

NYC

REPORT

BY

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Downloading and merging by Borough, Block and Lot

The following datasets were downloaded and merged through Borough, Block and Lot

- FY18 Database Files by Tax Class - Tax Classes 2, 3 and 4 for **2018** with more than 400000 records
- FY15 Database Files by Tax Class - Tax Classes 2, 3 and 4 for 2015 with 384560
- There are almost 117 different fields for both of these datasets

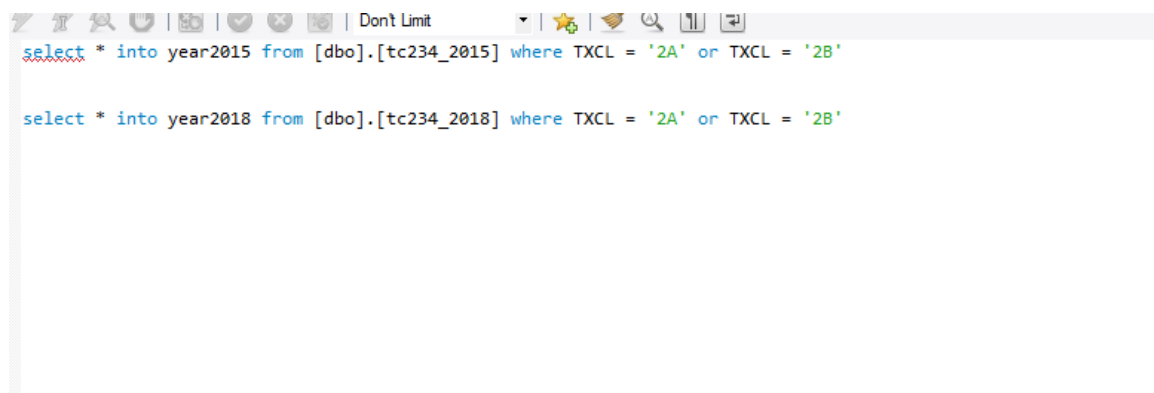
SORTING OF DATASETS

Using data filter column 'AV-TAX CLASS' = 2A OR 2B was sorted and renamed as 'LimitationProperties' using SQL query

The records where the percentage was more than 26% for AV-CURAVT-ACT were sorted and renamed as "ReassessedProperties"

The following SQL queries were executed

The number of records were **2634** after sorting for percentage increase more than 26 from 2015 to 2018



```
select * into year2015 from [dbo].[tc234_2015] where TXCL = '2A' or TXCL = '2B'

select * into year2018 from [dbo].[tc234_2018] where TXCL = '2A' or TXCL = '2B'
```

```

( (select y5.BBLE, COALESCE((y8.CURAVT_A - y5.CURAVT_A) / NULLIF((y5.CURAVT_A), 0), 0)*
100 as percentage , case when (COALESCE((y8.CURAVT_A - y5.CURAVT_A) / NULLIF((y5.CURAVT_A), 0), 0)*100) > 26
then 1 else 0 end as percentage
into final
from year2015 as y5
inner join year2018 as y8 on y5.bble = y8.bble
where y8.BBLE is not null and y5.bble is not null)

select * into ReassessedProperties from [dbo].[tc234_2015] where bble in (
select BBLE from final where percentage =1)

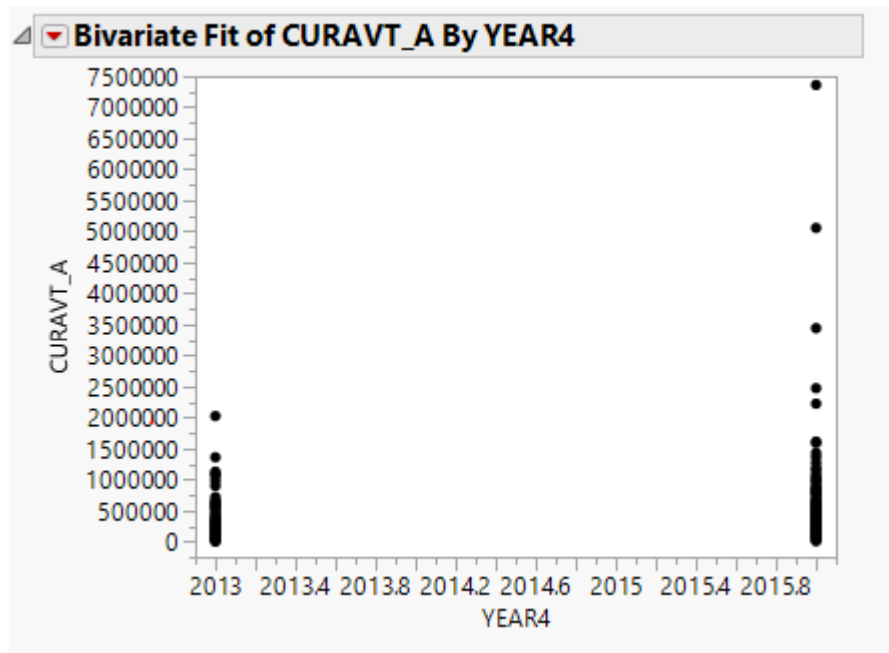
insert into ReassessedProperties
select * from [dbo].[tc234_2018] where bble in (
select BBLE from final where percentage =1)

select * from [dbo].[ReassessedProperties]

```

Data Analysis

Running an analysis of CURAVT-ACT against Year column for 2013 and 2016 gave the following graph where the range for year **2013** was from 2500 to 2000000 whereas for **2016** it is 8601 to 7500000



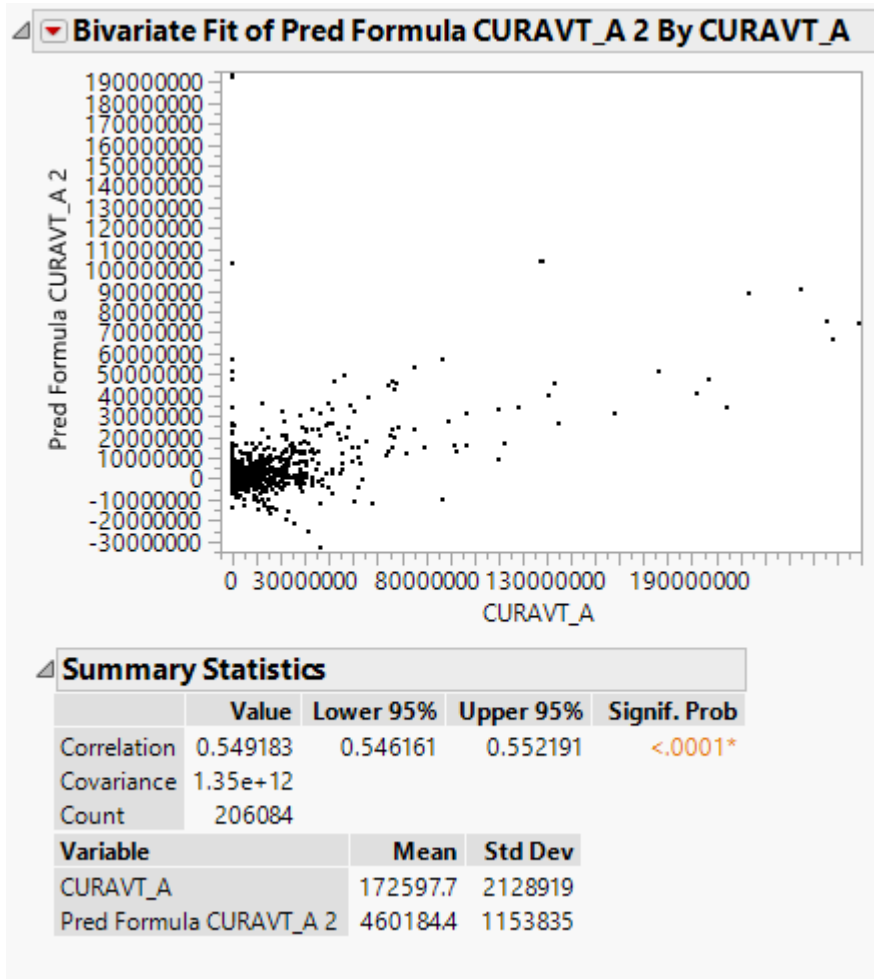
Fit Model

The following model gave an Rsquare value of 0.8900803. The variables which are used for prediction are least correlated to "CURAVT-ACT" and are as follow

- LND_AREA – This is the total land area which holds significance in the determining the total value, as the increase in demand of land tends to increase the value of any property.
- GR_SQFT— It is the sum of all areas on all floors of the building, it determines the total carpet area of building.
- BLDGS – the number of buildings on the property also is an important factor as more the number of buildings less is the price.

- RES_UNIT – The number of units for residents tends to signify that the prices are different for commercial and residential units.
- TOT_UNIT – The total number of units in the building specify price value the building holds. That is more the number of units higher the price.
- SECVOL- Geographic subset of BORO which means the areas in which New York City is divided and each hold a different value.
- BLOCK – BLOCK ranges by BORO for example MANHATTAN is 1 TO 2,255 and is considered as one block.
- EXT – Extensions and garage also determine the value of any property, that is if present then the value increases.
- CONDO_S1 – This variable has only two type of values that is commercial or residential. The prices are different for commercial and residential.

Response CURAVT_A					
Summary of Fit					
RSquare			0.890803		
RSquare Adj			0.890267		
Root Mean Square Error			584368.7		
Mean of Response			234227		
Observations (or Sum Wgts)			2048		
Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Ratio	
Model	10	5.6746e+15	5.675e+14	1661.738	
Error	2037	6.9561e+14	3.415e+11		Prob > F
C. Total	2047	6.3702e+15			<.0001*
Parameter Estimates					
Effect Tests					
Source	Nparm	DF	Sum of Squares	F Ratio	Prob > F
LND_AREA	1	1	2.2009e+10	0.0645	0.7996
GR_SQFT	1	1	3.497e+15	10240.42	<.0001*
BLDGS	1	1	1.4779e+11	0.4328	0.5107
RES_UNIT	1	1	1.0445e+13	30.5876	<.0001*
TOT_UNIT	1	1	7.8296e+11	2.2928	0.1301
SECVOL	1	1	5.4907e+12	16.0788	<.0001*
BLOCK	1	1	8.0429e+12	23.5527	<.0001*
EXT	2	2	1.2262e+13	17.9536	<.0001*
CONDO_S1	1	1	4.4288e+11	1.2969	0.2549
Effect Details					



The above graph shows 0.54 correlation between the “CURAVT-ACT” and the “predicted value for CURAVT-ACT” as most of the values were missing.