with 3/2/ 1 bedrooms.

Insight 6- Which Number of bedrooms is most prevalent among the listed properties?

Query-

```
# Insight-6 Which Number of bedrooms is most prevalent among the listed properties-
Select Beds, count(Beds) as count, concat(round(((count(Beds) / 4801) * 100 ),2), '%')  as percentage
From ny #Getting a count of the various categories of number of beds, and the percentage
Group by Beds #Grouping by beds
Order by count DESC  #Ordering by the count in the descending order
```

Output-

Beds	count	percentage
3	1456	30.33%
2	995	20.72%
1	820	17.08%
4	570	11.87%
5	360	7.50%
6	271	5.64%
7	105	2.19%
8	84	1.75%
9	39	0.81%
12	23	0.48%
10	21	0.44%
11	20	0.42%
14	7	0.15%
15	5	0.10%
13	5	0.10%
16	4	0.08%
20	3	0.06%
24	3	0.06%
32	2	0.04%
35	1	0.02%
50	1	0.02%
36	1	0.02%
42	1	0.02%
40	1	0.02%
30	1	0.02%
19	1	0.02%
18	1	0.02%

Explanation- The most listed properties are the ones with 3/2/1 bedrooms.

Insight 7: Which locality has the most expensive property listed?
Query-

```
# Insight-7 Which locality has the most expensive property listed
Select locality, price
from ny # Selecting locality and price from ny dataset
Where price= (Select max(price) from ny); #Where the price is equal to the maximum price
```

Output-

locality	price
New York	2147483647

Explanation- New York has the most expensive property listed.

Insight 8: Top 5 Sub localities with the highest average prices
Query-

```
# Insight-8 Top 5 Sub localities with the highest average prices
Select Sublocality,avg(price) as average_price
from ny #Selecting sublocality and average prices from ny dataset
Group by Sublocality # Grouping by Sub locality
order by average_price desc # Ordering by average
limit 5; #Limiting to only 5 values so as to see the top 5
```

Output-

Sublocality	average_price
New York County	10191202.0874
Dumbo	5799000.0000
Richmond County	5427597.8729
Manhattan	3609904.7619
New York	2534033.0846

Explanation- New York county on average is more expensive to live in than other localities.

Insight 9: Top 5 Sub localities with the lowest average prices
Query:

```
# Insight-9 Top 5 Sub localities with the lowest average prices
Select Sublocality,avg(price) as average
from ny #Selecting sublocality and average prices from ny dataset
Group by Sublocality # Grouping by Sub locality
order by average asc # Ordering by average in ascending order
limit 5; #Limiting to only 5 values so as to see the top 5
```

Output-

Sublocality	average
Rego Park	215000.0000
East Bronx	265000.0000
The Bronx	336616.2500
Riverdale	347000.0000
Queens	443733.0775

Explanation- On average it is least expensive to live in Rego park.

Insight 10- How many properties from each sub locality
Query-

```
# Insight-10 How many properties from each sub locality
Select Sublocality, count(Sublocality) as count, concat(round(((count(Type) / 4801) * 100 ),2), '%')  as percentage
From ny #Getting a count of the properties in the Sublocalities, and the percentage
Group by Sublocality #Grouping by Sublocality
Order by count DESC  #Ordering by the count in the descending order
```

Output-

Sublocality	count	percentage
New York	1016	21.16%
Kings County	727	15.14%
Queens County	684	14.25%
Queens	555	11.56%
Richmond County	480	10.00%
Brooklyn	464	9.66%
Bronx County	307	6.39%
New York County	286	5.96%
The Bronx	184	3.83%
Staten Island	59	1.23%
Manhattan	21	0.44%
Riverdale	4	0.08%
Flushing	4	0.08%
Coney Island	3	0.06%
East Bronx	1	0.02%
Brooklyn Heights	1	0.02%
Jackson Heights	1	0.02%
Rego Park	1	0.02%
Fort Hamilton	1	0.02%
Dumbo	1	0.02%
Snyder Avenue	1	0.02%

Explanation- New York has the most amount of listings. Rego park, Dumbo. Snyder avenue among others have only 1 listing each.

Insight 11- Top 5 brokers with the most listings-
Query-

```
# Insight-11 Top 5 brokers with the most listings-
Select Brokertitle,Count(Brokertitle) as Count
from ny #Selecting broker title and count brokertitle from ny dataset
Group by Brokertitle # Grouping by Broker title
order by Count desc # Ordering by average in ascending order
limit 5; #Limiting to only 5 values so as to see the top 5
```

Output-

Brokertitle	Count
Brokered by COMPASS	457
Brokered by Douglas Elliman - 575 Madison Ave	110
Brokered by Exp Realty	95
Brokered by Brown Harris Stevens	93
Brokered by Corcoran East Side	91

Explanation- COMPASS is the broker to most amount of listings.

Insight 12- Top 5 brokers with the least listings-
Query-

```
# Insight-12 Top 5 brokers with the least listings-
Select Brokertitle,Count(Brokertitle) as Count
from ny #Selecting broker title and count brokertitle from ny dataset
Group by Brokertitle # Grouping by Broker title
order by Count asc # Ordering by count in ascending order
limit 5; #Limiting to only 5 values so as to see the top 5
```

Output-

Brokertitle	Count
Brokered by F.G. VOLPE REALTY "SERVICING S...	1
Brokered by Home Source Realty Inc	1
Brokered by Native Real Estate - Native Real Es...	1
Brokered by Dolly Lenz Real Estate LLC	1
Brokered by Keller Williams Hudson Valley United	1

Insight 13- Relationship between the number of bathrooms and price-
Query-

```
# Insight-13 Relationship between the number of bathrooms and price-
Select Bath,avg(price) as average_price, max(price) as maximum_price , min(price) as minimum_price
from ny #Selecting number of bathrooms, and average price from ny table
Group by Bath # Grouping by number of bathrooms
Order by average_price desc; # Ordering by the price in the decsending order to see the highest on top
```

Output-

Bath	average_price	maximum_price	minimum_price
13	29950000.0000	29950000	29950000
10	27072680.5000	195000000	1768888
6	22643366.6901	2147483647	825000
11	12145000.0000	19995000	4295000
50	11000000.0000	11000000	11000000
43	10700000.0000	10700000	10700000
8	9644511.1111	60000000	1085000
9	7458412.4286	28500000	990000
16	6015800.0000	16800000	2800000
7	5866208.3333	27000000	950000
20	5491666.6667	6995000	3500000
0	5448333.3333	14995000	675000
2.3...	4265698.9437	65000000	5800
17	4195000.0000	4195000	4195000
4	3521754.9587	31000000	300000
12	3499666.6667	4000000	2499000
5	3369973.4600	24950000	699000
32	3000000.0000	3000000	3000000
24	2700000.0000	2700000	2700000
3	1699883.9936	12495000	199999
2	1216548.5817	16500000	189000
1	476297.5569	4200000	2494

Explanation- The more the number of bathrooms, the more the cost. The least costly properties on average are the ones with 3/2/1 bathrooms.

Insight 14- Top 5 brokers with the highest average price
Query-

```
# Insight-14. Top 5 brokers with the highest average price
Select Brokertitle,avg(price) as average
from ny #Selecting broker title and average of price from ny dataset
Group by Brokertitle # Grouping by Broker title
order by average desc # Ordering by average in ascending order
limit 5; #Limiting to only 5 values so as to see the top 5
```

Output-

Brokertitle	average
Brokered by ANNE LOPA REAL ESTATE	1075039323.5000
Brokered by Douglas Elliman - New Development	40000000.0000
Brokered by Reserve	32000000.0000
Brokered by EVERGREEN REALTY & INVESTMENTS	31500000.0000
Brokered by Brown Harris Stevens - 43 North M...	15546333.3333

Explanation- ANNE LOPA REAL ESTATE are the broker to the properties with the highest average price.

Insight 15-Which Number of bathrooms is most prevalent among the listed properties.
Query-

```
# Insight-15 Which Number of bathrooms is most prevalent among the listed properties-

Select Bath, count(Bath) as count, concat(round((((count(Bath) / 4801) * 100 ),2), '%') as percentage

From ny #Getting a count of the variousnumber of bathrooms, and the percentage

Group by Bath #Grouping by  number of bathrooms

Order by count DESC  #Ordering by the count in the descending order
```

Output-

Bath	count	percentage
2	1671	34.81%
1	1521	31.68%
4	484	10.08%
3	467	9.73%
2.373860858	302	6.29%
6	142	2.96%
5	100	2.08%
8	45	0.94%
7	24	0.50%
10	16	0.33%
9	7	0.15%
16	5	0.10%
20	3	0.06%
12	3	0.06%
0	3	0.06%
11	2	0.04%
32	1	0.02%
13	1	0.02%
50	1	0.02%
24	1	0.02%
43	1	0.02%
17	1	0.02%

Explanation- Most of the properties listed have 2 or 1 bathrooms. The properties with 2 bathrooms are the most listed.

Insight 16- Property type wise average square footage
Query-

```
# Insight-16. Property type wise average square footage
Select Type,avg(Propertysqft) as average_square_footage
from ny #Selecting Type, and average sq footage from ny table
Group by Type # Grouping by Type
Order by average_square_footage desc; # Ordering by the average in the descending order to see the highest on top.
```

Output-

Type	average_square_footage
Townhouse for sale	3891.0936
Multi-family home for sale	3259.8102
Foreclosure	2331.2143
House for sale	2255.5010
Coming Soon	2217.0000
Mobile house for sale	2184.0000
Condop for sale	2184.0000
Land for sale	2158.8163
For sale	2116.4000
Pending	2070.0947
Contingent	1775.2045
Co-op for sale	1661.8317
Condo for sale	1574.5982

Explanation- Townhouse for sale has the highest average square footage and condo for sale has the lowest.

Insight 17- Which locality has the highest average square footage available
Query-

```
#Insight-17 Which locality has the highest average square footage available
Select Locality,avg(Propertysqft) as average_square_footage
from ny #Selecting Locality, and average sq footage from ny table
Group by Locality # Grouping by Type
Order by average_square_footage desc; # Ordering by the average in the descending order to see the highest on top.
```

Output-

Locality	average_square_footage
New York	2693.6176
United States	2085.0541
New York County	1883.7140
Queens County	1582.6553
Queens	1554.5000
The Bronx	1336.8000
Kings County	1331.8319
Richmond County	1231.8983
Bronx County	1217.1099
Brooklyn	1077.3333
Flatbush	1050.0000

Explanation- New York has the highest average square footage in terms of properties listed.

Insight 18- Top 5 sub localities with the highest average square footage available

Query-

```
# Insight-18 Top 5 sub localities with the highest average square footage available
Select Sublocality,avg(Propertysqft) as average_square_footage
from ny #Selecting Sublocality, and average sq footage from ny table
Group by Sublocality # Grouping by Sub locality
Order by average_square_footage desc # Ordering by the average in the descending order to see the highest on top.
Limit 5; #Seeing only top 5
```

Output-

Sublocality	average_square_footage
New York County	4574.2937
Bronx County	2667.5147
Kings County	2653.1829
Dumbo	2497.0000
Queens County	2305.0731

Explanation- New York county has the highest average square footage in terms of properties available.

Insight 19- Which locality has the highest average price per square footage

Query-

```
# Insight 19- Which locality has the highest average price per square footage
Select locality, avg(Price/Propertysqft) as average_price_per_sq_footage
From ny  # Selecting locality, and the average of price per square footage from ny table
Group by locality #Grouping by locality
Order by average_price_per_sq_footage desc; #Ordering by the average price per square footage.
```

Output-

locality	average_price_per_sq_footage
New York County	1220.52303585
Brooklyn	986.39450000
New York	857.09706463
Kings County	660.70488190
United States	619.99217838
Flatbush	619.04760000
Richmond County	377.13143220
Queens County	351.08496014
Queens	347.94478333
Bronx County	287.36319066
The Bronx	271.32028000

Explanation- New York county has the highest average price per square footage and The Bronx has the lowest average price per square footage in terms of listed properties.

Insight 20- Top 10 states with the highest number of listings
Query-

```
# Insight-20 Top 10 states with the highest number of listings
Select State, count(Type) as count
From ny #Getting a count of the state wise listings
Group by State #Grouping by state
Order by count DESC  #Ordering by the count in the descending order
Limit 10; #Seeing only top 10
```

Output-

State	count
Brooklyn, NY 11235	102
Brooklyn, NY 11209	94
Forest Hills, NY 11375	91
Brooklyn, NY 11234	90
Staten Island, NY 10314	86
Bronx, NY 10463	79
Staten Island, NY 10312	73
Staten Island, NY 10306	69
Brooklyn, NY 11201	60
Rego Park, NY 11374	58

Explanation- Brooklyn NY 11235 has the highest number of listed properties.

Insight 21- Top 10 states with the lowest number of listings
Query-

```
# Insight 21 Top 10 states with the lowest number of listings
Select State, count(Type) as count
From ny #Getting a count of the state wise listings
Group by State #Grouping by state
Order by count ASC #Ordering by the count in the ascending order
Limit 10; #Seeing only top 10
```

Output-

State	count
Queens, NY 11412	1
Bedford Stuyvesant, NY 11206	1
Kew Garden Hills, NY 11367	1
New York, NY 11101	1
Brooklyn, NY 10308	1
Queens, NY 11355	1
Ditmas Park, NY 11226	1
Jackson Heights, NY 11370	1
Manhattan, NY 10004	1
Bronx, NY 10455	1

Insight 22- Top 10 states with the Highest average prices
Query-

```
# Insight 22- Top 10 states with the Highest average prices
Select State, avg(Price) as average_price
From ny #Getting state and the average price from ny table
Group by State #Grouping by state
Order by average_price desc #Ordering by the average in the descending order
Limit 10; #Seeing only top 10
```

Output-

State	average_price
New York, NY 10309	2147483647.0000
Manhattan, NY 10013	12965333.3333
New York, NY 10013	11128124.9583
New York, NY 10011	9810750.0000
Manhattan, NY 10075	9189461.5385
New York, NY 10019	8764590.9091
New York, NY 10065	8412191.4681
New York, NY 10007	8340466.6667
New York, NY 10021	7821999.8750
New York, NY 10014	7219454.5455

Insight 23- Top 10 streets with the highest number of listings
Query-

```
# Insight 23- Top 10 streets with the highest number of listings
Select Street_name, count(Street_name) as count
From ny #Getting a count of the street wise listings
Group by Street_name #Grouping by street name
Order by count DESC  #Ordering by the count in the descending order
Limit 10; #Seeing only top 10
```

Output-

Street_name	count
Manhattan	979
Brooklyn	727
Queens	684
Staten·Island	480
The Bronx	310
New York	285
Flushing	139
Forest Hills	62
Jackson Heights	42
Bayside	42

Explanation- Manhattan Street has the highest number of listings.

Insight 24- Top 10 streets with the highest average price per square footage

Query-

```
# Insight 24- Top 10 streets with the highest average price per square footage-
Select Street_name, avg(Price/Propertysqft) as average_price_per_sq_footage
From ny  # Selecting Street_name, and the average of price per square footage from ny table
Group by Street_name #Grouping by Street_name
Order by average_price_per_sq_footage desc #Ordering by the average price per square footage.
Limit 10; #Seeing only top 10
```

Output-

Street_name	average_price_per_sq_footage
East 22nd Street	5134.44110000
Central Park West	4451.13790000
West 13th Street	3548.53480000
Centre Street	2500.00000000
East 10th Street	2415.25420000
John Street	2322.38690000
New York	2315.36393895
East 74th Street	2069.13340000
West 56th Street	2067.74060000
West 64th Street	2037.17200000

Explanation- East 22nd Street has the highest average price per square footage in terms of properties listed.

Insight 25- Top 10 states with the highest average price per square footage
Query-

```
# Insight 25- Top 10 states with the highest average price per square footage-
Select State, avg(Price/Propertysqft) as average_price_per_sq_footage
From ny #Getting state and the average price per sq footage from ny table
Group by State #Grouping by state
Order by average_price_per_sq_footage desc #Ordering by the average price per sq foot in the descending order
Limit 10; #Seeing only top 10
```

Output-

State	average_price_per_sq_footage
New York, NY 10309	214748.36470000
Manhattan, NY 10075	3500.87810000
New York, NY 10013	3057.24152500
New York, NY 10021	2720.98831875
New York, NY 10011	2700.49122500
New York, NY 10065	2587.49629787
New York, NY 10014	2583.96461212
New York, NY 10007	2340.03491333
Manhattan, NY 10013	2333.09112000
Manhattan, NY 10018	2291.07980000

Insight 26- Top 10 Latitude and longitude wise number of listings
Query-

```
# Insight 26 Top 10 Latitude and longitude wise number of listings-
Select latitude,longitude, count(Type) as Count
from ny # Selecting latitude, and longitude and the count of listings
Group by latitude,longitude # Grouping by latitude,longitude
Order by count desc # Ordering by count
Limit 10; #Seeing only top 10
```

Output-

latitude	longitude	Count
40.7564761	-73.7212008	9
40.7577991	-73.7159564	8
40.7379227	-73.8470718	7
40.7104509	-73.7982064	5
40.6189484	-74.1071576	5
40.7318958	-73.8599645	5
40.6275896	-74.0016198	5
40.7291499	-73.84944	5
40.7887084	-73.9700091	4
40.8248699	-73.9229829	4

Insight 27- Top 10 latitude and longitude wise average prices
Query-

```
# Insight 27- Top 10 latitude and longitude wise average prices
Select latitude,longitude, avg(Price) as average_price
from ny # Selecting latitude, and longitude and the count of listings
Group by latitude,longitude # Grouping by latitude,longitude
Order by average_price desc # Ordering by count
Limit 10; #Seeing only top 10
```

Output-

latitude	longitude	average_price
40.5184841	-74.2244185	1075039323.5000
40.7663935	-73.9809909	100947500.0000
40.7765613	-73.9633167	65000000.0000
40.7756423	-73.9642465	60000000.0000
40.7616	-73.9761913	56000000.0000
40.7672235	-73.9698561	55000000.0000
40.782238	-73.9846322	55000000.0000
40.7707516	-73.9645283	48000000.0000
40.768301	-73.9697336	45000000.0000
40.768973	-73.969136	44500000.0000

Insight 28: Property type wise average price per square footage
Query-

```
# Insight 28 Property type wise average price per sq footage-
Select Type, avg(Price/Propertysqft) as average_price_per_sq_footage
From ny  # Selecting Type, and the average of price per square footage from ny table
Group by Type #Grouping by Type
Order by average_price_per_sq_footage desc #Ordering by the average price per square footage.
```

Output-

Type	average_price_per_sq_footage
Townhouse for sale	1533.91171973
Condo for sale	1220.07904467
For sale	1018.47255500
House for sale	835.33170771
Pending	606.02653333
Co-op for sale	605.49463490
Multi-family home for sale	599.03047442
Mobile house for sale	589.74360000
Coming Soon	525.24725000
Land for sale	503.43589388
Contingent	503.38588864
Foreclosure	459.93677143
Condop for sale	457.23444000

Explanation- Townhouse for sale has the highest average price per square footage.