



Beau Home Properties House Price Prediction

Dima Taher

Presentation Agenda



Business Overview and Goals

The Business Problem

- Beau Home Properties
- Real Estate industry
- Automate home value estimation

Goals

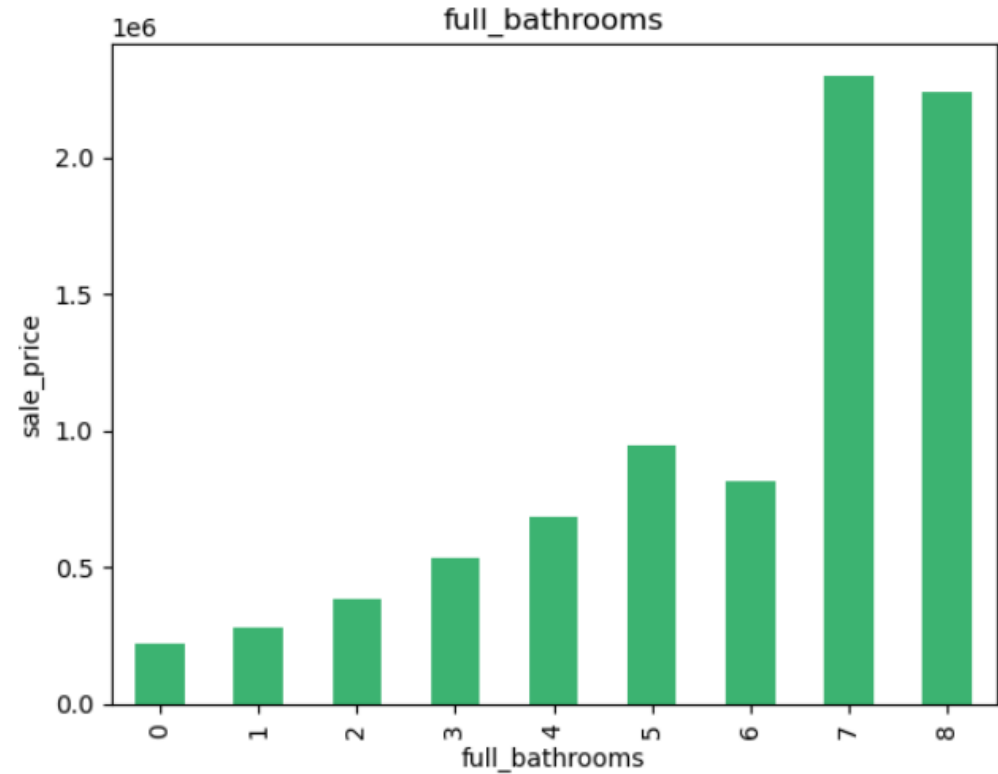
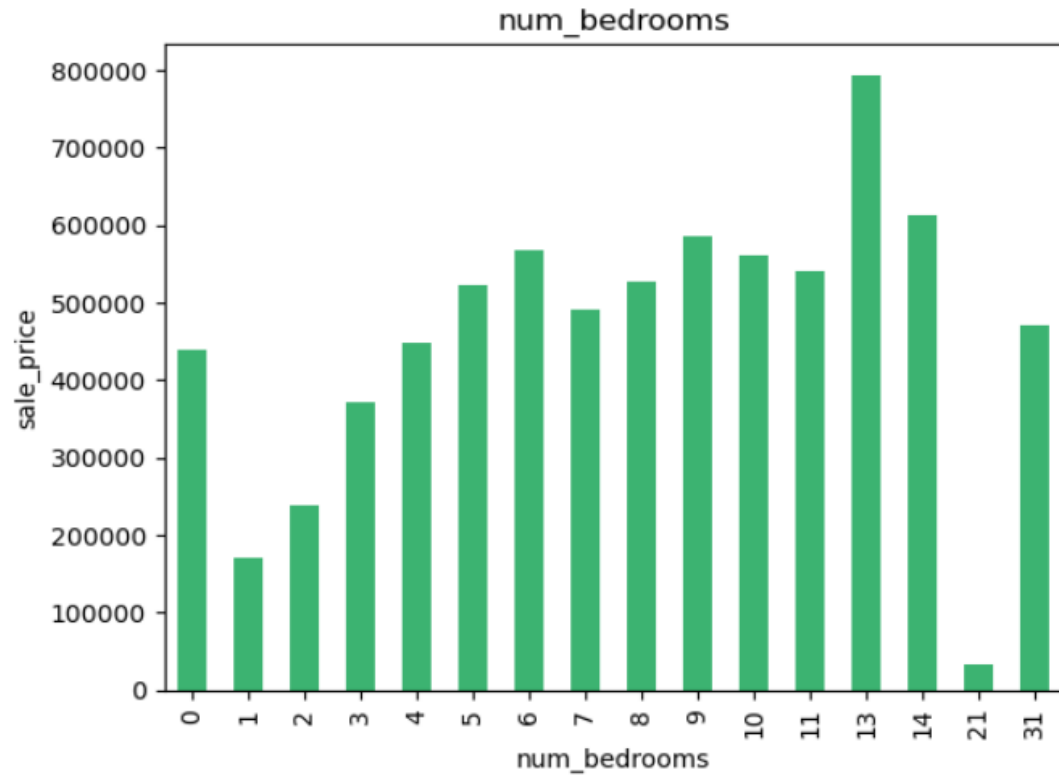
- Deliver Accurate ML Model

Bottom Line Up Front

- Produced a model that can predict house prices within a margin of error of \$59,000 USD

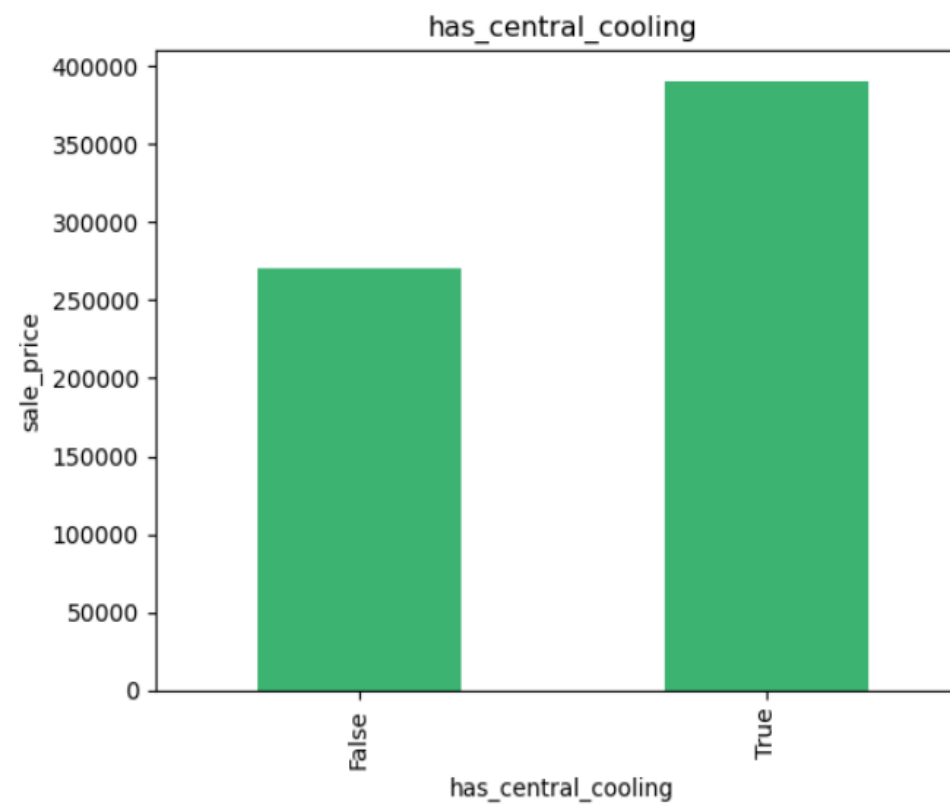
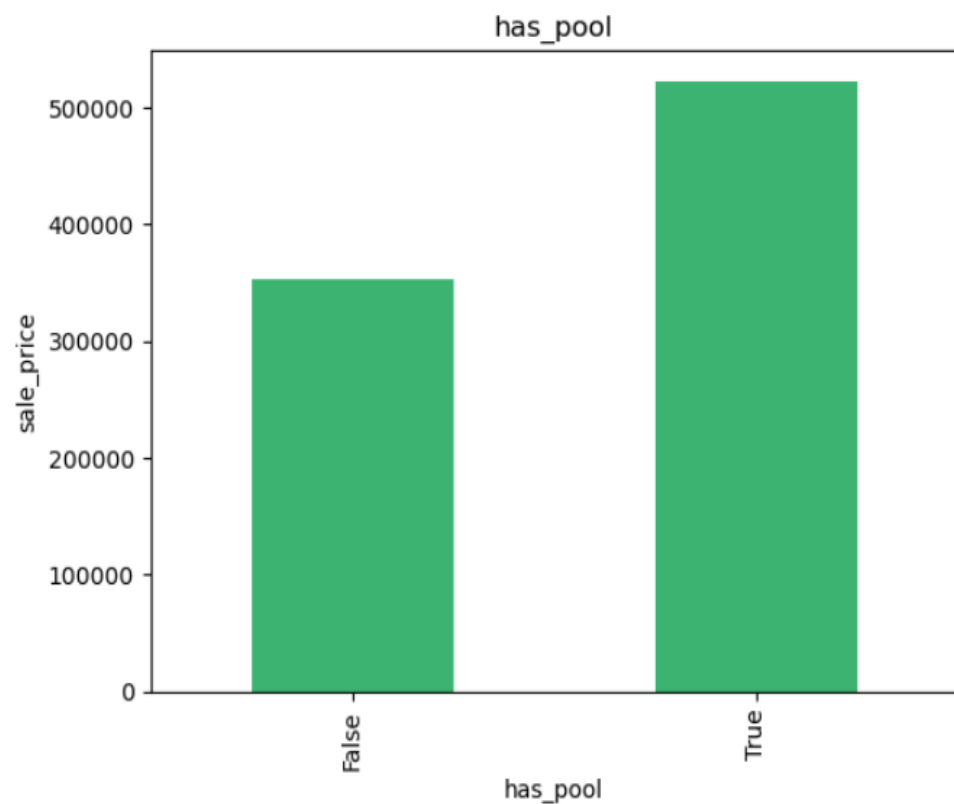
Feature Highlights:

15 features were identified as factors that influenced house prices.



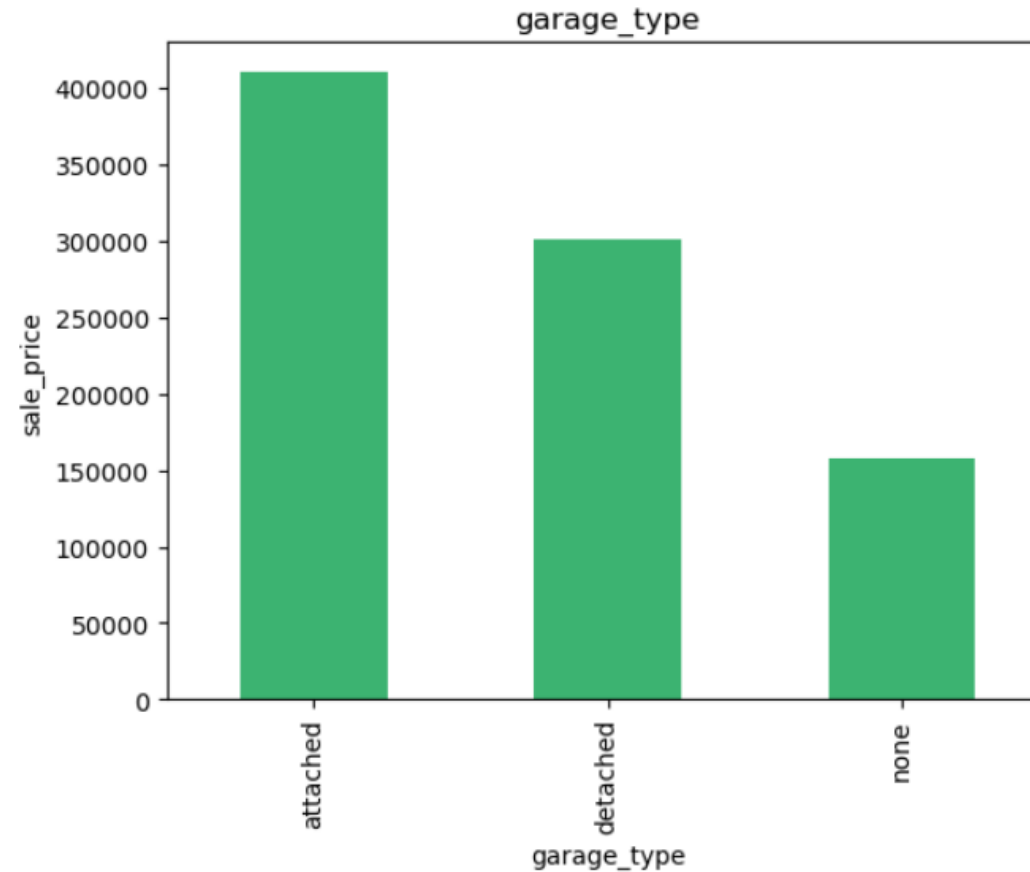
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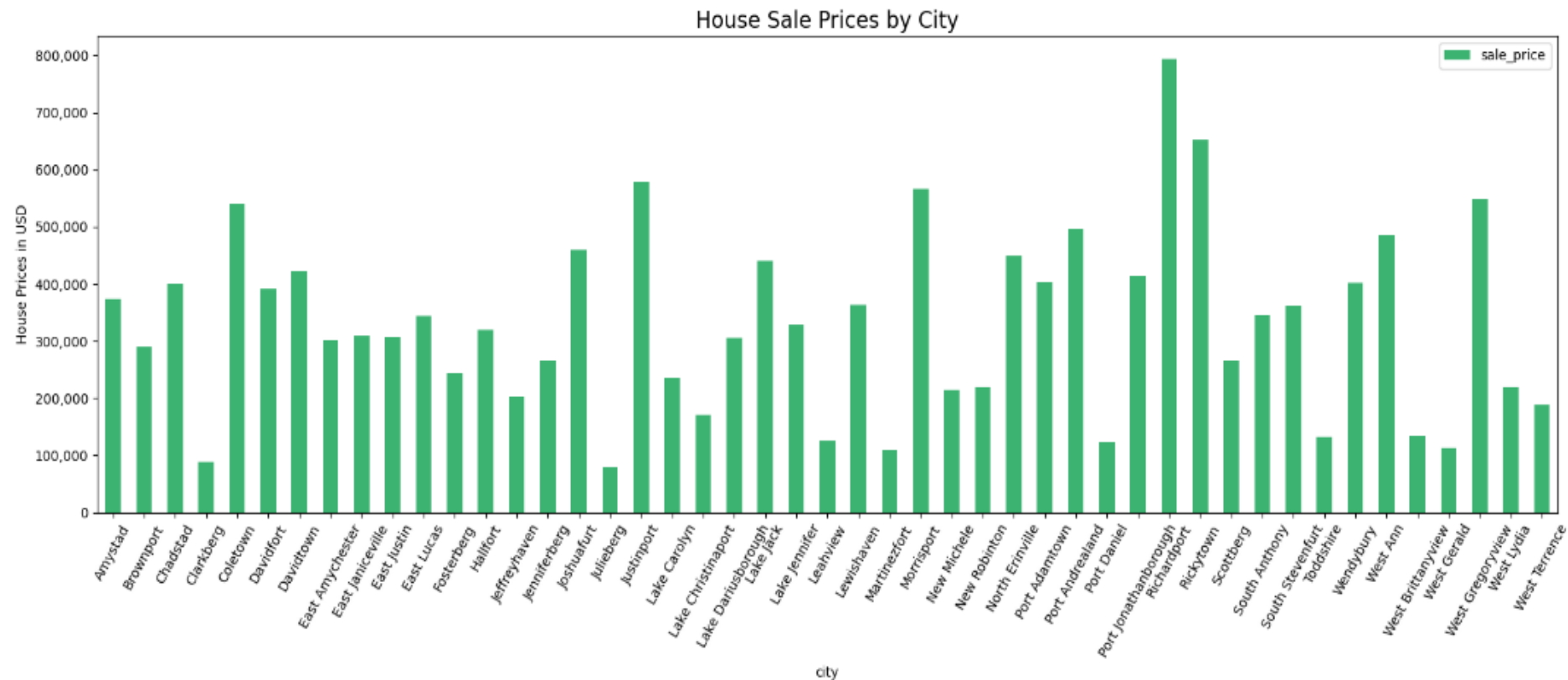
Feature Highlights:

Garage Type is one of the two categorical variables in the dataset.



Feature Highlights:

City is one of the two categorical variables in the dataset.



Linear Regression Model

The Linear Regression model is used as baseline and will later be compared to other models.



Results

- R^2 : 0.63
- MAE: 94602.7

Interpretation

- 63% of the variance in house sale prices is explained.
- Model is off by about 94,602 USD in a prediction.

Random Forest Model

This is the second model



Results

- R^2 : 0.77
- MAE: 59265.3

Interpretation

- 77% of the variance in house sale prices is explained.
- Model is off by about 59,265 USD in a prediction.

XG Boost Model

This is our final model



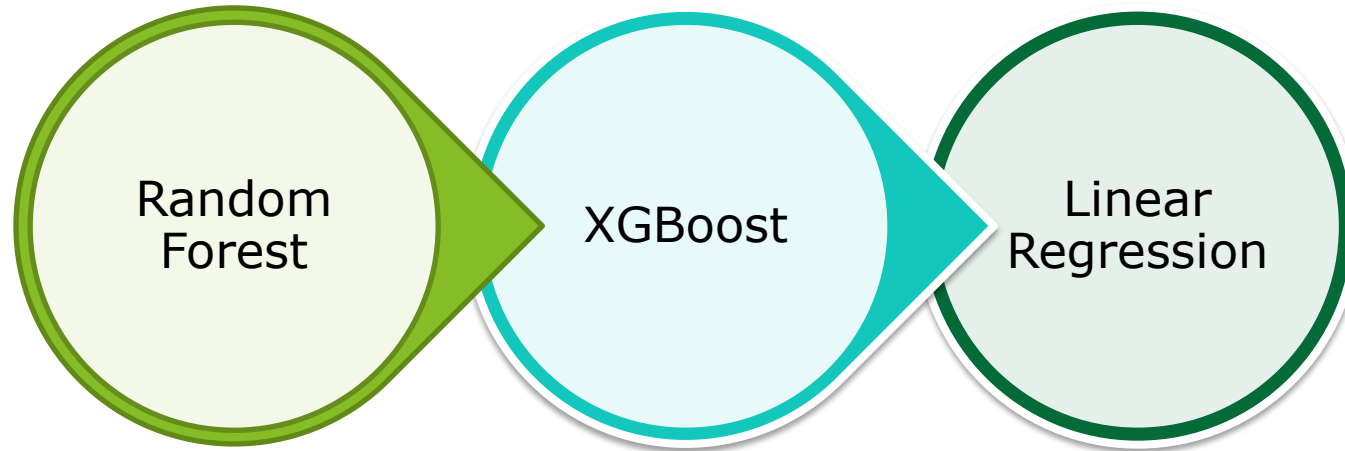
Results

- R^2 : 0.75
- MAE: 62197.7

Interpretation

- 75% of the variance in house sale prices is explained.
- Model is off by about 62,197 USD in a prediction.

Model Comparisons & Recommendation



	Model	R-squared Score	MAE	RMSE
1	Random Forest	77.448343	59265.3	135676
2	XGBoost	75.461871	62197.7	141526
0	Linear Regression	63.627396	94602.44	172306.61

Recommendation

- It is best for Beau Home Properties to use the Random Forest Model.

Thank you for your time!

Questions?

Deloitte – Orlando GPS Strategy and Analytics

Dima Taher

Solution Analyst

Dtaher@deloitte.com