



Predicting Value of Midtown Manhattan Apartments

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CityRealty
contains real
time data on
NYC real
estate

CITYREALTY Buy Rent Sell Buildings Insights Search By Neighborhood

Gallery List

\$ Price Range: \$100K - \$50M+

Neighborhoods

- Upper East Side
- Upper West Side
- Midtown
- Downtown
- Financial District/BPC
- Upper Manhattan
- Brooklyn
- LIC / Queens
- The Bronx

Bedrooms

- Studio
- 1 Bedroom
- 2 Bedrooms
- 3

Update Results

CityRealty > New York City Closed Sales > Search Results

New York City Closed Sales - Search Results

22,950 Sold Units	\$920,000 Median Price - Condos \$1,140 / ft ²	N/A Median Price - Coops
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Sort By: Most Recently Closed

Charlie West, 505 West 43rd Street, Apt. 6F
Condo in Midtown West


\$1,915,000 (\$1,840 per ft²)
2 beds | 2 baths | ~ 1,041 ft²
Sold Oct 2, 2019

220 Central Park South, Apt. 18H
Condo in Midtown West

Neighborhood
✓ Midtown

Bedrooms
✓ Studio
✓ 1 bed
✓ 2 beds

Type
✓ Condo

The background of the slide features a modern, curved apartment building with glass balconies on the left side. The building has a white facade and blue-tinted glass. To the right, a dense city skyline is visible under a clear blue sky. The text is centered in the white space between the building and the skyline.

Can we accurately predict apartment
sold prices in Midtown Manhattan using
CityRealty data?

The Data

4,988 apartment sales

9 Features

Numeric

Building Rating

Square feet

Beds

Baths

Monthly Commons Charges

Monthly Real Estate Taxes

Year (2004 – 2019)

Categorical

Sold Season

Neighborhood

Model Selection

Tested multiple models to select model based on

1. Performance consistency
2. R2 value

	Model	Scaled Features	Polynomial Features
1	Linear Regression		
2	Ridge Regression	✓	
3	Lasso Regression	✓	
4	Linear Regression		✓
5	Ridge Regression	✓	✓
6	Lasso Regression	✓	✓

Model Selection

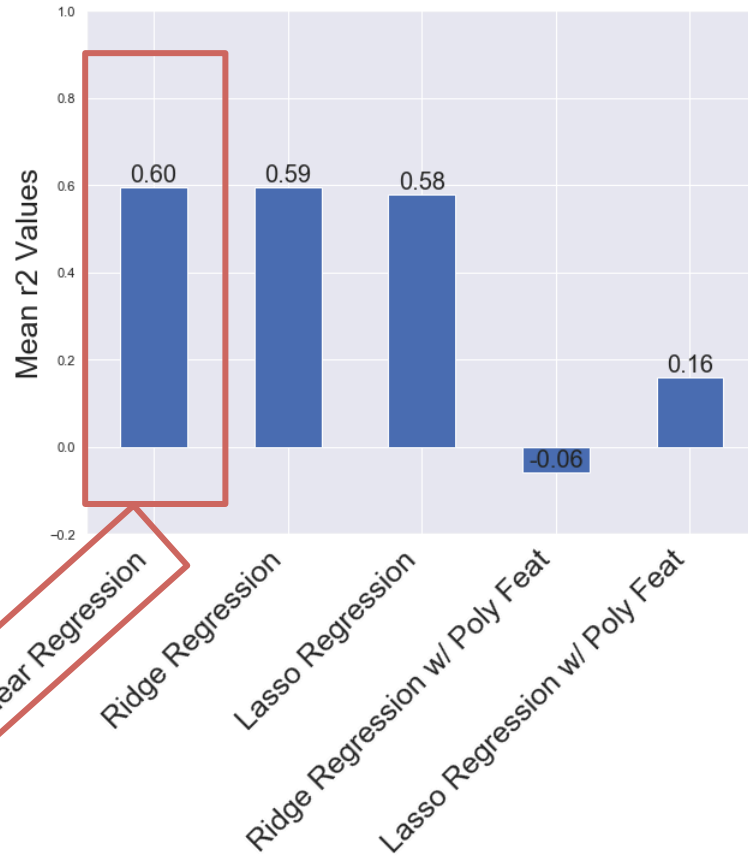
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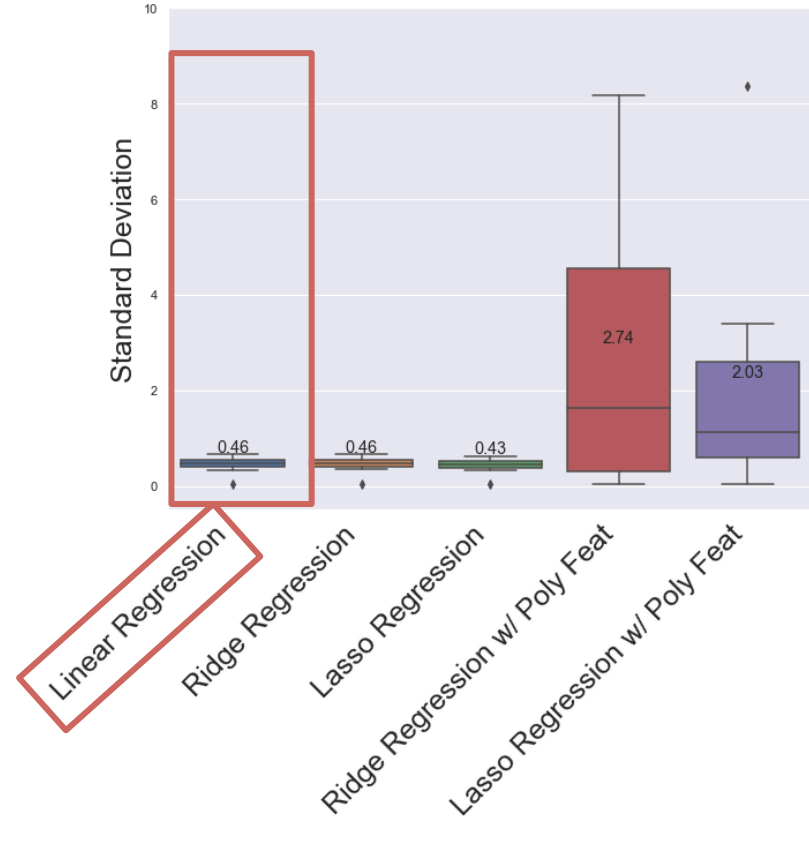
	Model	Scaled Features	Polynomial Features
1	Linear Regression		
2	Ridge Regression	✓	
3	Lasso Regression	✓	
4	Linear Regression		✓
5	Ridge Regression	✓	✓
6	Lasso Regression	✓	✓

Model Selection: Linear Regression

Mean R2 Values for Each Tested Model

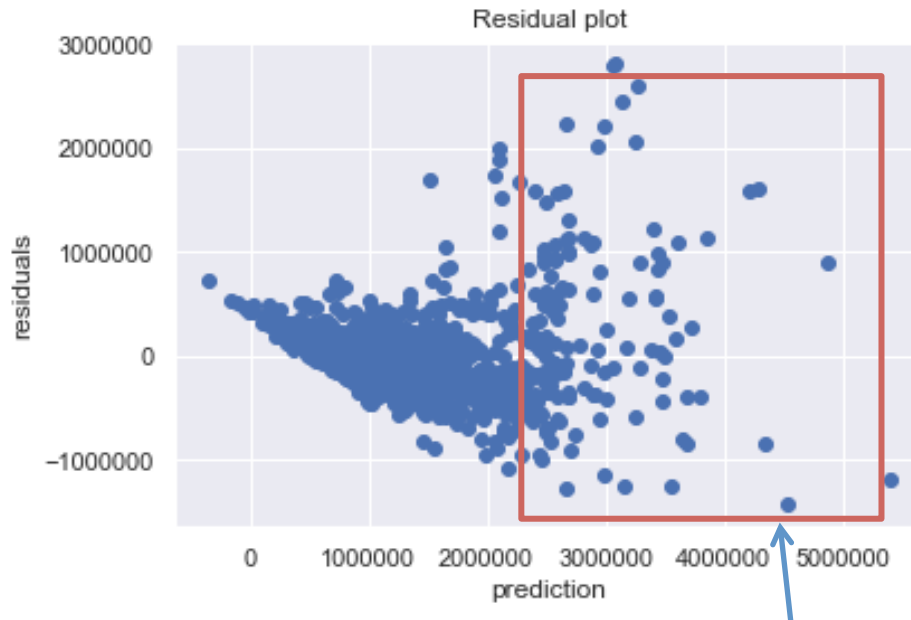


Variance of Standard Deviations of CV scores



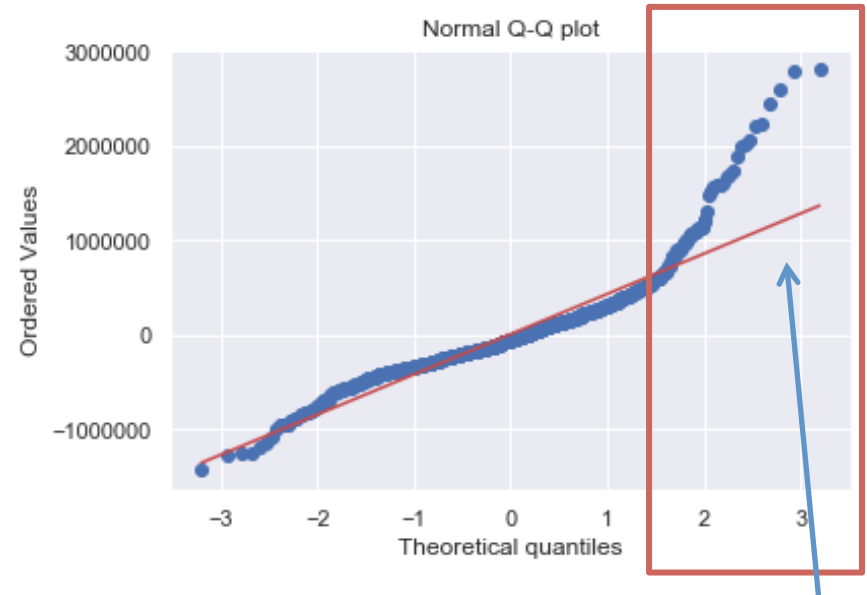
Model Performance: Linear Regression

$R^2 = 0.75$



$Residual = Actual - Predicted$

Funnel shaped plot shows non-constant variance, especially as prediction increases

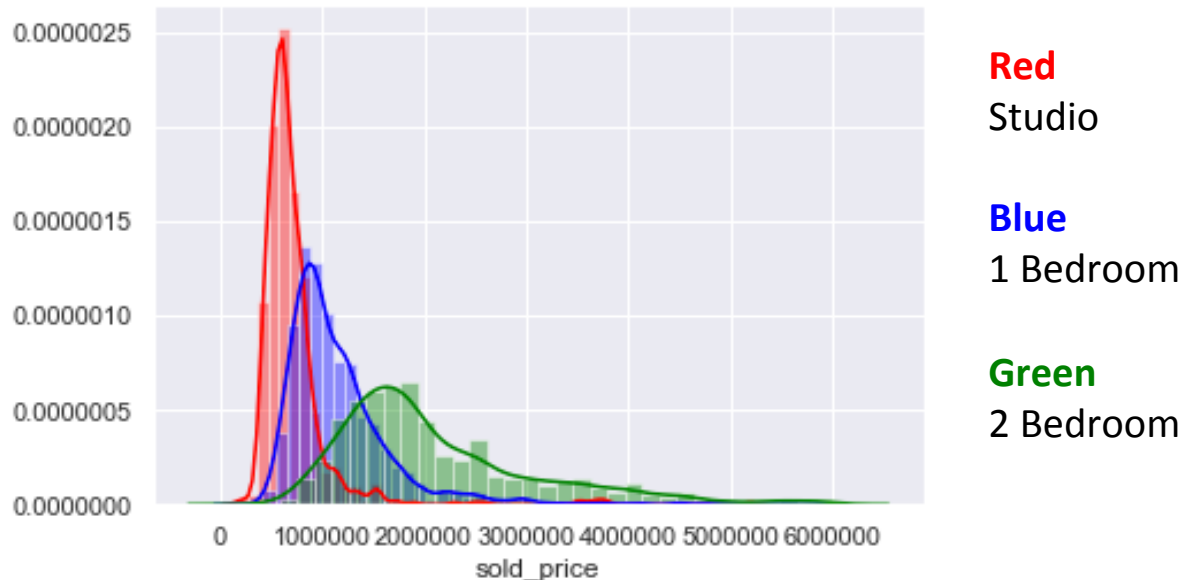


Heavy right tail due to Right Skew of data

Model Performance: Linear Regression

Distribution of Sale Prices Colored by Number of Bedrooms

Attribute	Coefficient
Beds	-77,725
Year	56,719
Baths	45,203



A modern, multi-story apartment building with a curved facade and large glass windows, set against a clear blue sky. The building is the central focus of the image, with its architectural details clearly visible. The text is overlaid on the building, with the top part of the text on the upper half and the bottom part on the lower half.

Real Estate prices of similar “type”
apartments *fluctuate drastically*.

Need to collect **more features and
data points** to accurately predict
apartment sale prices