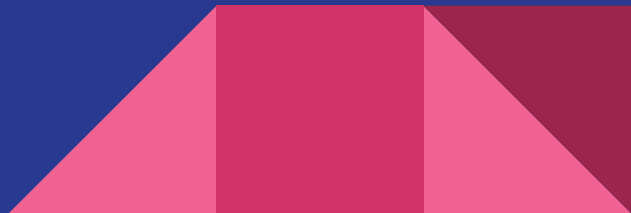


Buying or Selling? Get the Best Deal

Using thorough Data Cleaning and Statistical Modeling and Analysis
to maximize your home wealth

How this data was gathered and tested:

- Over 1500 rows(home sales) of data with almost 300 data points each
- Carefully cleaned to preserve data without negatively influencing model
- Feature Engineering to create columns that make sense (“Enough dollars make sense”-Jay-Z)
- Tested across multiple models with accuracy averaging MSE within \$22000
- Tested on over 500 rows of additional data for guaranteed quality



Value Impact

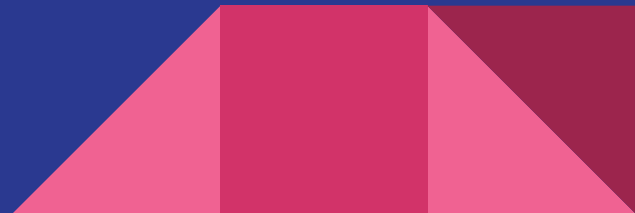
Roof Style_Mansard	-\$58330.0
Roof Matl_WdShngl	\$48410.0
Sale Type_ConLI	-\$38840.0
Roof Matl_Tar&Grv	-\$36180.0
Condition 1_PosN	\$29490.0
Sale Type_COD	-\$28000.0
Roof Matl_CompShg	-\$26830.0
Condition 1_PosA	\$26470.0
Condition 1_Norm	\$18220.0
Overall Qual	\$6109.86
Overall Cond	\$5297.18
Fireplaces	\$4928.49
Bedroom AbvGr	-\$3751.57
Total Bathrooms	\$2547.97
Year Built	\$419.91

Lot Frontage	\$87.28
Screen Porch	\$37.69
Mas Vnr Area	\$27.42
Total Porch SF	\$22.13
Total SF	\$22.12
Gr Liv Area	\$20.04
BsmtFin SF 1	\$14.5
2nd Flr SF	\$12.3
Total Bsmt SF	\$8.68
Bsmt Unf SF	-\$5.02
Lot Area	\$1.08

How key features were selected:

-Only features with Ttest values of <0.05 selected for ensured price influence

-Features selected based on financial impact per unit in US dollars



Value Impact

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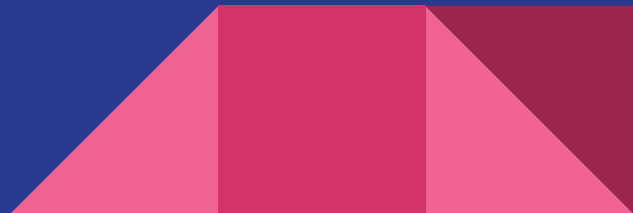
We will focus on the individual property and things to consider when selecting a home or considering upgrades and improvements

-Neighborhoods

-Housing type

-Proximity to external influences

-Features within the home



	Value Impact
Neighborhood_Veenker	-\$77960.0
Neighborhood_Edwards	-\$76170.0
Neighborhood_Gilbert	-\$74860.0
Neighborhood_Timber	-\$73460.0
Neighborhood_NWAmes	-\$73400.0
Neighborhood_SawyerW	-\$73340.0
Neighborhood_NAmes	-\$71050.0
Neighborhood_OldTown	-\$70750.0
Neighborhood_CollgCr	-\$70740.0
Neighborhood_SWISU	-\$69970.0
Neighborhood_Mitchel	-\$69520.0
Neighborhood_Sawyer	-\$69180.0
Neighborhood_IDOTRR	-\$68570.0

Neighborhood_BrkSide	-\$63620.0
Neighborhood_ClearCr	-\$63570.0
Neighborhood_Greens	-\$61490.0
Neighborhood_Somerst	-\$59600.0
Neighborhood_MeadowV	-\$59310.0
Neighborhood_Blmngtn	-\$57620.0
Neighborhood_Blueste	-\$57470.0
Neighborhood_Crawfor	-\$56470.0
Neighborhood_NPkVill	-\$51000.0
Neighborhood_BrDale	-\$49540.0
Neighborhood_NridgHt	-\$48720.0
Neighborhood_NoRidge	-\$43790.0

Neighborhoods:

Get a bargain on a nice home, if you don't care what neighborhood you are in!

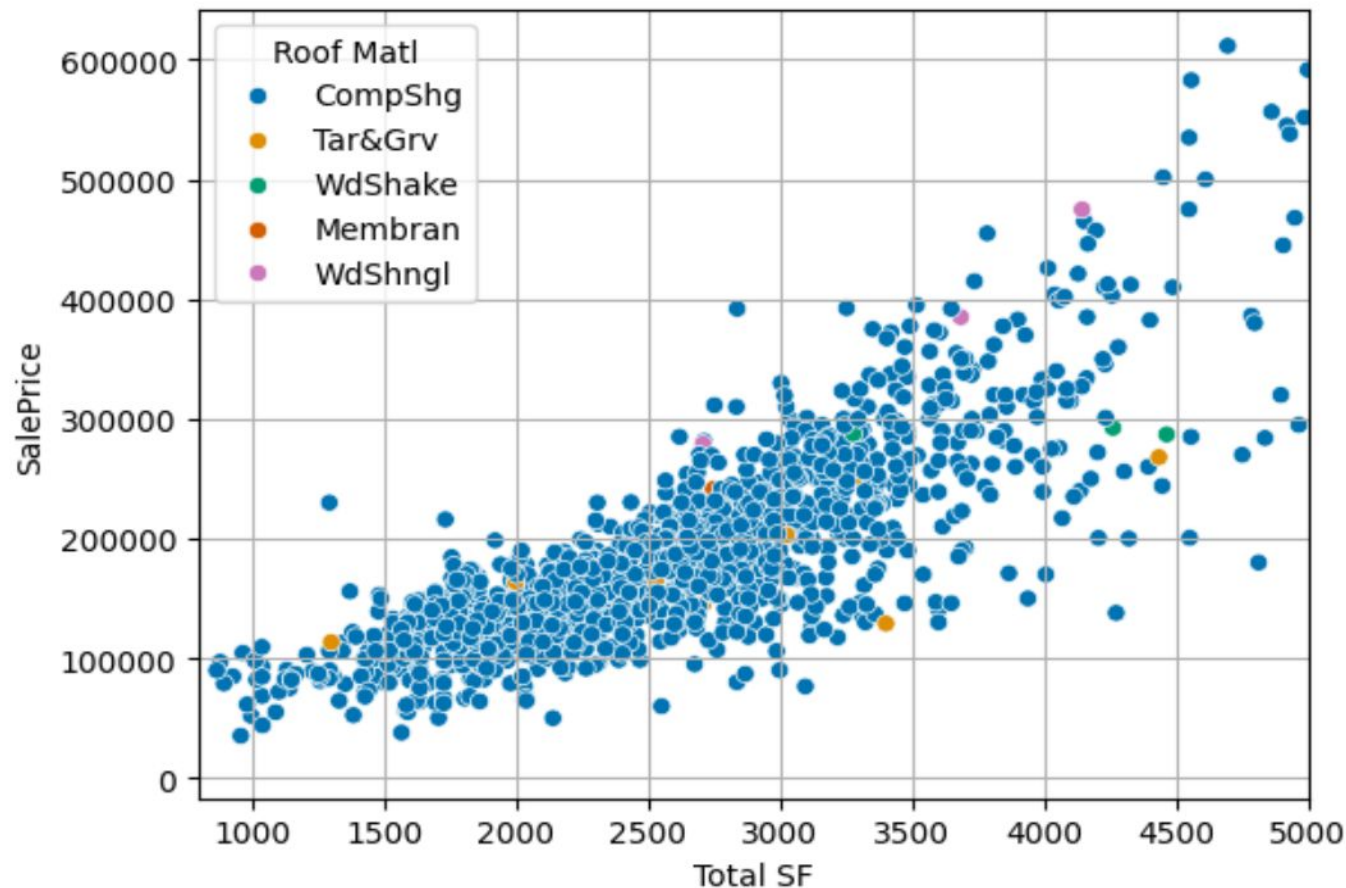
Property Type: Selecting a property type or modifying an existing property

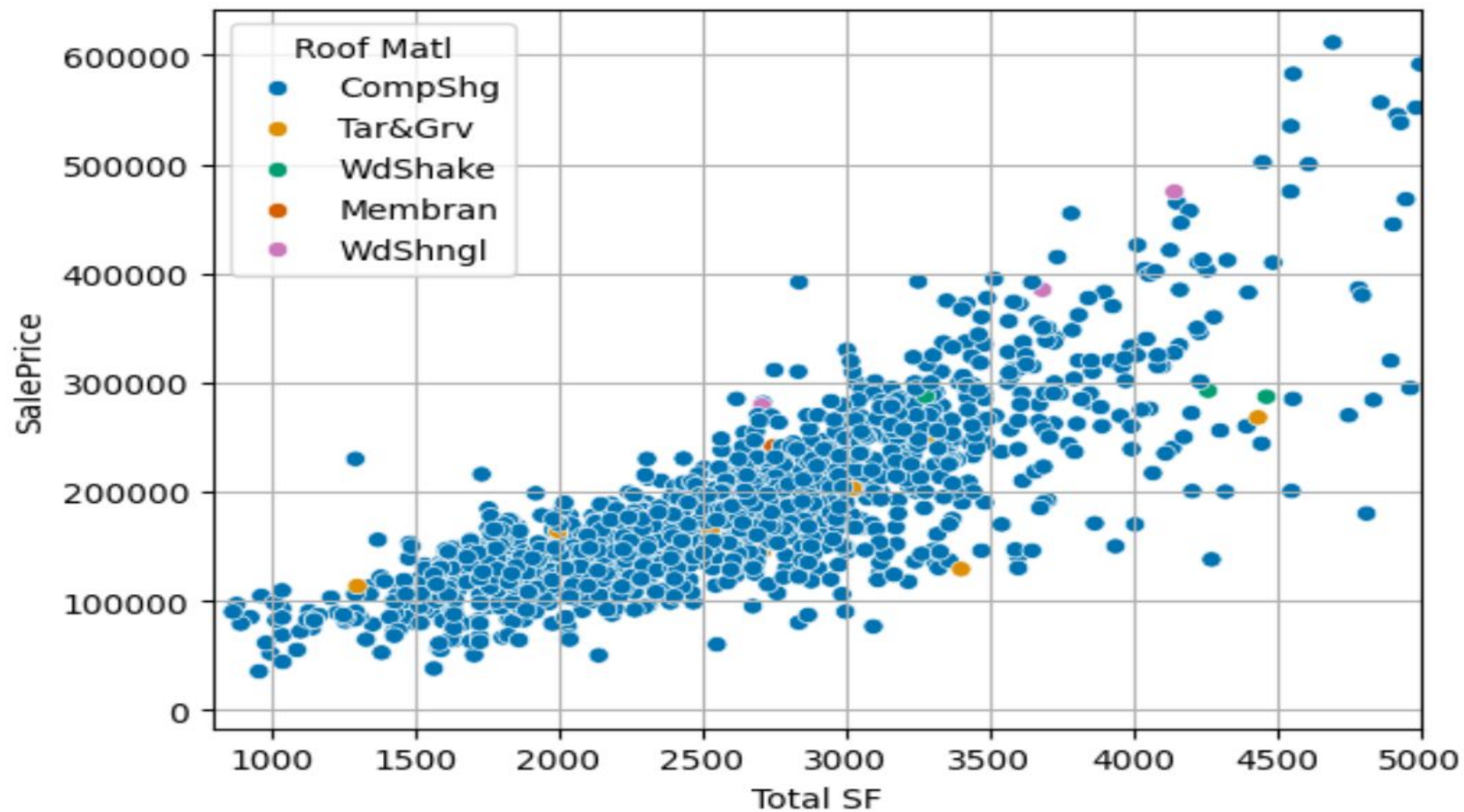
Value Impact		Property Type
MS SubClass_45	\$111200.0	1-1/2 STORY - UNFINISHED ALL AGES
MS SubClass_30	\$86230.0	1-STORY 1945 & OLDER
MS SubClass_40	\$86160.0	1-STORY W/FINISHED ATTIC ALL AGES
MS SubClass_50	\$83920.0	1-1/2 STORY FINISHED ALL AGES
MS SubClass_70	\$80730.0	2-STORY 1945 & OLDER
MS SubClass_20	\$75070.0	1-STORY 1946 & NEWER ALL STYLES
MS SubClass_75	\$74060.0	2-1/2 STORY ALL AGES
MS SubClass_60	\$73770.0	2-STORY 1946 & NEWER
MS SubClass_85	\$71410.0	SPLIT FOYER
MS SubClass_190	\$66970.0	2 FAMILY CONVERSION - ALL STYLES AND AGES
MS SubClass_80	\$63890.0	SPLIT OR MULTI-LEVEL

	Value	Impact
Roof Style_Mansard	-	\$58330.0
Roof Matl_WdShngl		\$48410.0
Sale Type_ConLI	-	\$38840.0
Roof Matl_Tar&Grv	-	\$36180.0
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Fireplaces		\$4928.49
Bedroom AbvGr	-	\$3751.57
Total Bathrooms		\$2547.97
Year Built		\$419.91

Roofing type and material:

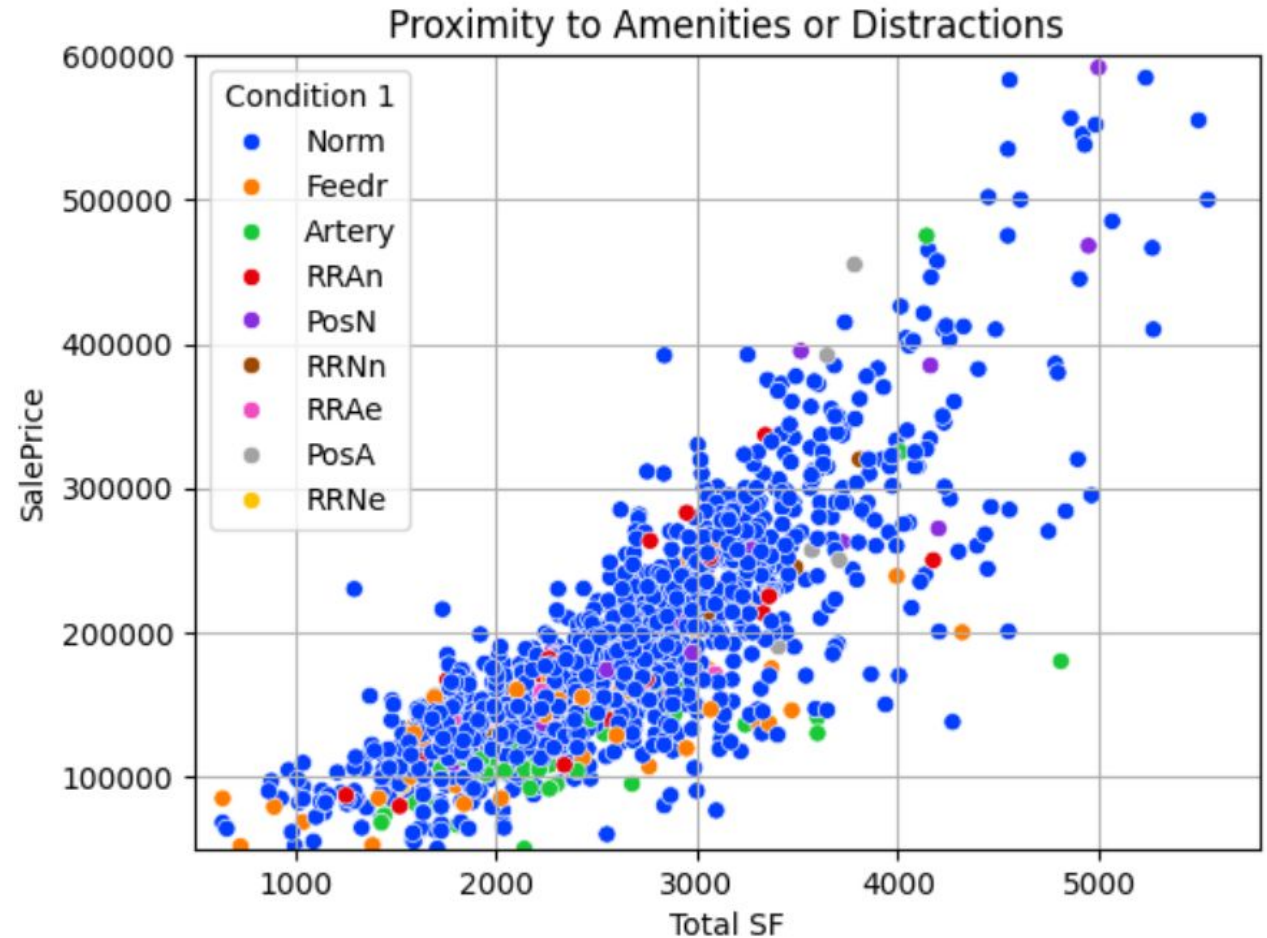
Some of the largest modifiable influencers in price are roofs





	Value Impact
Roof Style_Mansard	-\$58330.0
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Sale Type_ConLI	-\$38840.0
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A little noise and pollution can score you a great deal



Value Impact

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Fireplaces:

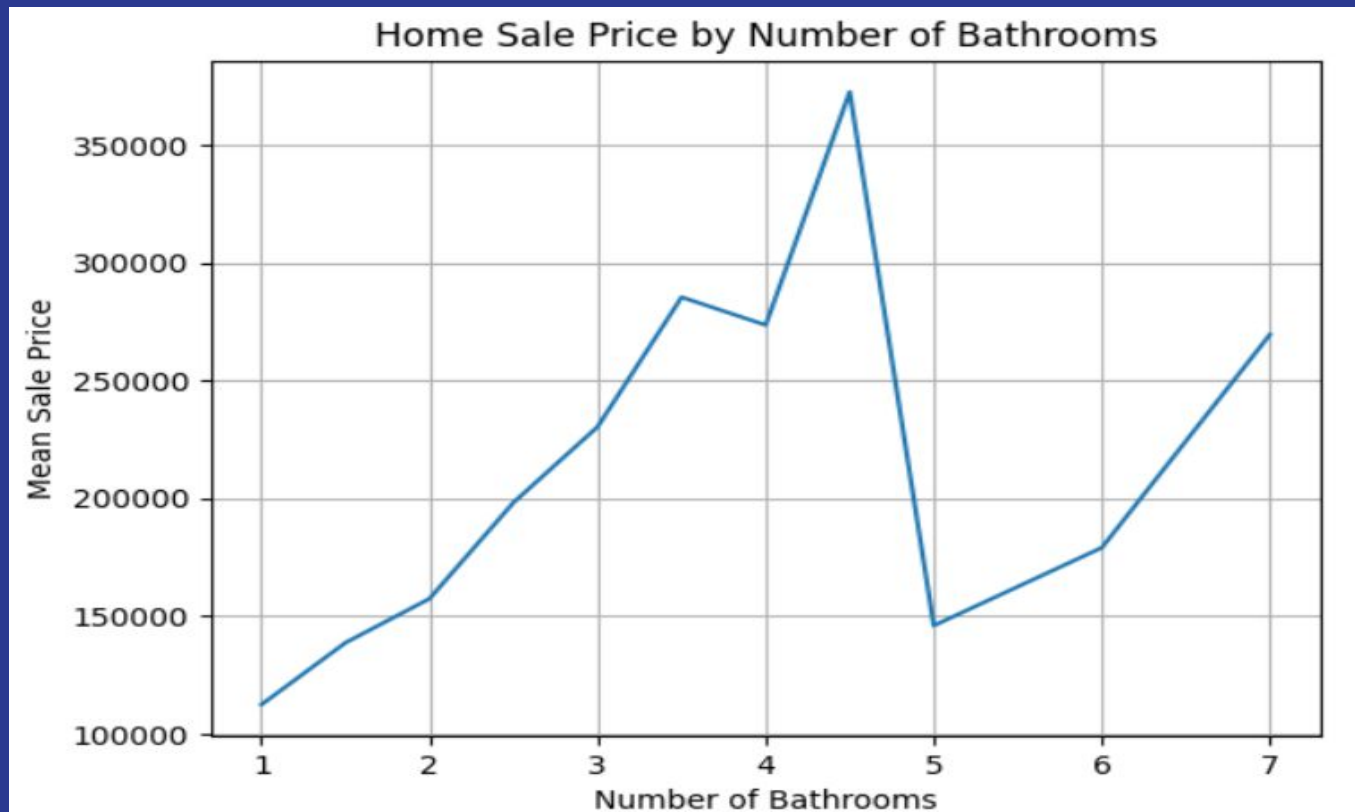
Keep warm in style and improve home value



	Value Impact
Roof Style_Mansard	-\$58330.0
Roof Matl_WdShngl	\$48410.0
Sale Type_ConLI	-\$38840.0
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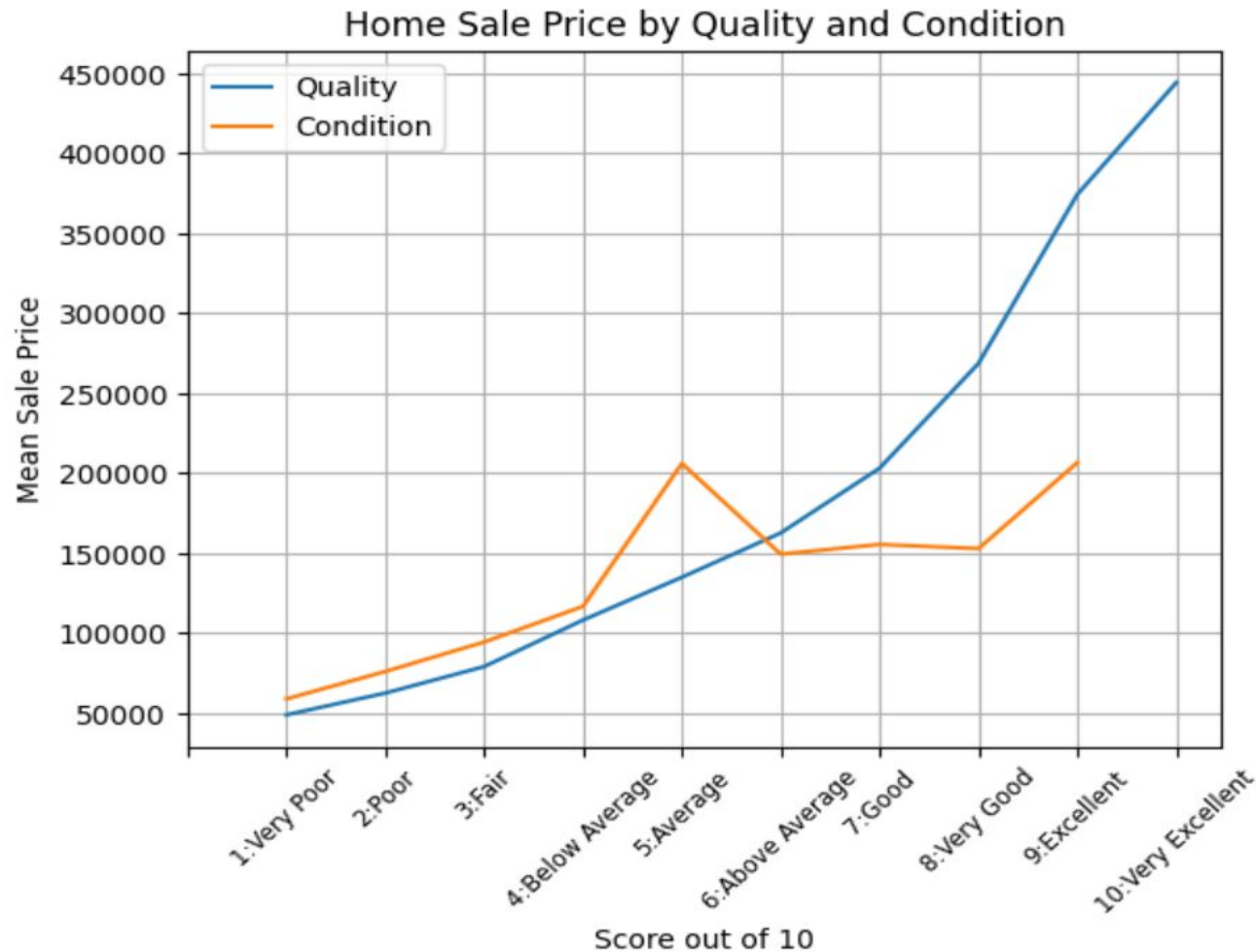
Let's Talk Toilets:

Each added bathroom adds approx \$2547.97 to home sale value, but don't go overboard, or it gets weird.



Caring for your property or buying a “fixer upper”:

	Value Impact
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Year Built	\$419.91



Move those bodies, it's time to finish your basement for that big pay day

Lot Frontage	\$87.28
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Screen Porch	\$37.69
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Mas Vnr Area	\$27.42
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Total Porch SF	\$22.13
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Total SF	\$22.12
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Gr Liv Area	\$20.04
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BsmtFin SF 1	\$14.5
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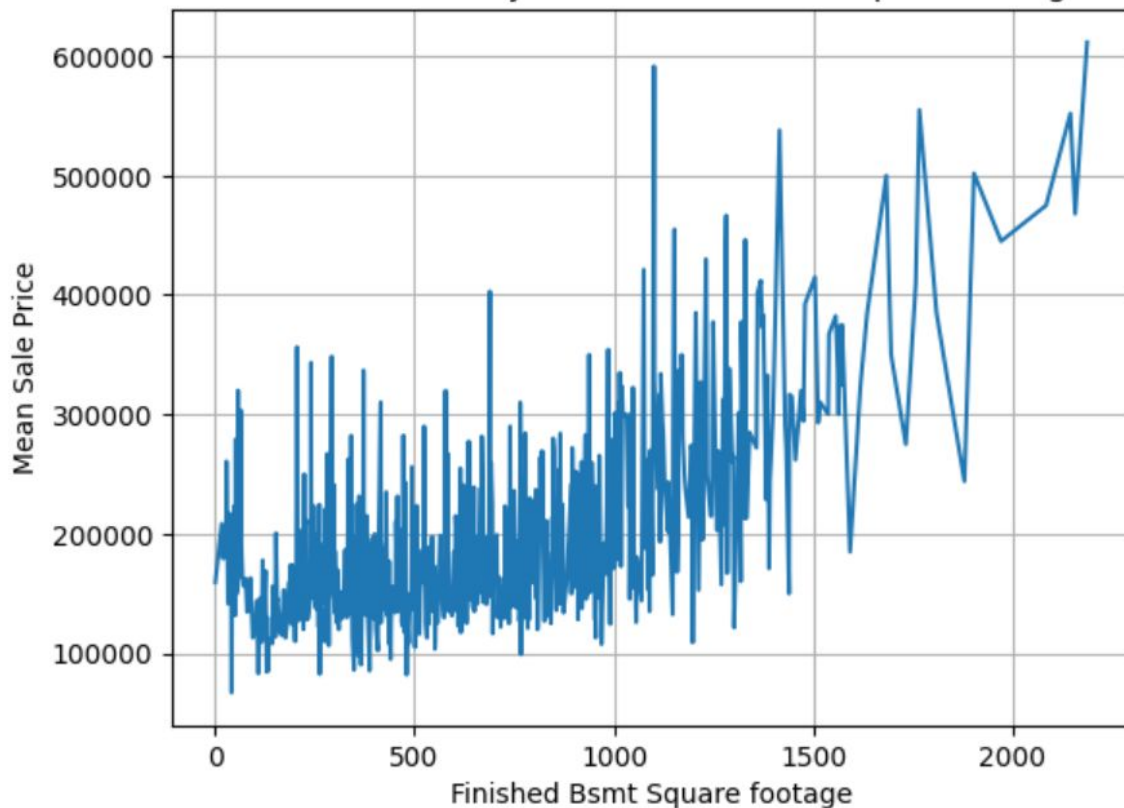
2nd Flr SF	\$12.3
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Total Bsmt SF	\$8.68
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Bsmt Unf SF	-\$5.02
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Lot Area	\$1.08
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Home Sale Price by finished basement square footage



Citations:

De Cock D. 2011. Ames, Iowa: Alternative to the Boston Housing Data as an End of Semester Regression Project. Journal of Statistics Education; 19(3)

