

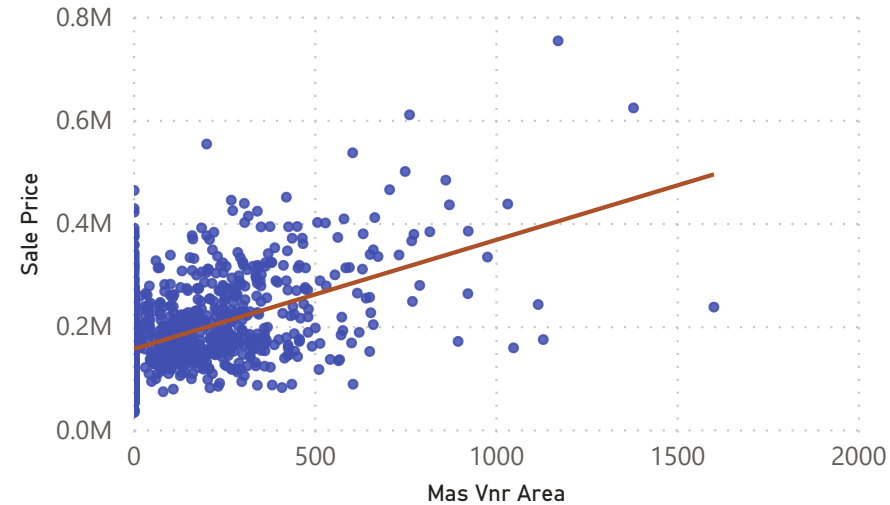


Key Numerical Variables related to Sales Price

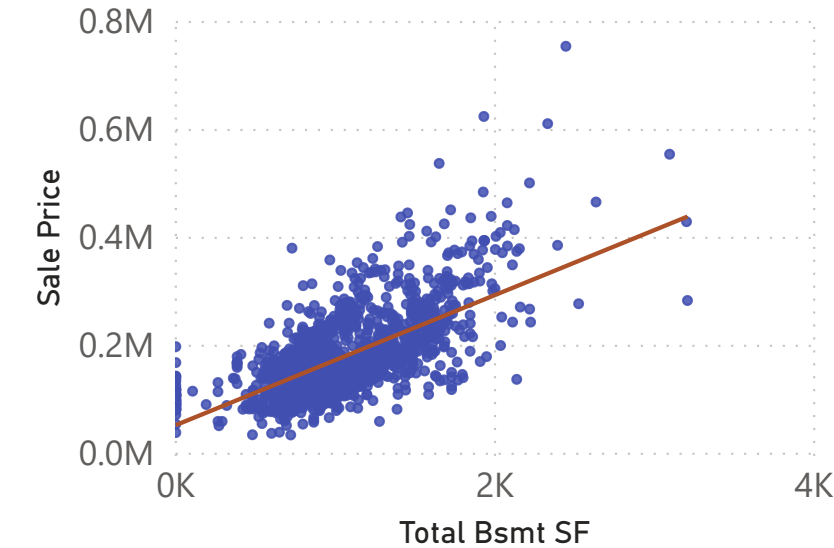
Numerical Variables have strong predictive features as well as a positive relationship along with Sales Price:

- Ms Vn Area
- Total Basement SF
- Gr Liv Area
- Garage Size

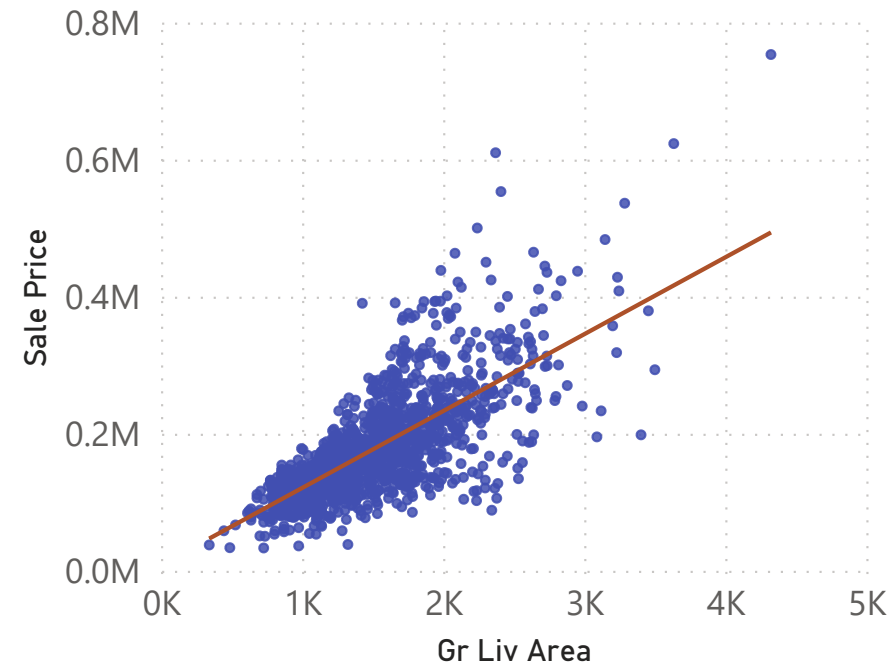
Mas Vnr Area and Sale Price by Id



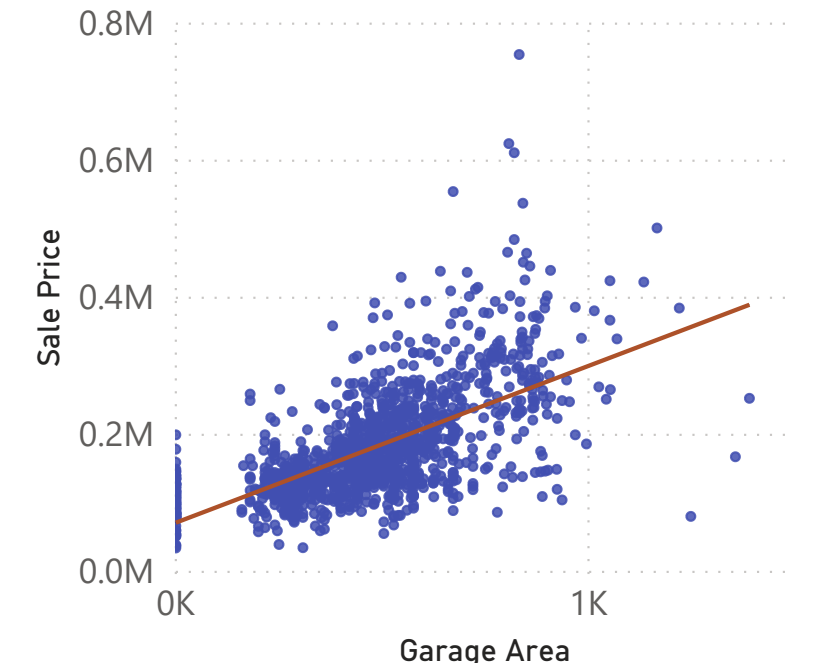
Total Bsmt SF and Sale Price by Id



Gr Liv Area and Sale Price by Id



Garage Area and Sale Price by Id





Key Feature Variables related to Sales Price

Sale Price by Bldg Type and Id

Sale Price by Central Air_3 and Id

Categorized Variables have positive influences on the Sales Price since we can see the mean of sales price are very different in different Categories

- Ms Vn Area
- Total Basement SF
- Gr Liv Area
- Garage Size

Sale Price by Paved DriveYes: 1, No; 0 and Id

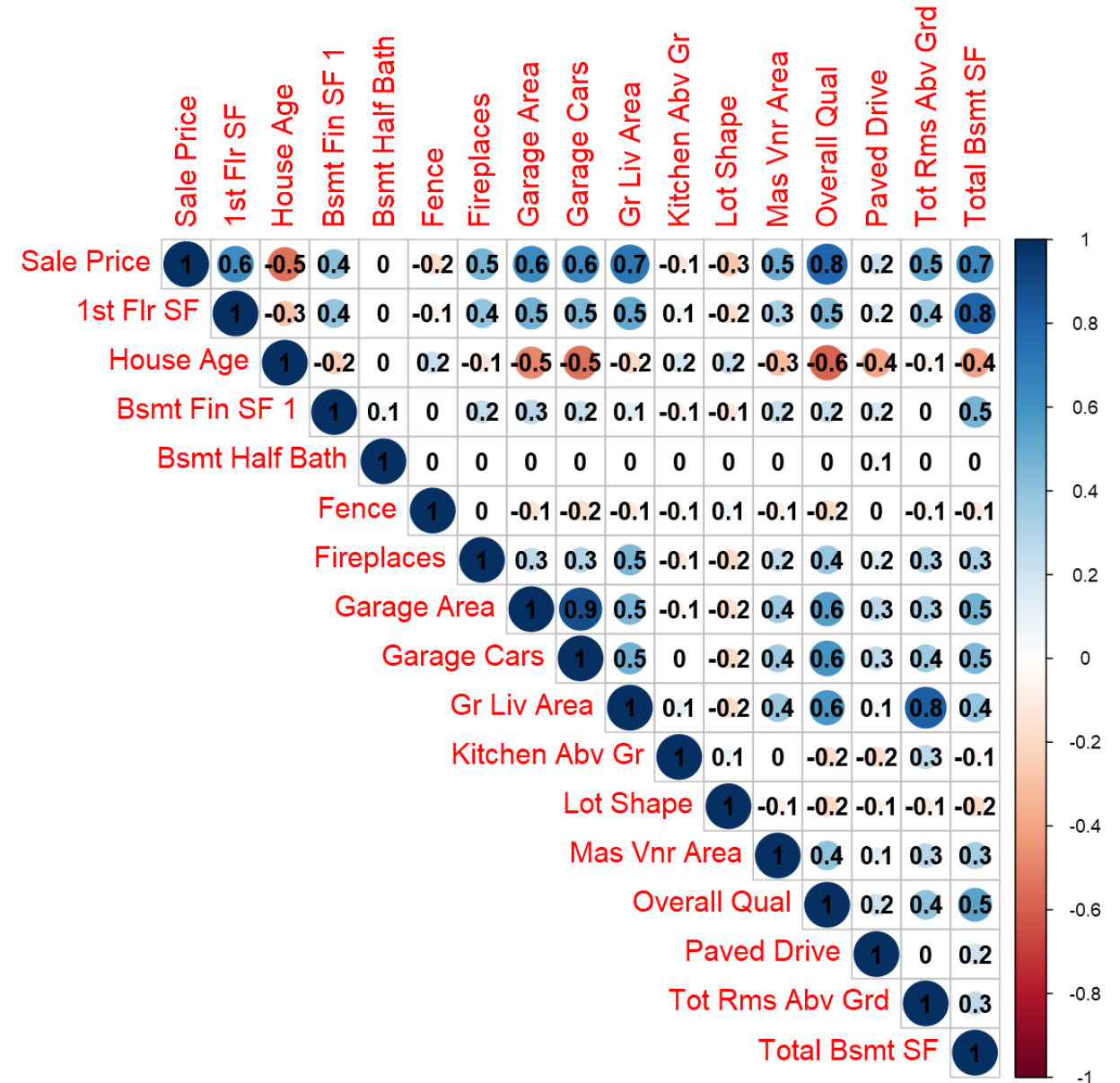
Sale Price by Yr Sold and Id



- Overall Quality
- Ground Living Area/Total Bsemt SF
- Garage Area/ Garage Cars/1st Flr SF
- Total Rooms Above Ground/Fireplaces

- Kitchen Above Ground
- House Age
- Lot Shape
- Utilites

- Fireplaces
- Mas Vnr Area





Regression Analysis & Prediction

•R Square is 85% which means only 85% of Sales price are explained by all other independent variables such as Ground Living Area and Kitchen Above Ground etc

•P-Value: Basement half bath, Total rooms above ground and Garage cars are > 0.05 which means they are insignificant to our prediction outcome, we should remove them in the regression equation

Overall, the regression model is a moderate fit for the initial modeling

Regression Equation:

- Fitting the regression equation into our dataset again, it proves our initial predictive modeling is moderate fit as we mention before. Overall, the predictive price is slightly lower than actual

Regression Statistics	Value
Standard Error	29,857.36
Observations	1,450.00
Multiple R	0.92
R Square	0.85
Adjusted R Square	0.85

Variables	Coefficients	P-value
Fireplaces	3,514.40	0.02
Garage Cars	2,968.28	0.23
Tot Rms Abv Grd	642.93	0.49
Gr Liv	52.84	0.00

Sales Price VS Sales Price Prediction

