

Beyond City Limits

Distribution of housing Prices Urban vs Rural

Presented by
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Problem Statement

Urban vs Rural Analysis:

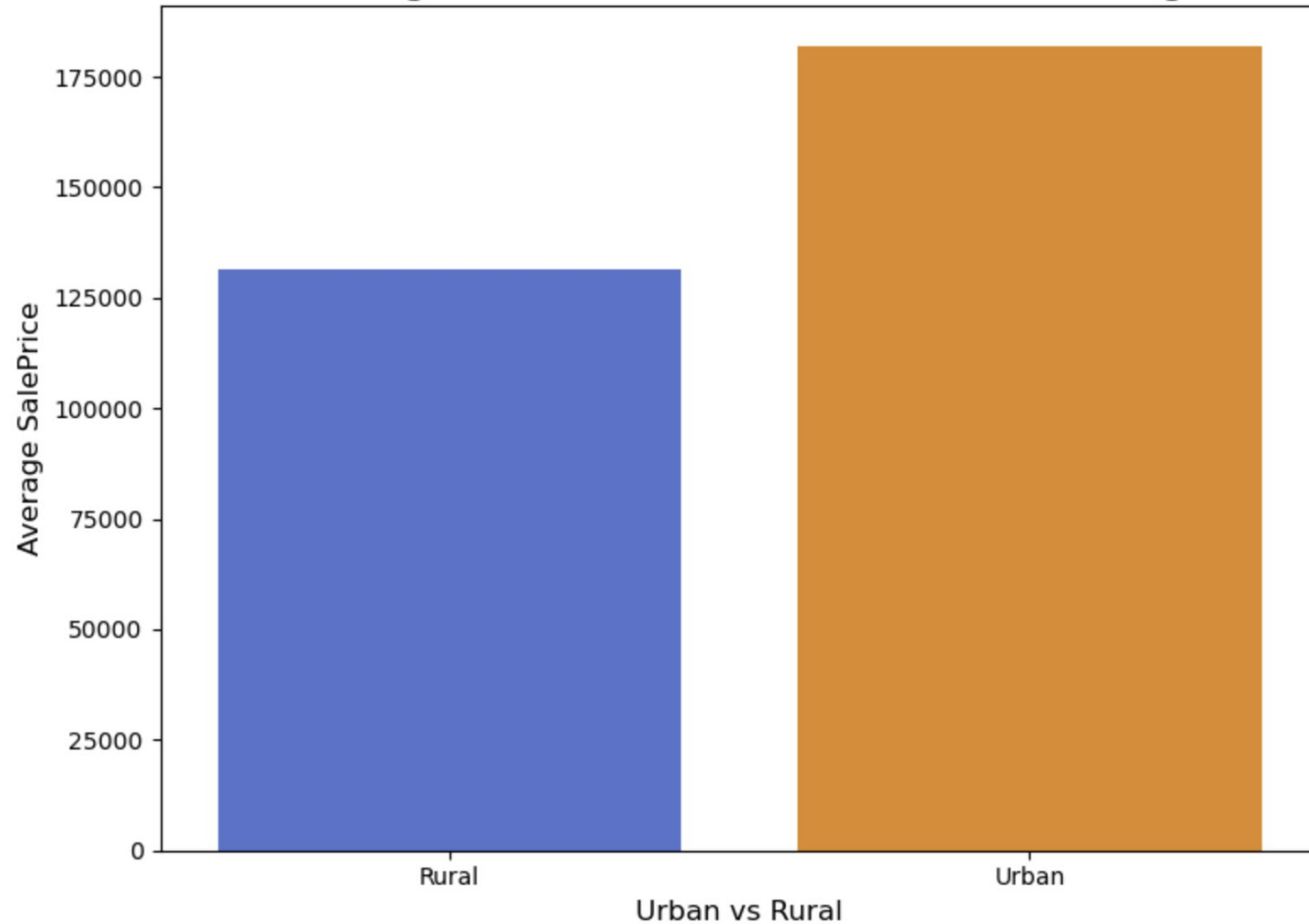
It benefits **home buyers, sellers, and real estate investors** by providing insights into fair pricing and investment opportunities. It also helps **urban planners, banks, and developers** make better decisions on housing trends.

Dataset: Kaggle Ames Housing Dataset

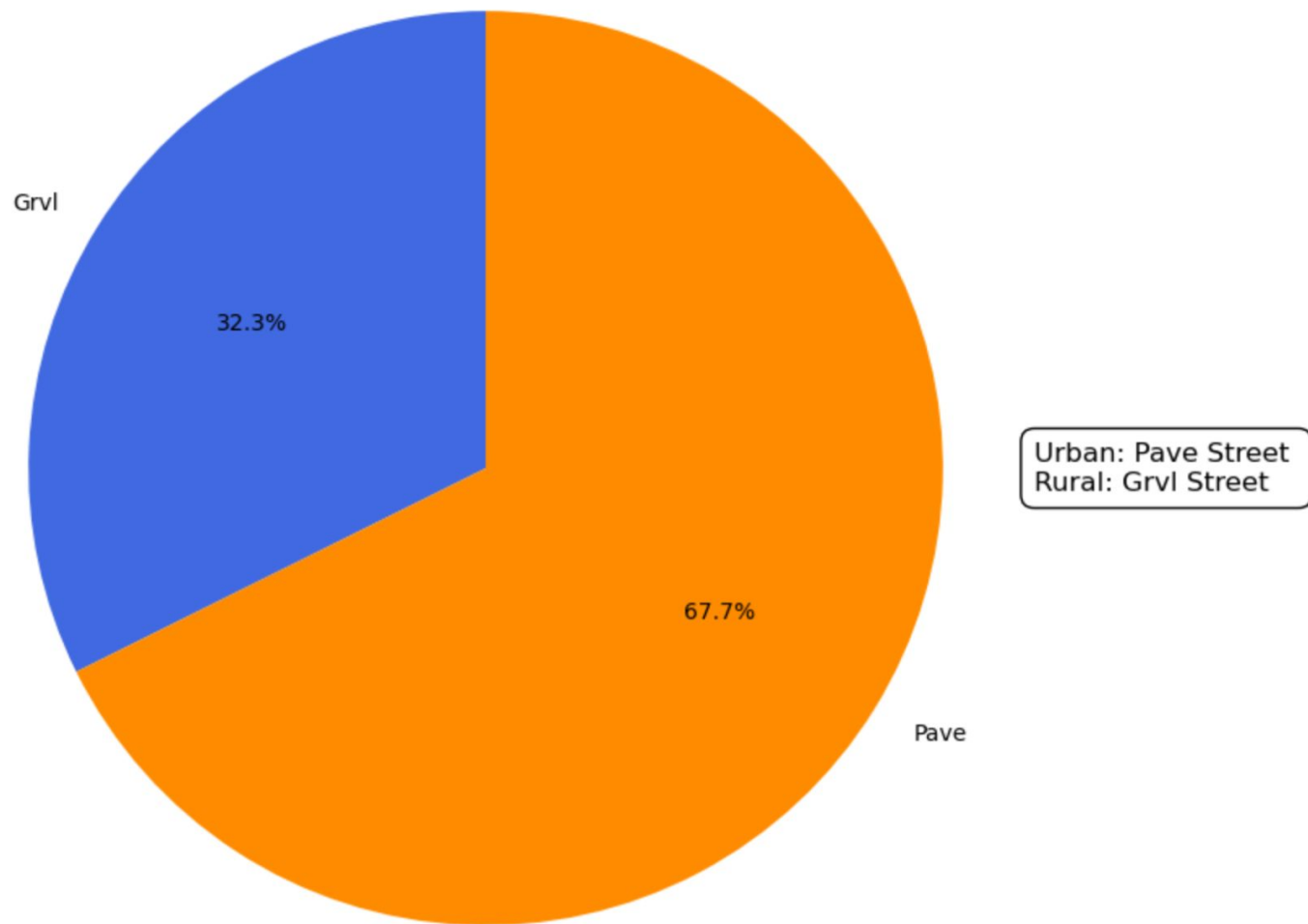
Ames Housing Dataset:

Widely used dataset in machine learning and data analysis, containing information about 2,930 properties in Ames, Iowa, including house characteristics, location, lot details, condition, and sale prices, often used for regression tasks like predicting housing prices.

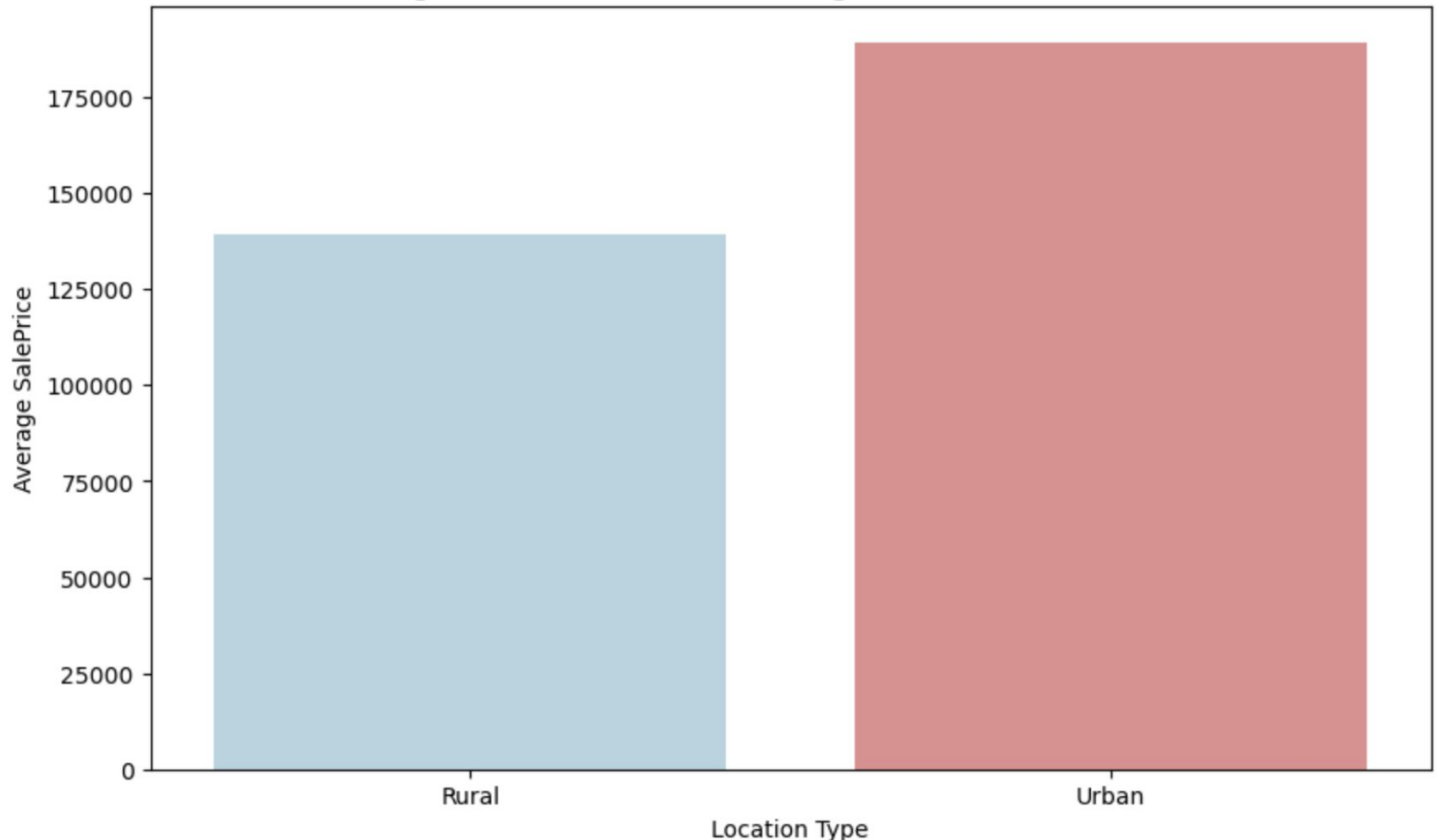
Average SalePrice for Urban vs Rural MSZoning



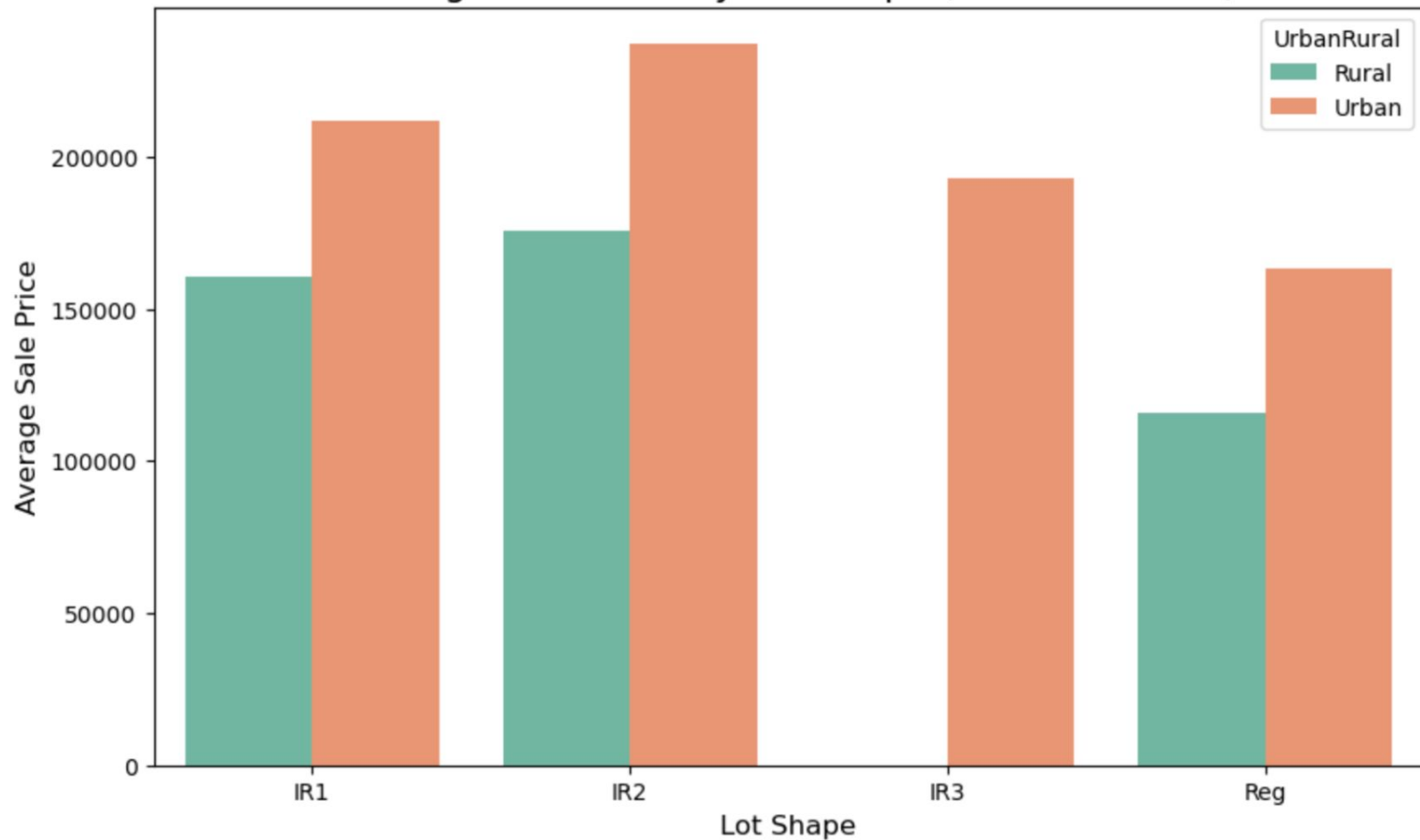
Average Sale Price by Street Type -Urban) vs Rural



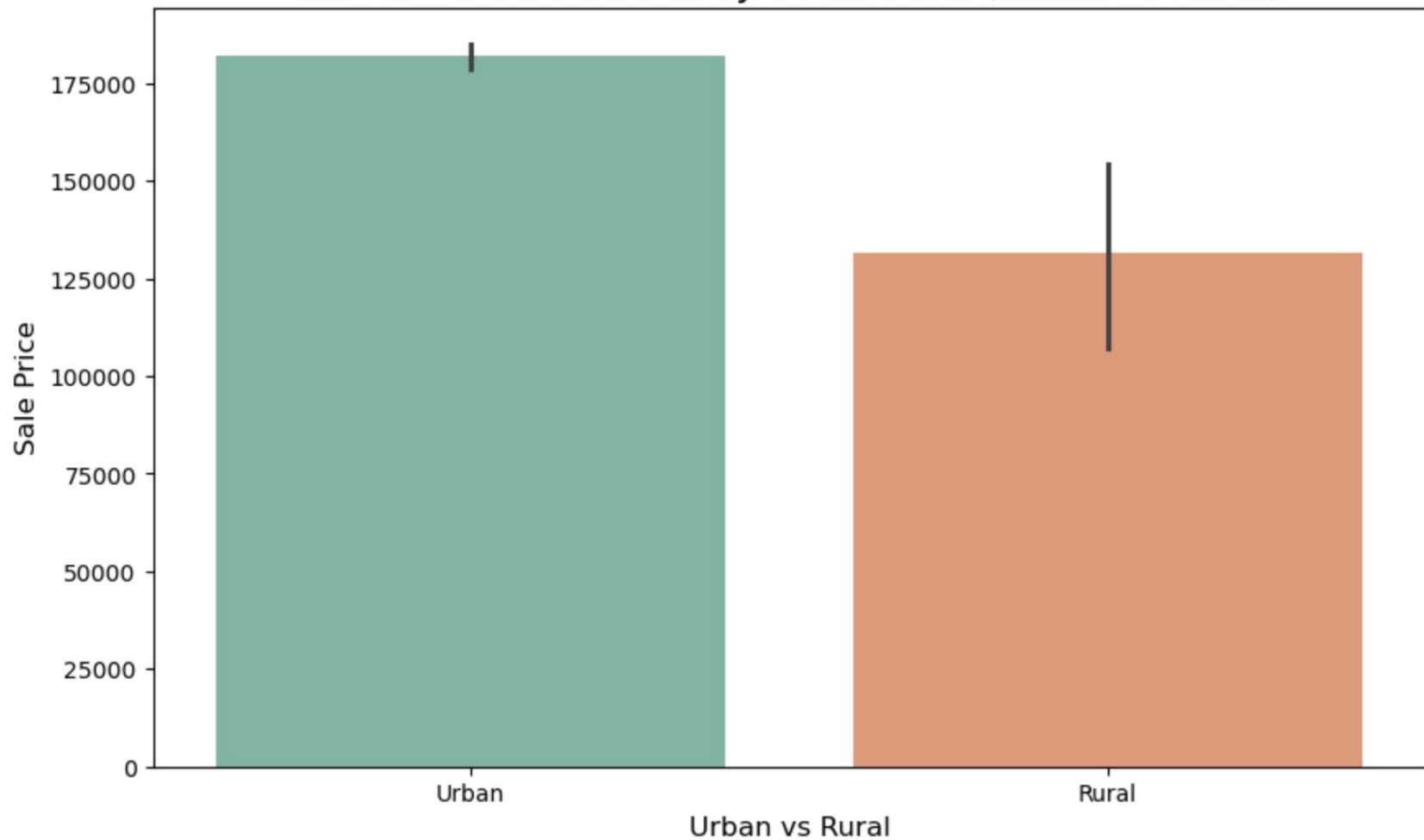
Average SalePrice based on Neighborhood: Urban vs Rural



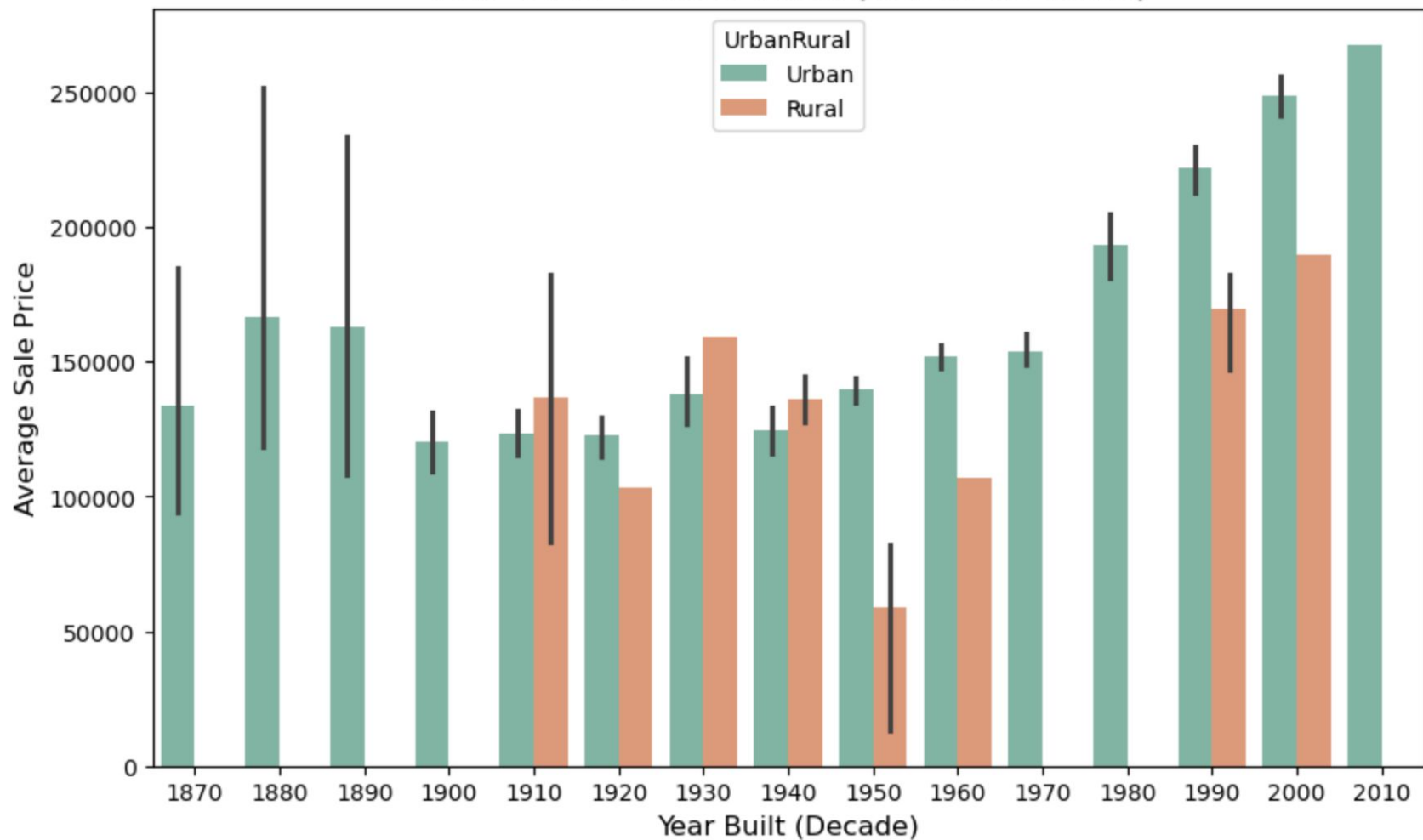
Average Sale Price by Lot Shape (Urban vs Rural)



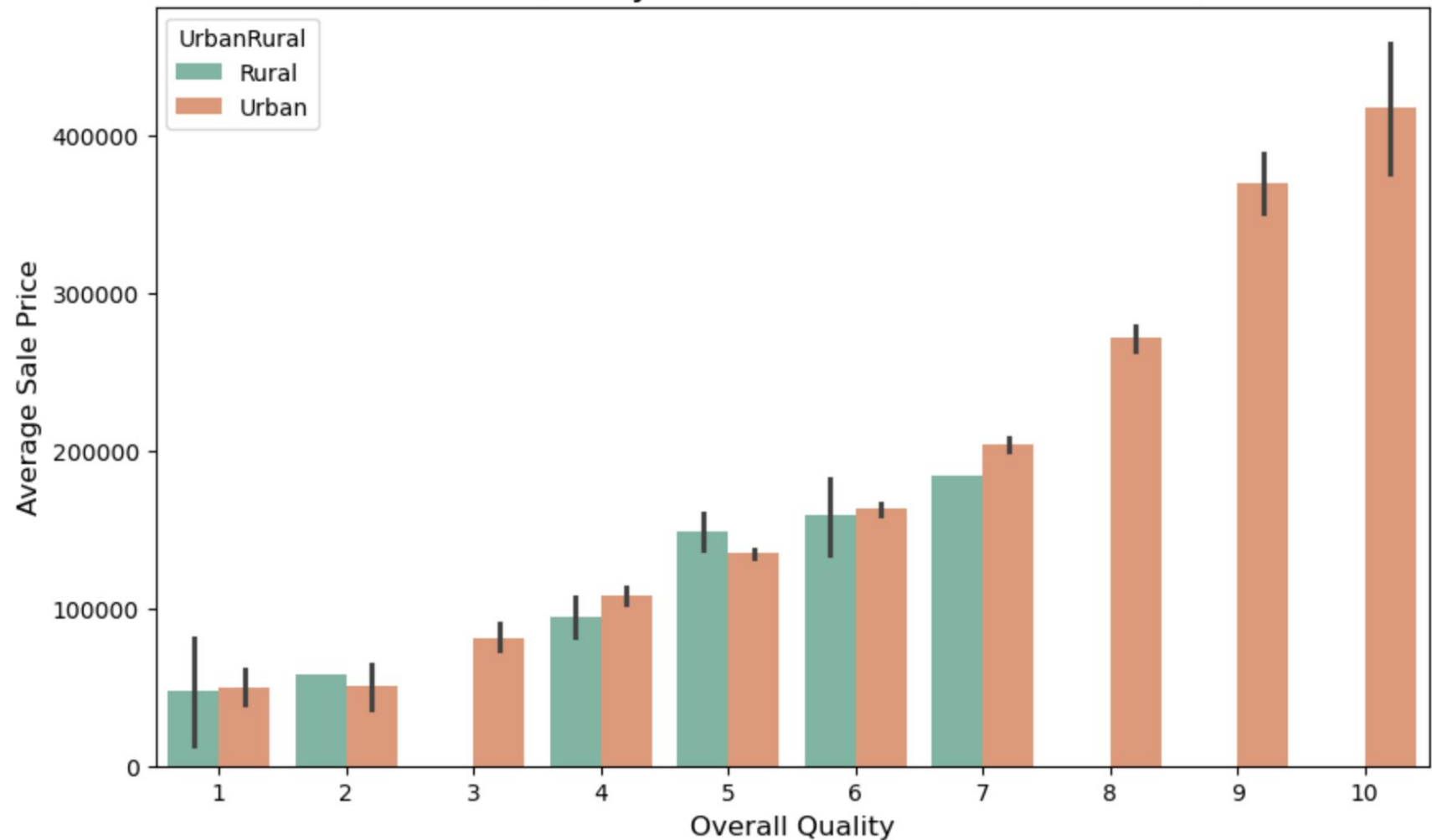
Sale Price Distribution by Gr Liv Area (Urban vs Rural)



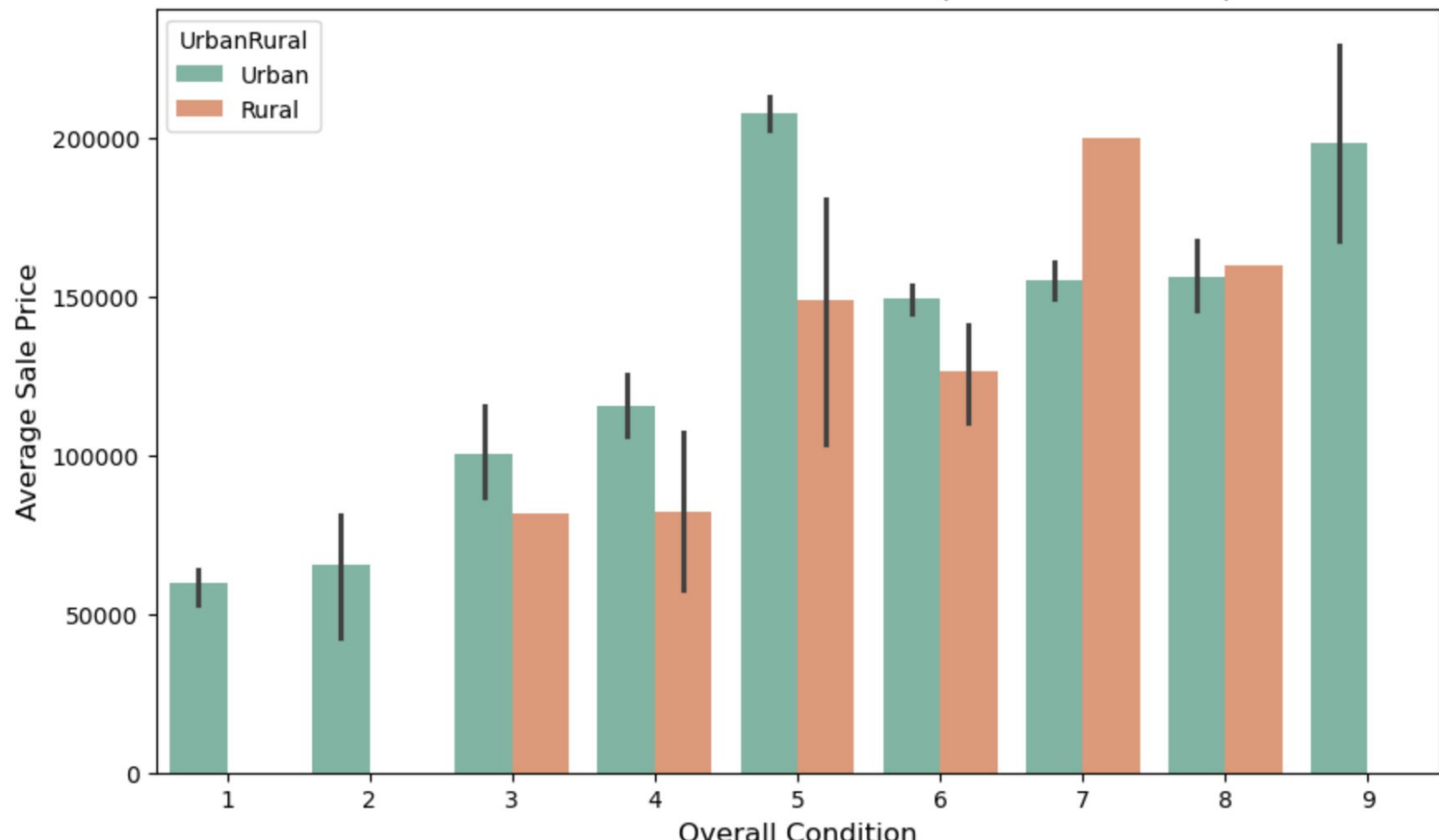
Year Built vs Sale Price (Urban vs Rural)



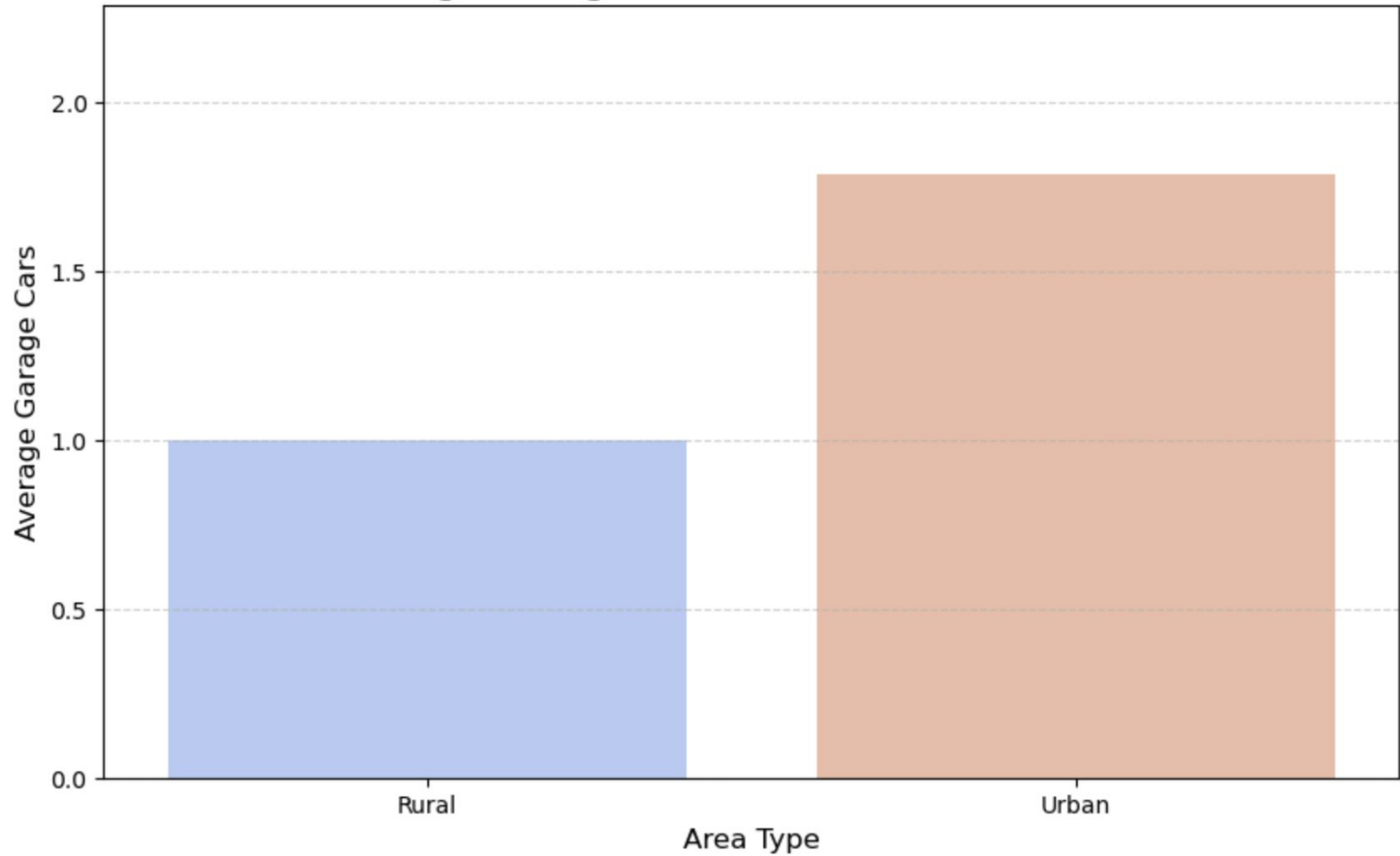
Overall Quality vs Sale Price (Urban vs Rural)



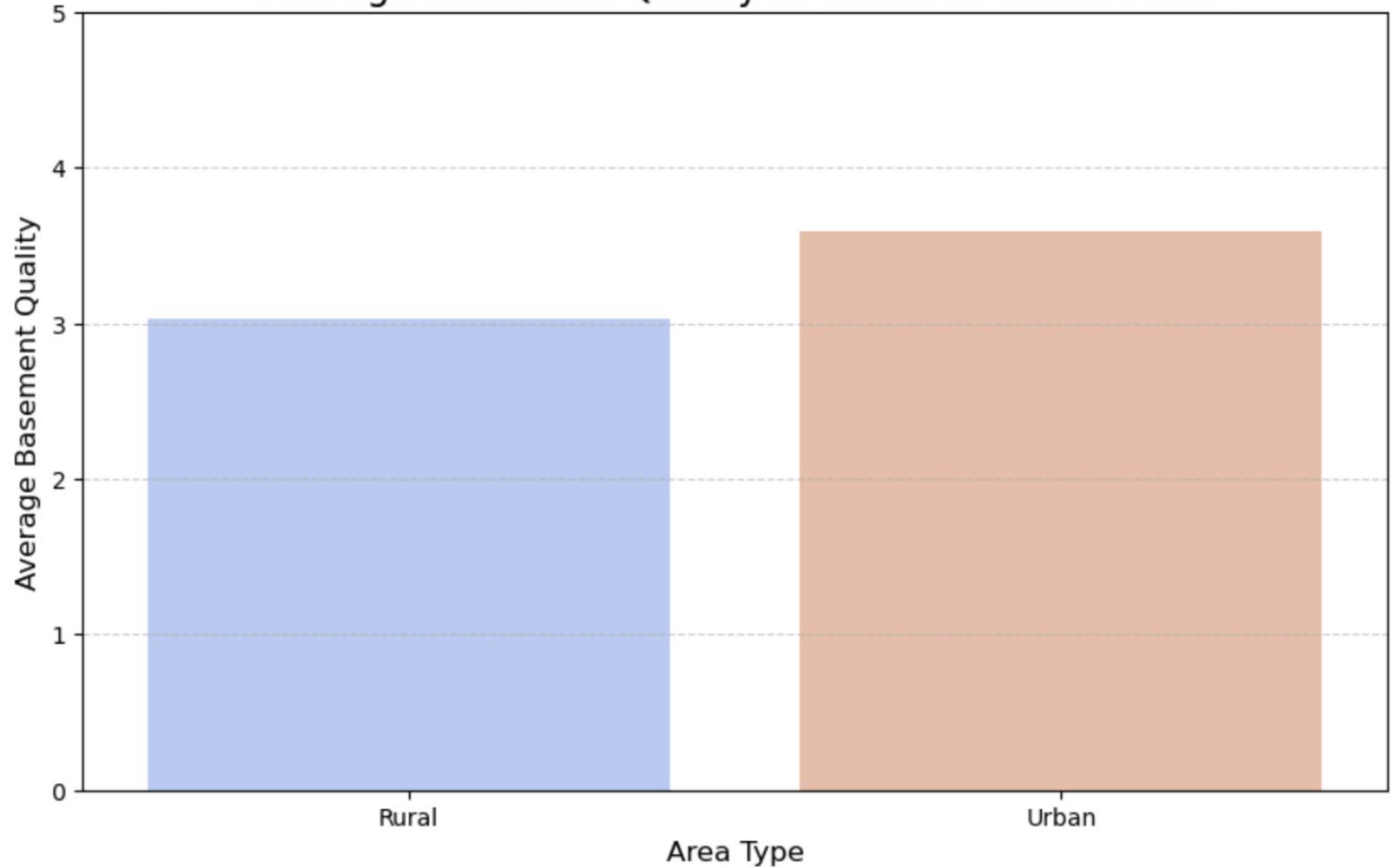
Overall Condition vs Sale Price (Urban vs Rural)



Average Garage Cars in Urban vs Rural Areas



Average Basement Quality in Urban vs Rural Areas



Assumptions

Model - Linear Regression

R-squared->R-squared indicates how much of the variation in the dependent variable is predictable from the independent variable(s): 0.8444

RMSE->Average difference between your model's predictions(30409.78) and the actual values.

RMSE is slightly better than my base model and it can fairly predict the features which directly influence the Housing Prices.

Key Observation/Insight	Implication for Urban vs. Rural Housing Price Prediction
<i>Overall House Quality</i>	<i>Urban overall house quality is high and it is one of the major determining factor.</i>
<i>Overall Quality and Condition</i>	<i>These quality indicators are highly predicting Features to determine Sale price.</i>
<i>Garage quality, kitchen quality, etc</i>	<i>Urban has higher quality rate that positively contributes to price rise.</i>
<i>Lot Shapes</i>	<i>Lot Shape->Fair prediction</i>
<i>MS Zoning, Street, and Neighborhood</i>	<i>Play a significant feature to predict the Housing Price</i>

Thank you