

Real Estate Investment Roadmap

2021

Strategy

- Understand with common sense approach
- Verify with statistical testing
- Use insights gained to make prudent investments in housing market
- Increase revenue from mortgage-backed securities



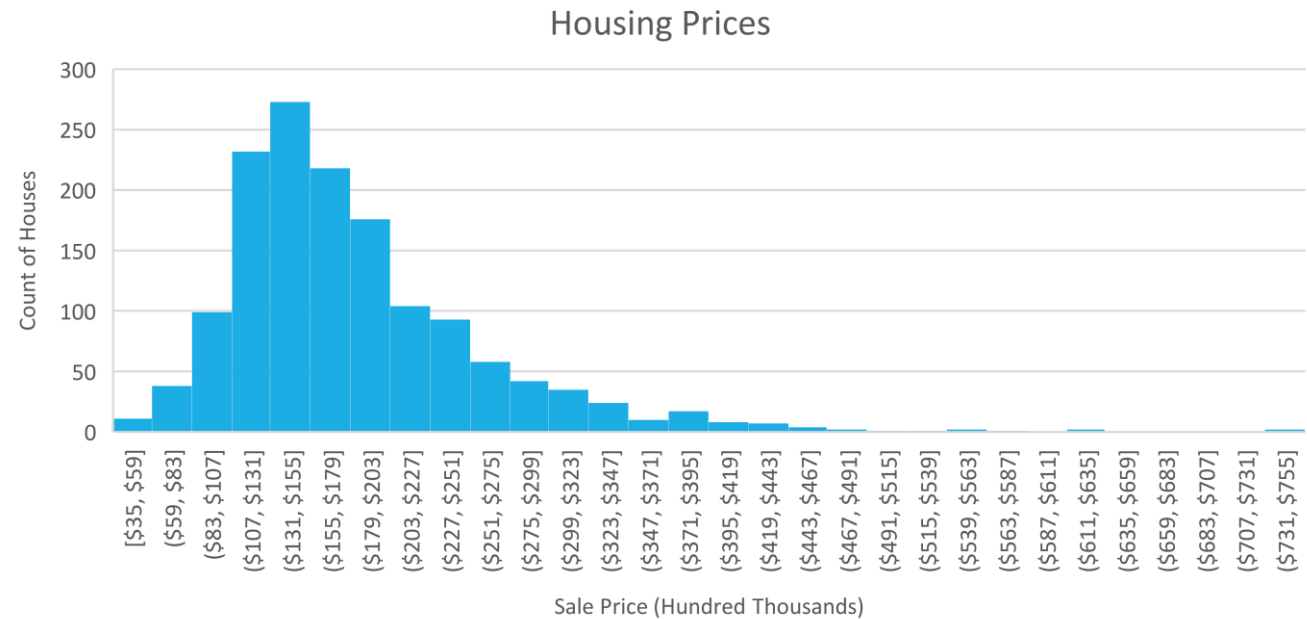
Introduction



- Are the variables normally distributed?
- Does the data contain bias?
- Gather key factors to formulate hypothesis.

Data Pre-Check

Sale Price	
Mean	\$ 180,921
Standard Error	2079.105324
Median	\$ 163,000
Mode	\$ 140,000
Standard Deviation	\$ 79,443
Sample Variance	6311111264
Kurtosis	6.53628186
Skewness	1.88287576
Range	\$ 720,100
Minimum	\$ 34,900
Maximum	\$ 755,000
Sum	\$ 264,144,946
Count	1460




Housing prices are normally distributed

*A/A T-test found no significant difference in the two test groups

Hypothesis

Lot Area
Year Built
Bedrooms
Central Air
Basement
Wood Deck
Fireplace
Neighborhoods
Building Type

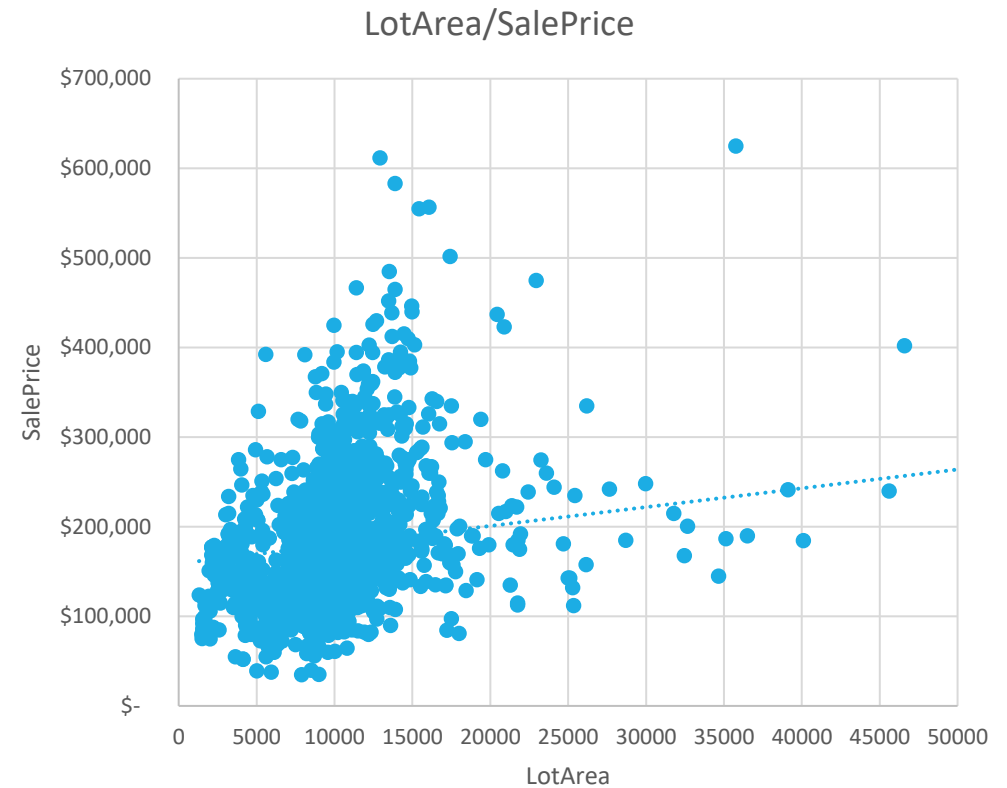


These factors are influential to the final sale price of houses, to a significant degree, and should be taken into consideration.

Lot Area

Lot Area is positively correlated to sale price

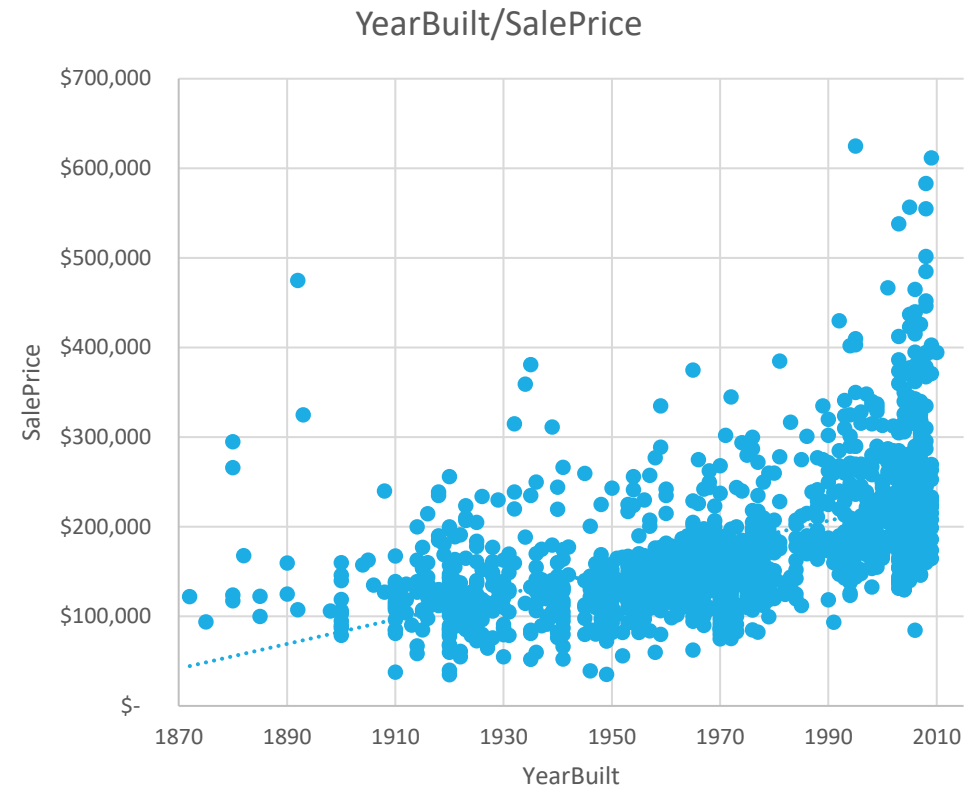
Coefficient (r):	0.263843354
N:	1460
T Statistic:	10.44463284
DF:	1458
P Value:	5.50616E-24



Year Built

- Year Built is positively correlated to Sale Price

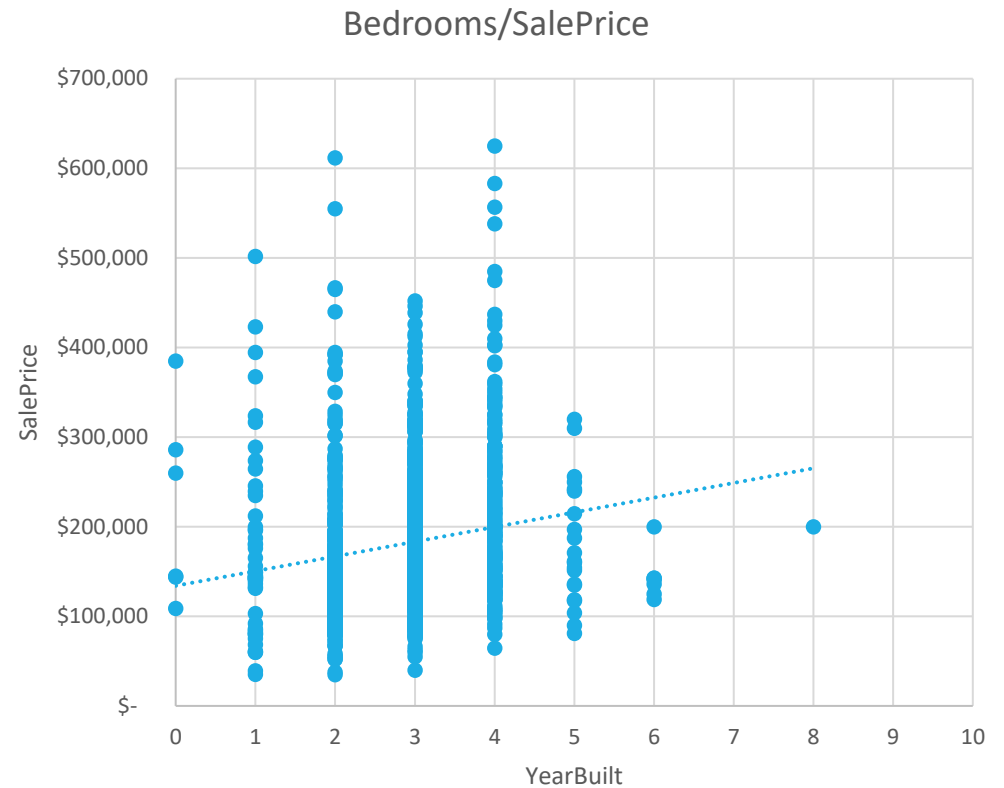
Coefficient (r):	0.522897333
N:	1460
T Statistic:	23.42361674
DF:	1458
P Value:	2.5492E-102



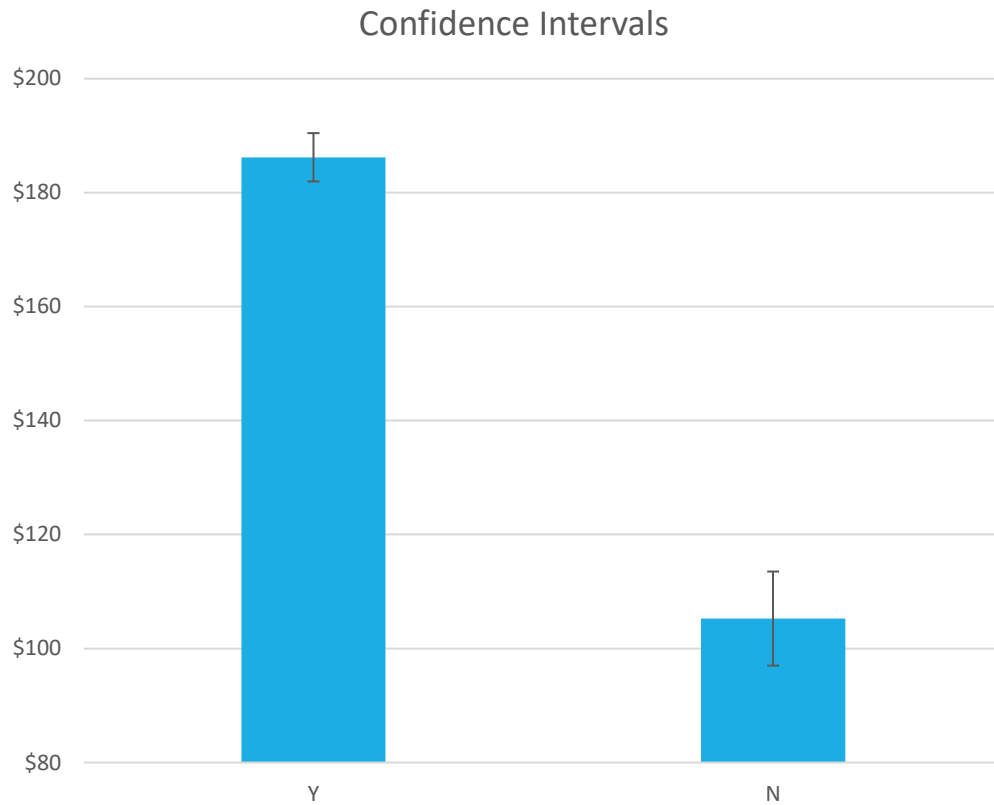
Bedrooms

The number of bedrooms is positively correlated to the overall Sale Price

Coefficient (r):	0.168213154
N:	1460
T Statistic:	6.515858532
DF:	1458
P Value:	3.21359E-10



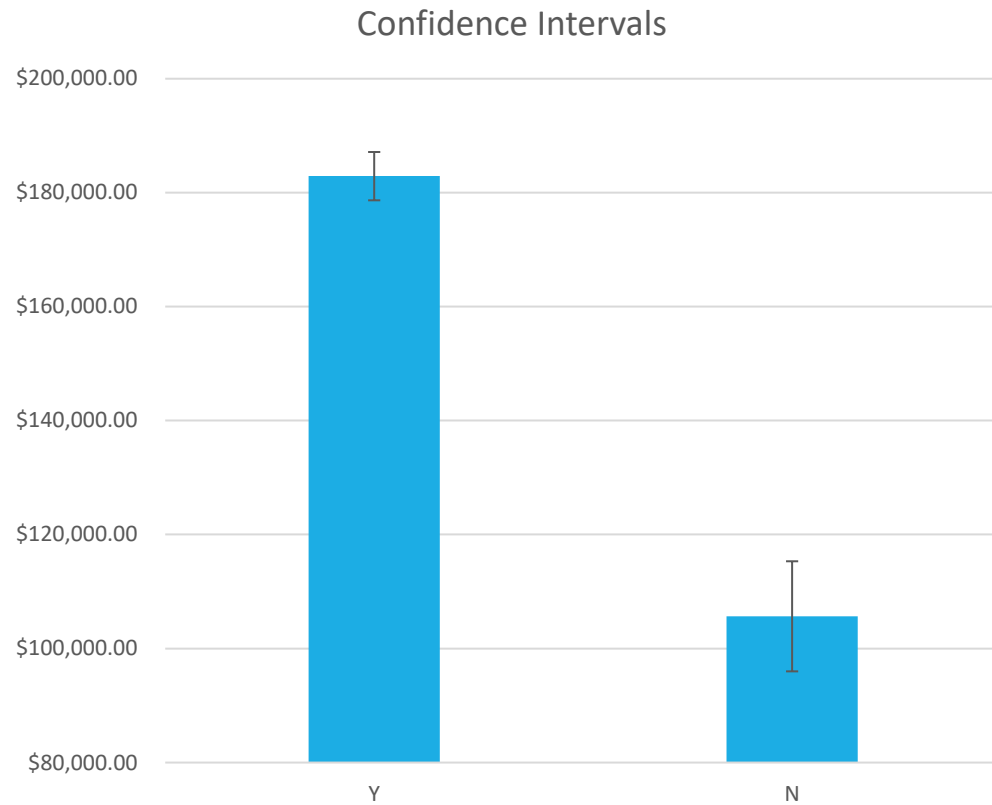
Central Air



Reject the Null

95% confidence that central air homes sell for approximately \$60,000 - \$90,000 more on average

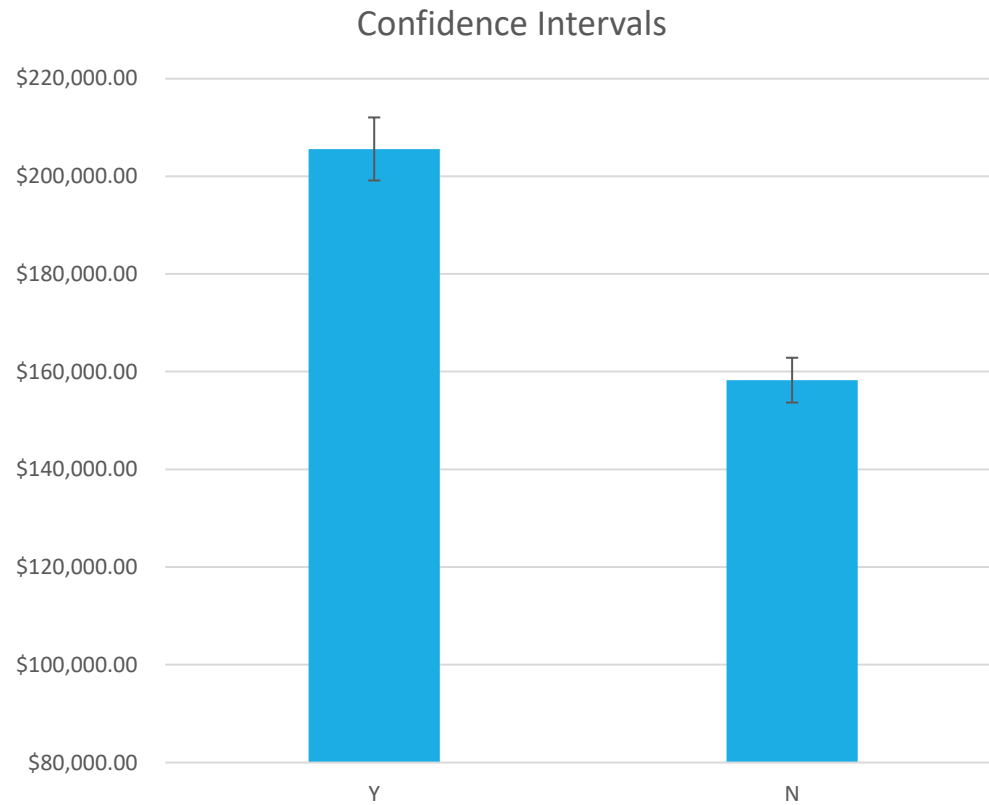
Basement



Reject the Null

95% confidence that basement having homes sell for approximately \$60,000 - \$85,000 more on average

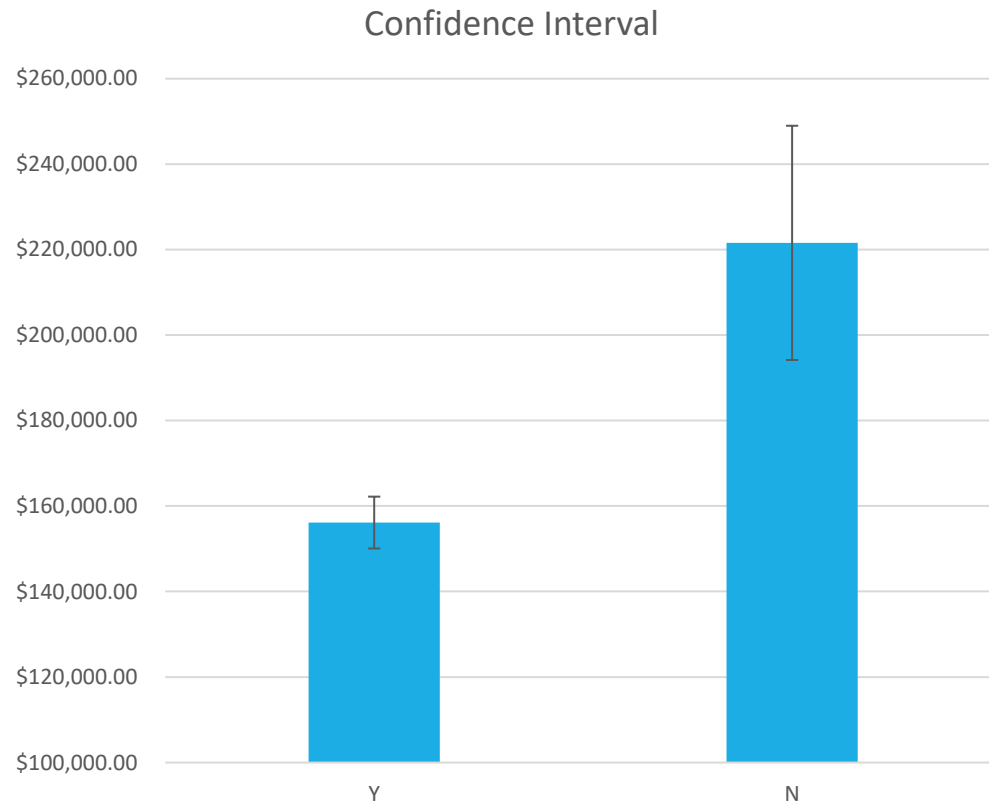
Wood Deck



Reject the Null

95% confidence that wood deck homes sell for approximately \$25,000 - \$60,000 more on average

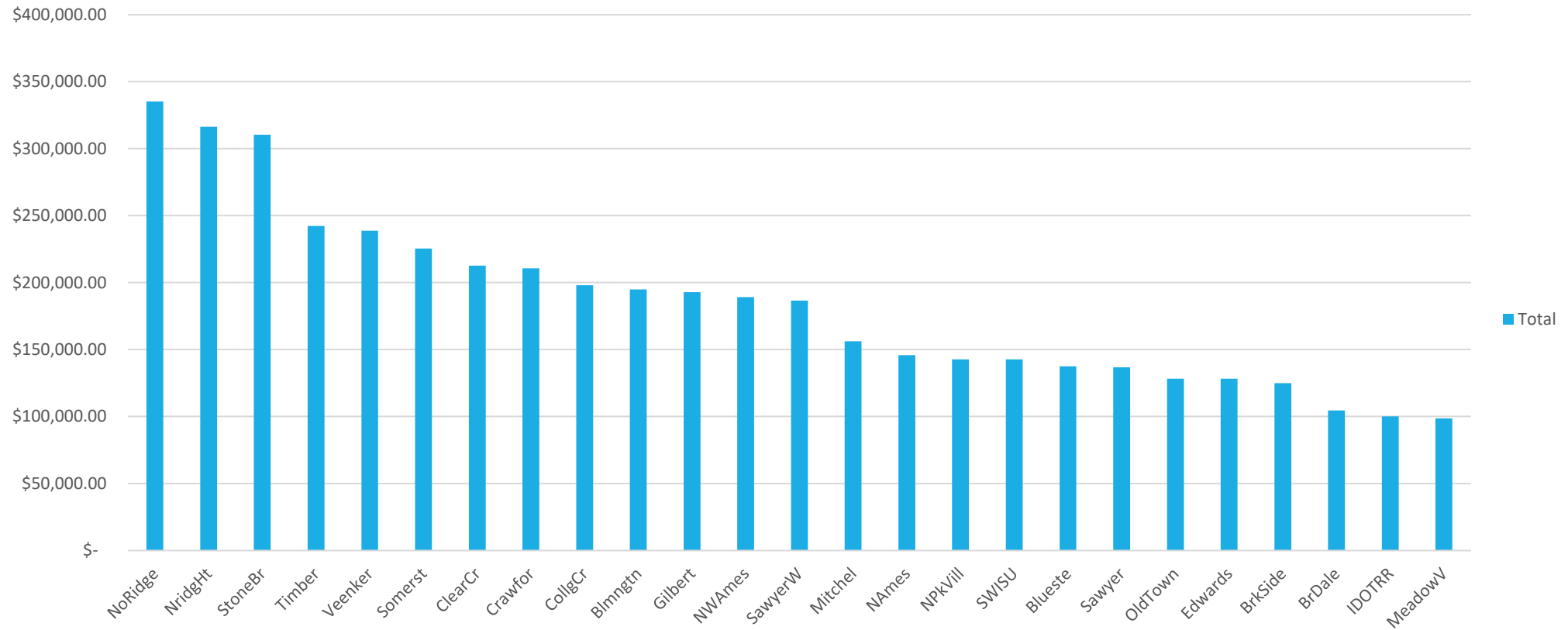
Fireplace



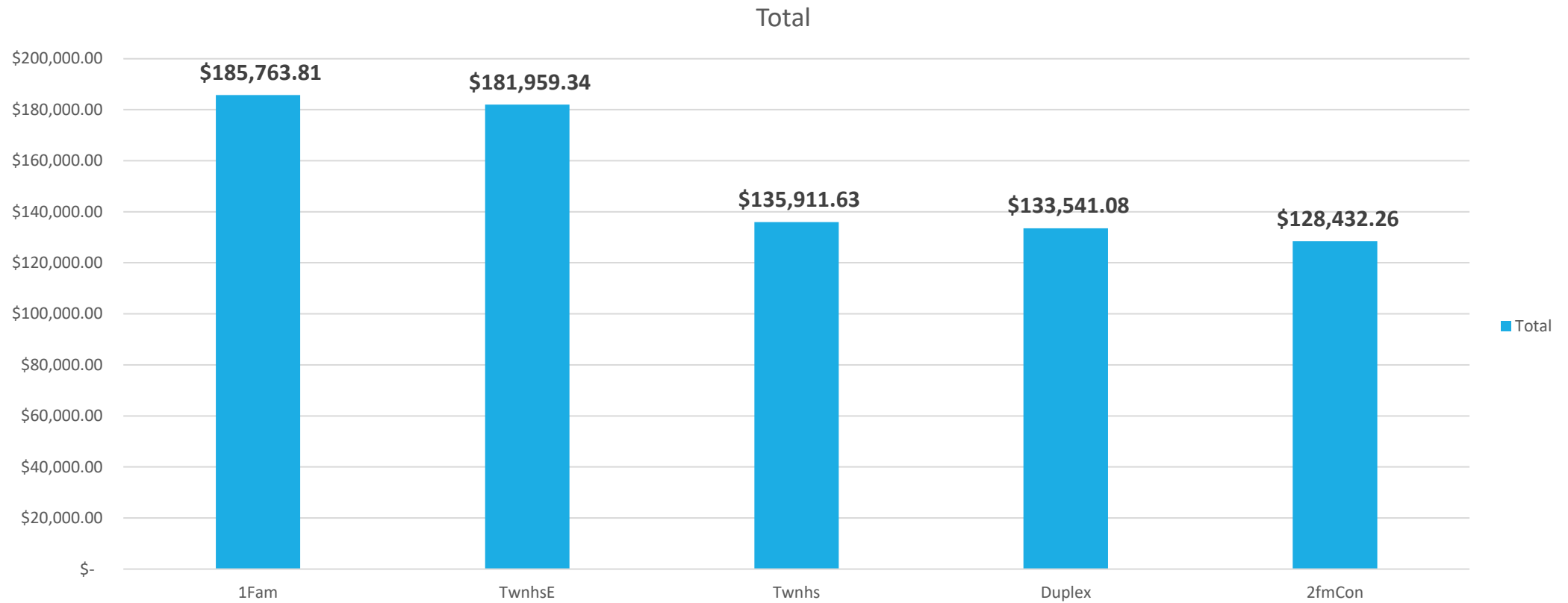
Reject the Null

95% confidence that central air homes sell for approximately \$30,000 - \$100,000 more on average

Neighborhoods



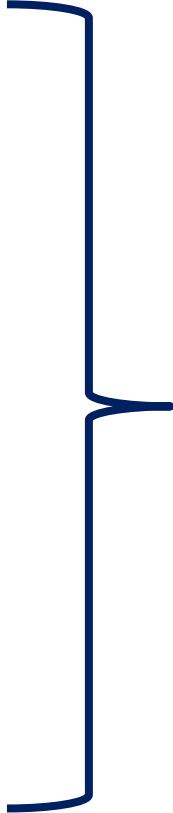
Building Types



Conclusion

Key Indicators

Lot Area
Year Built
Bedrooms
Central Air
Basement
Wood Deck
Fireplace
Neighborhoods
Building Type



These factors are significantly influential to the final sale price of houses and should be taken into consideration.

Summary



Goal

Combine all positively correlated key indicators, as much as possible, for best value on houses