



Using Linear Regression to Predict Undervalued Homes

by Mike Roth

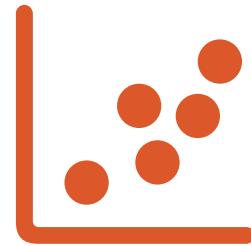
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Overview



Business and Data
Understanding



Modeling and
Results



Recommendations
and Next Steps

Problem: First Time Home Buyers Struggle in Housing Market

Not enough saved for a down payment

Credit Score

The Pandemic

Low income

Lack of available home in budget

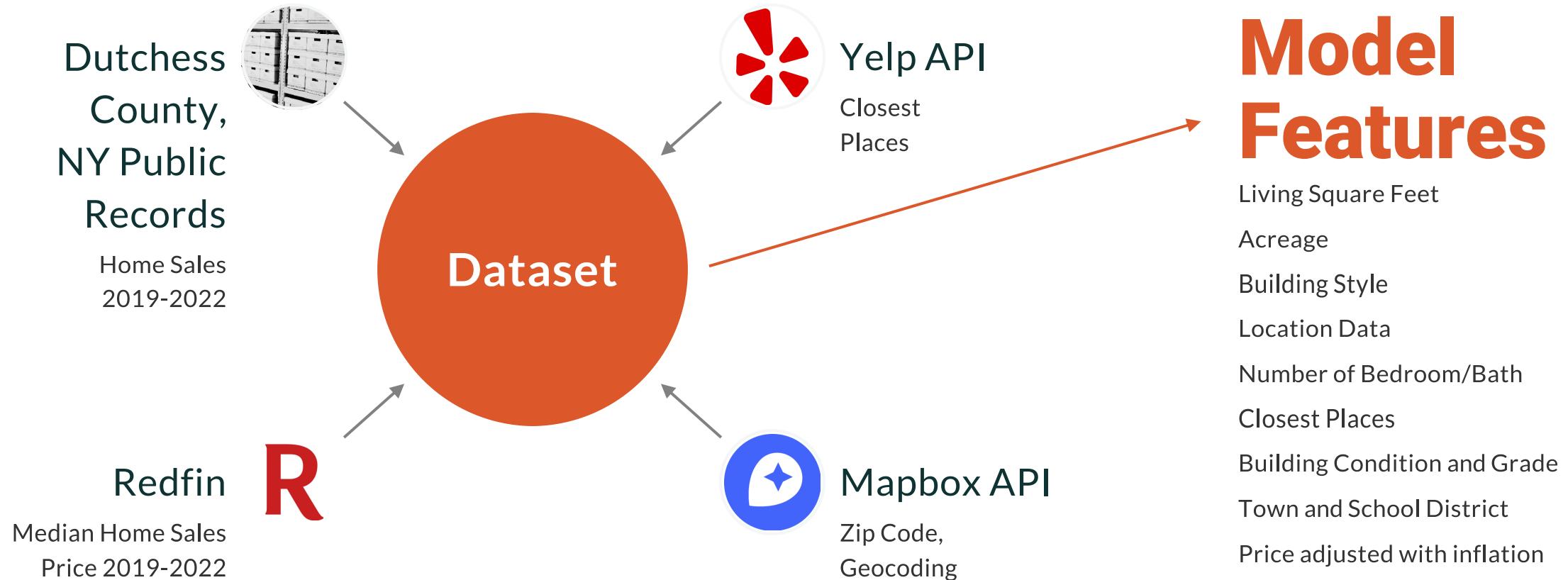
**What's
stopping
first time
buyers from
purchasing
a home?**

source: <https://www.nerdwallet.com/blog/2021-home-buyer-report/>

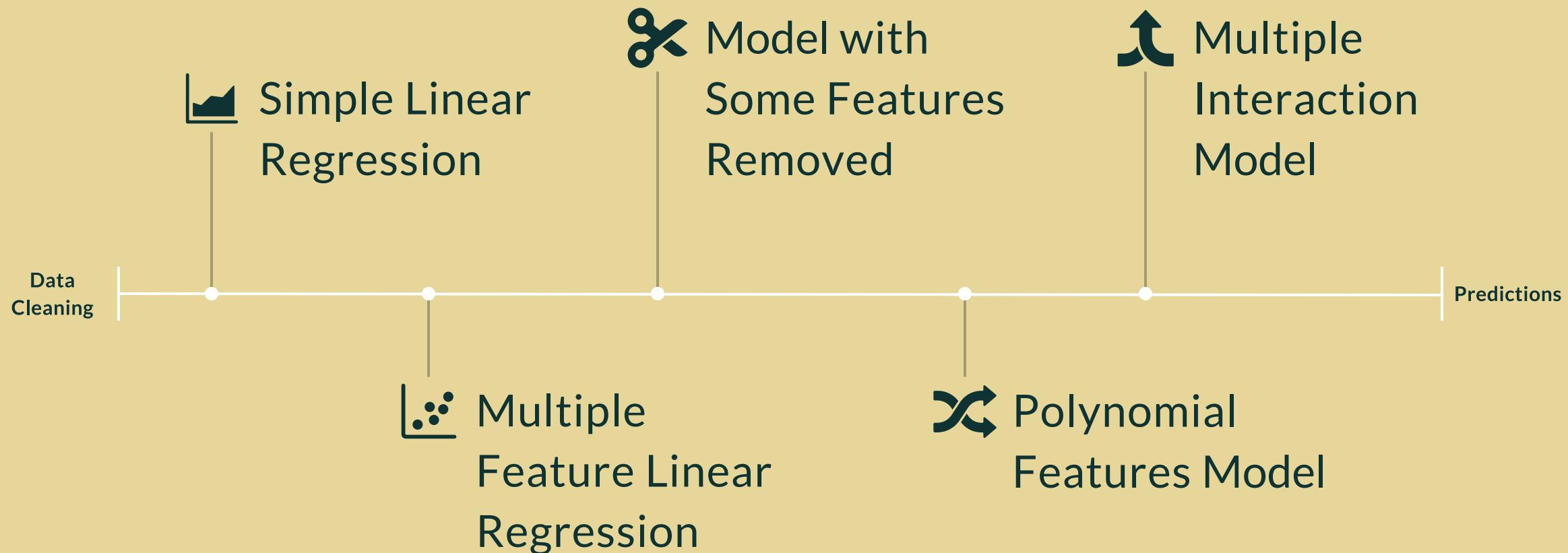


**Can the error of a prediction
give us more information
than just its accuracy?**

Data Scraper



Modeling Timeline



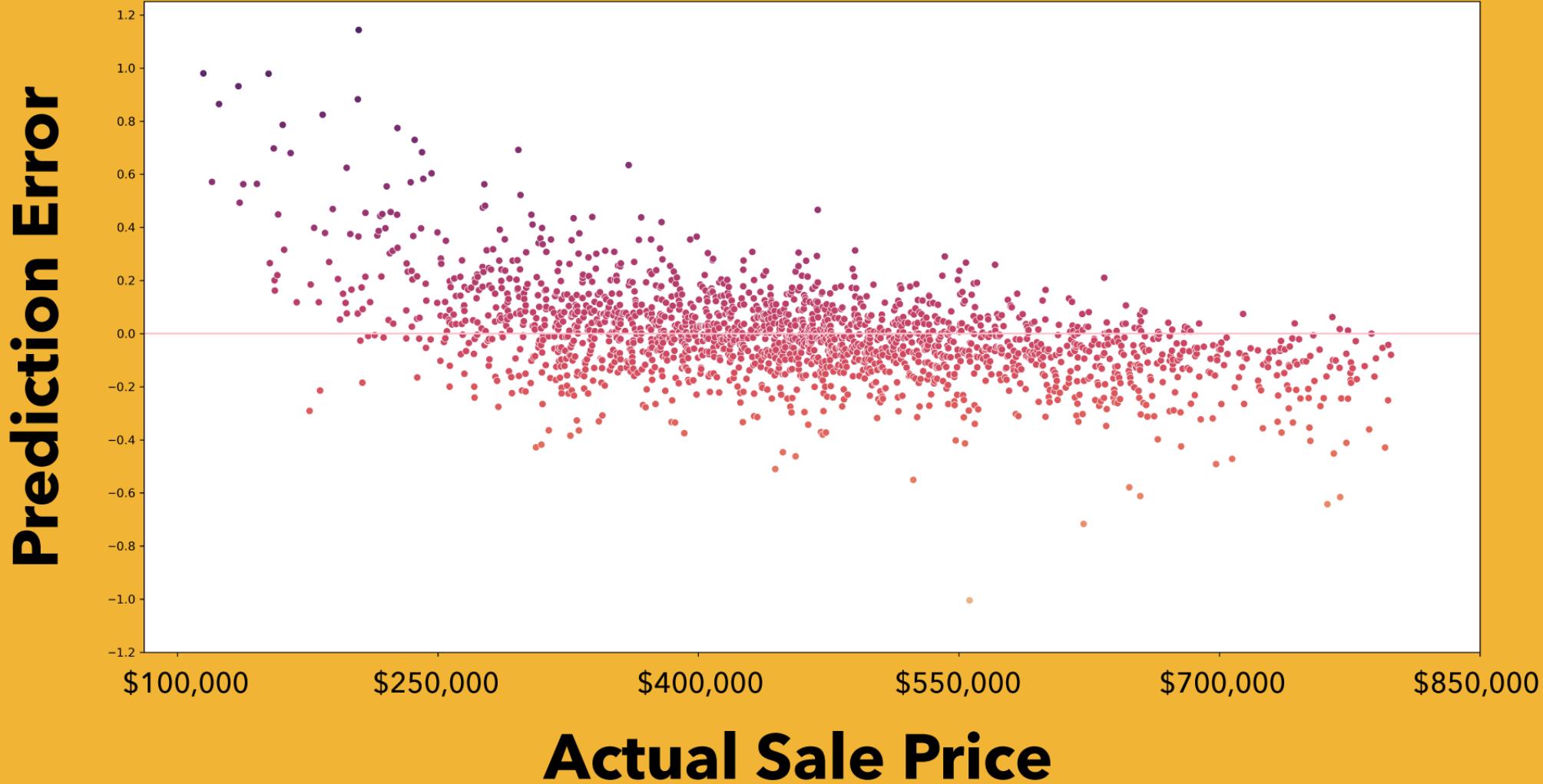
Interactions



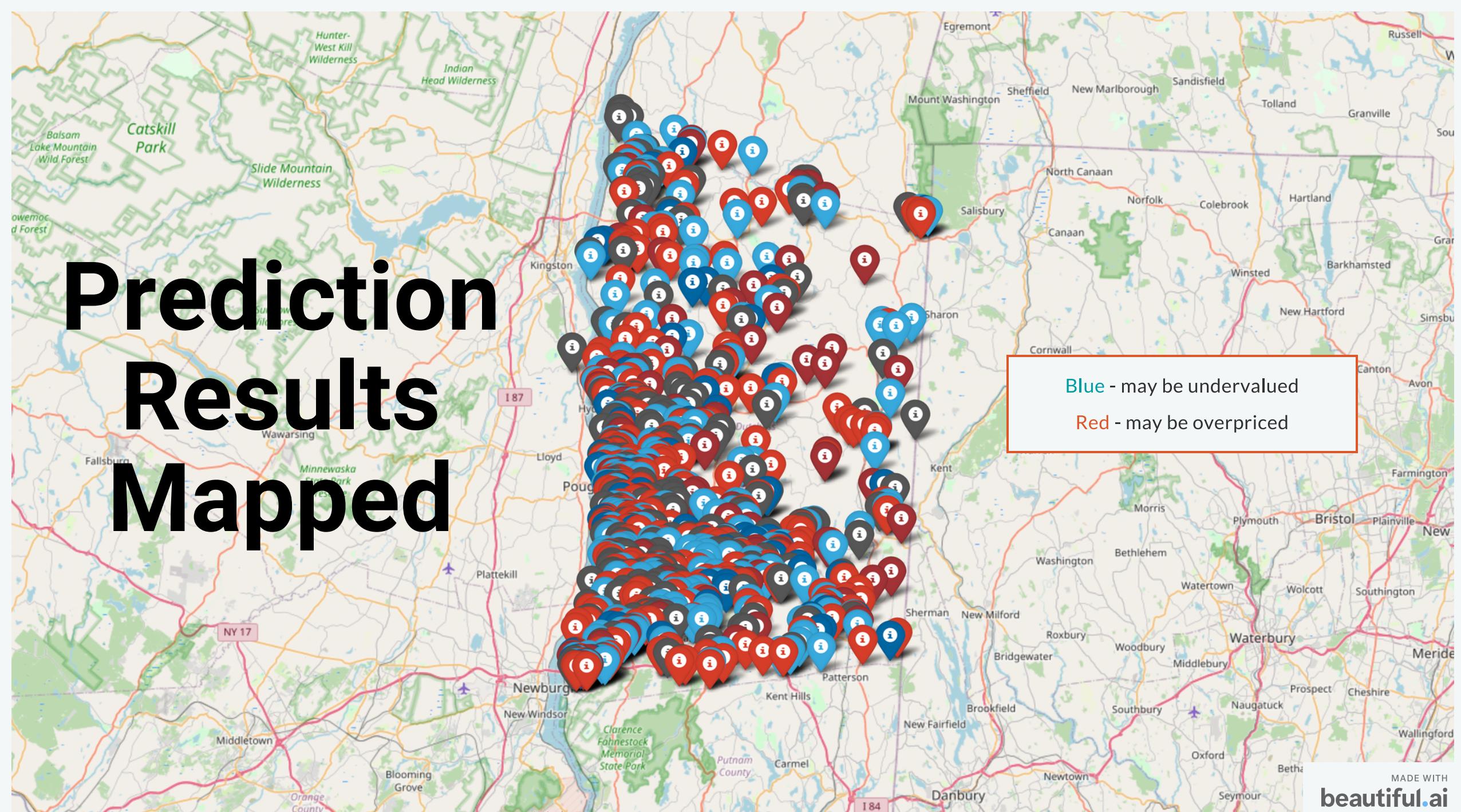
$$\text{Model} = A + B + A \times B$$

Two or more features that interact in a way that is more than adding them together.

Model Results : 70% Variance Captured



Prediction Results Mapped



Next Steps



New & Current Information

Using For Sale data to predict whether a home may be undervalued.

Predict Volatility

Predicting the unpredictability of the market.

Better Models

Applying same dataset to better suited models that can capture more of the variance.

“Thank You.”



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