Relationships Between Residential Property Features and Sale Prices in Ames, Iowa

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Kaleb Tsegaye

Problem Statement

- What features of a low-assessed real estate property are the most valuable for improving sale price?

Methodology

- Data: information from Ames Assessor's Office about individual residential properties sold, 2006-2010
- Property features that can be changed vs. environmental features that cannot be changed
- Linear regression analysis

Regression Results

- Results based on multiple linear regression
- Predictors examples:
    - Full bathrooms, garage area, roof material, property conditions, central air system, etc.

|	Training	Validation
R²	0.899	0.910
MAE	17091.36	17266.13
RMSE	25414.83	23323.68

Heating System/Quality

- Quality coefficient
  - $1422/stdev
- System coefs (vs. gas - air furnace)
  - Gas - hot water/steam heat:
    - $1519
  - Wall furnace
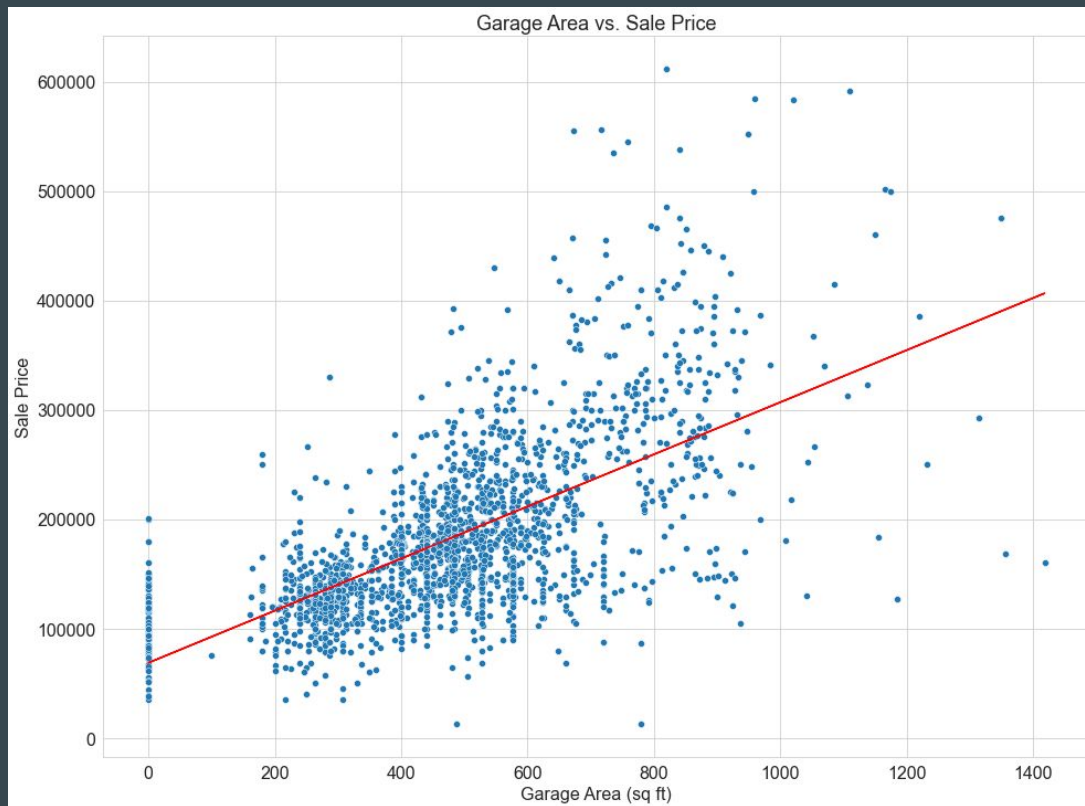   - $3612
  - Hot water/steam other than gas:
    - -$56885
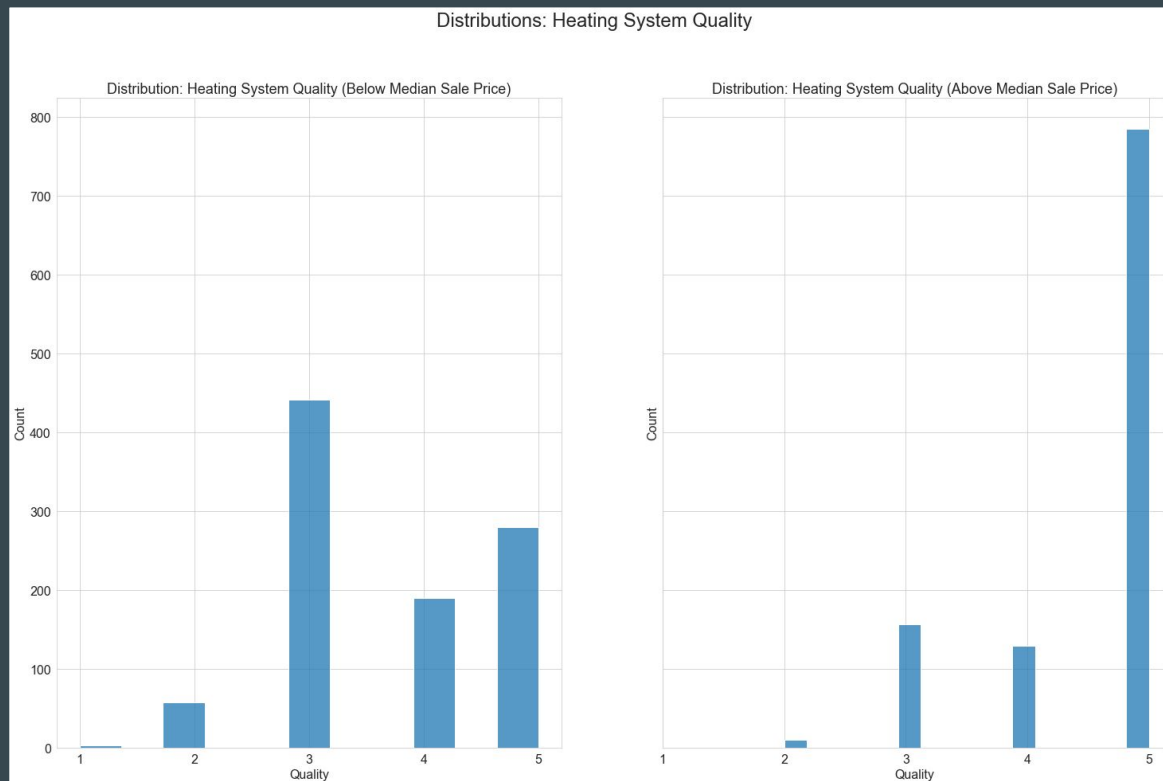
Electrical Systems

- Coefficients (vs. Fuse Box > 60 AMP):
  - Standard Breaker: -$422
  - Mixed: -$32846

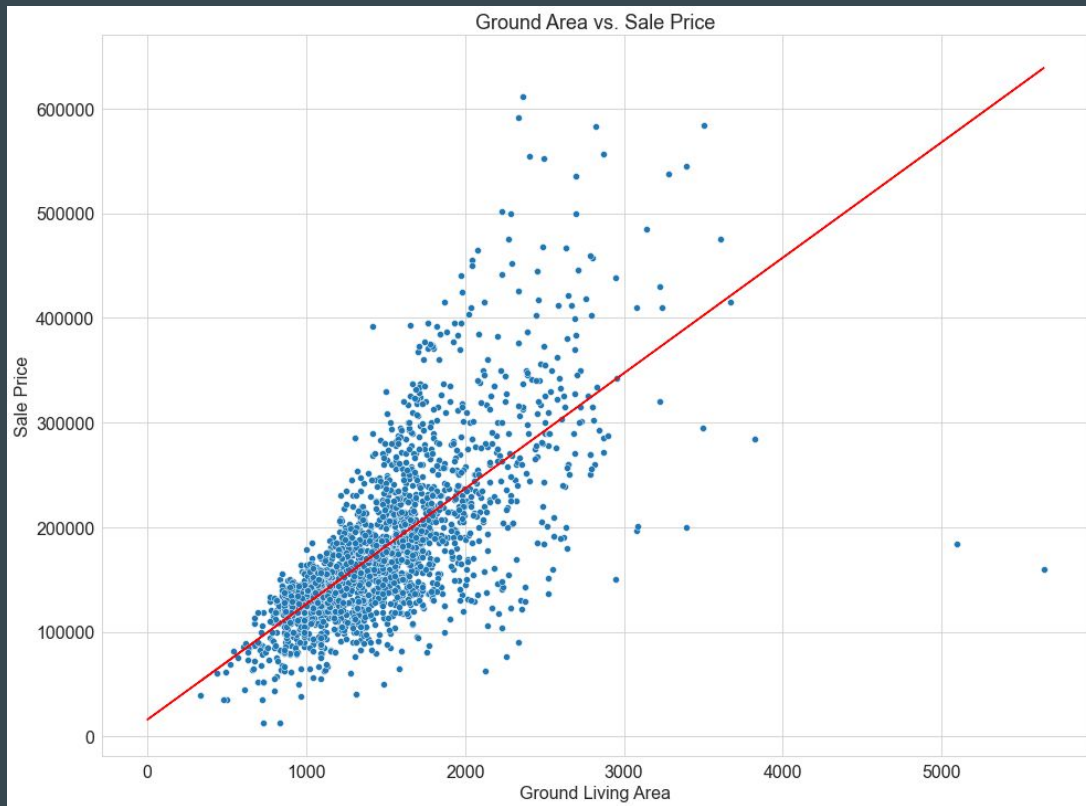
Distributions: Electrical Systems
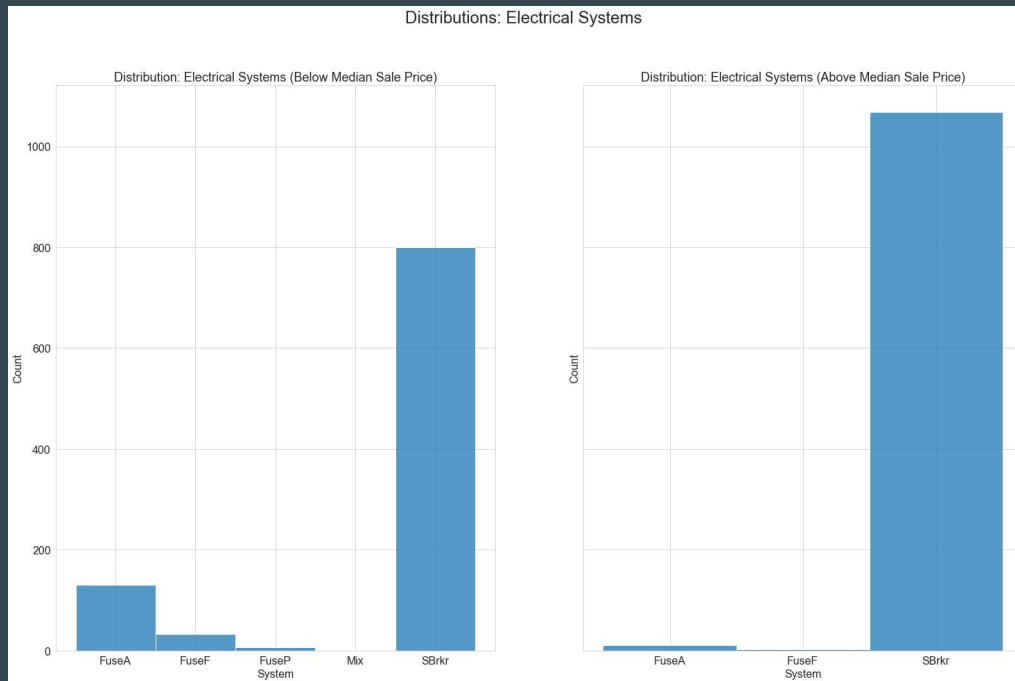
Garage Area

- One of the stronger correlations with sale price
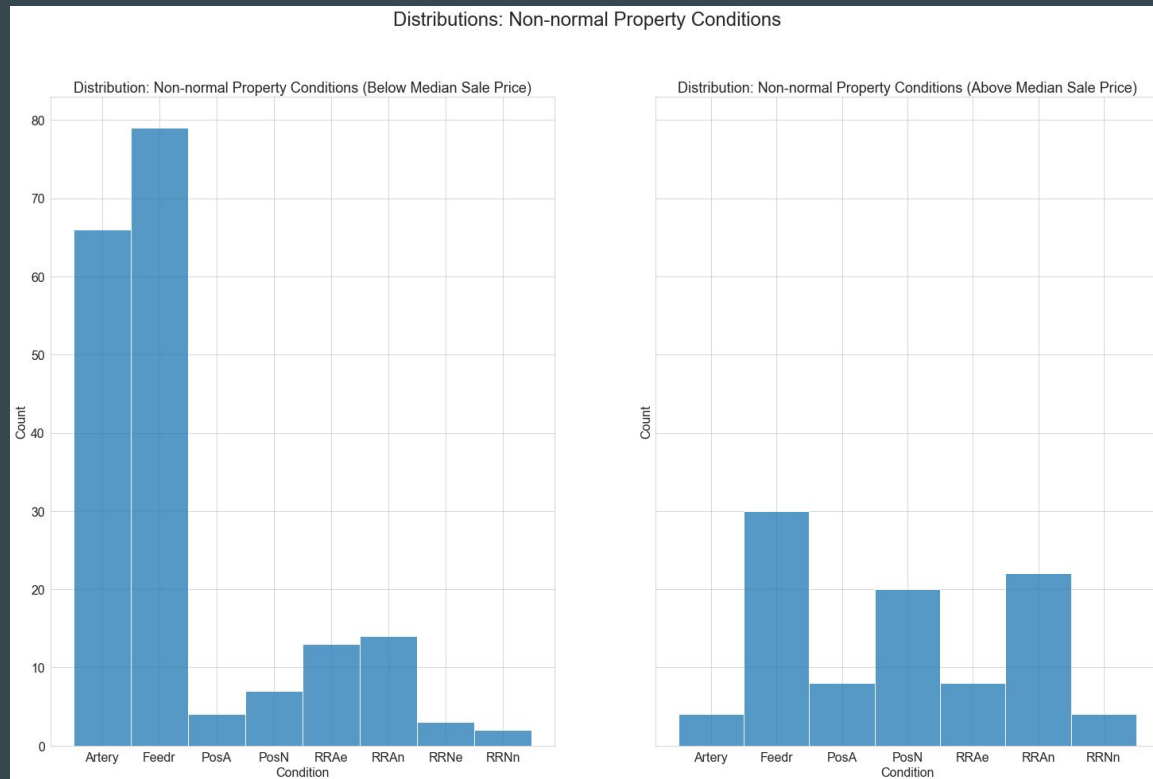 - 0.649
- Coefficient
  - $6830/stdev

Ground Living Area

- One of the stronger correlations with sale price
    - 0.697
- Coefficient
    - $26526/stdev

Property Conditions

- Coefs (vs. Artery)
  - Feeder:
    - $2672
  - Normal:
    - $9625
  - Adjacent Positive
    - $17185

Distributions: Non-normal Property Conditions

Conclusion

- Invest in improvements that will net the most returns relative to the current features for your property
- Request reassessment of the property
- Consider/accept uncontrollable environmental factors