



Utah Real Estate

Sales Analysis and Predictive
Modeling

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Synopsis

Analyze Utah's real estate market, identify key pricing drivers, and build a predictive model to support pricing strategies for real estate professionals.

Main Findings:

- Property Prices: Median listing prices are below \$529,000; farms and newer homes are valued higher.
- Predictive Modeling: K-Nearest Neighbors (KNN) achieved 99.54% accuracy in price prediction.
- Actionable Insights: Focus on key property features like bedrooms and modernity for pricing strategies.

Next Steps: Improve model accuracy through tuning and refine insights to support real estate investment strategies.

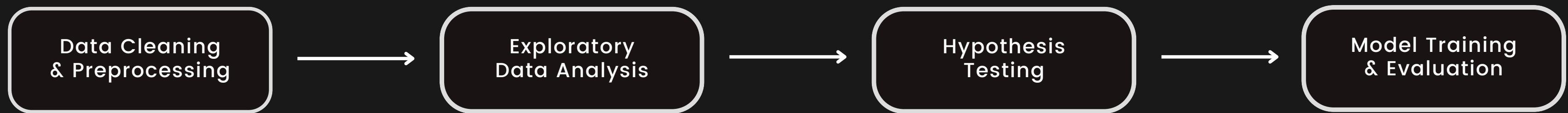


Objectives & Methodology

Target Audience: Real estate professionals and investors.

Our objectives included understanding Utah's real estate trends, building a predictive model, and offering insights that can inform investment strategies.

We followed a structured methodology:



Dataset Features:

- 4,400+ listings from Realtor.com, including features like price, bedrooms, property type, year built, and lot size.

Target Audience:

- Real estate professionals and investors.



Inferential Outcomes

What Drives Property Prices?

Tested with an Analysis of Variance
(ANOVA)

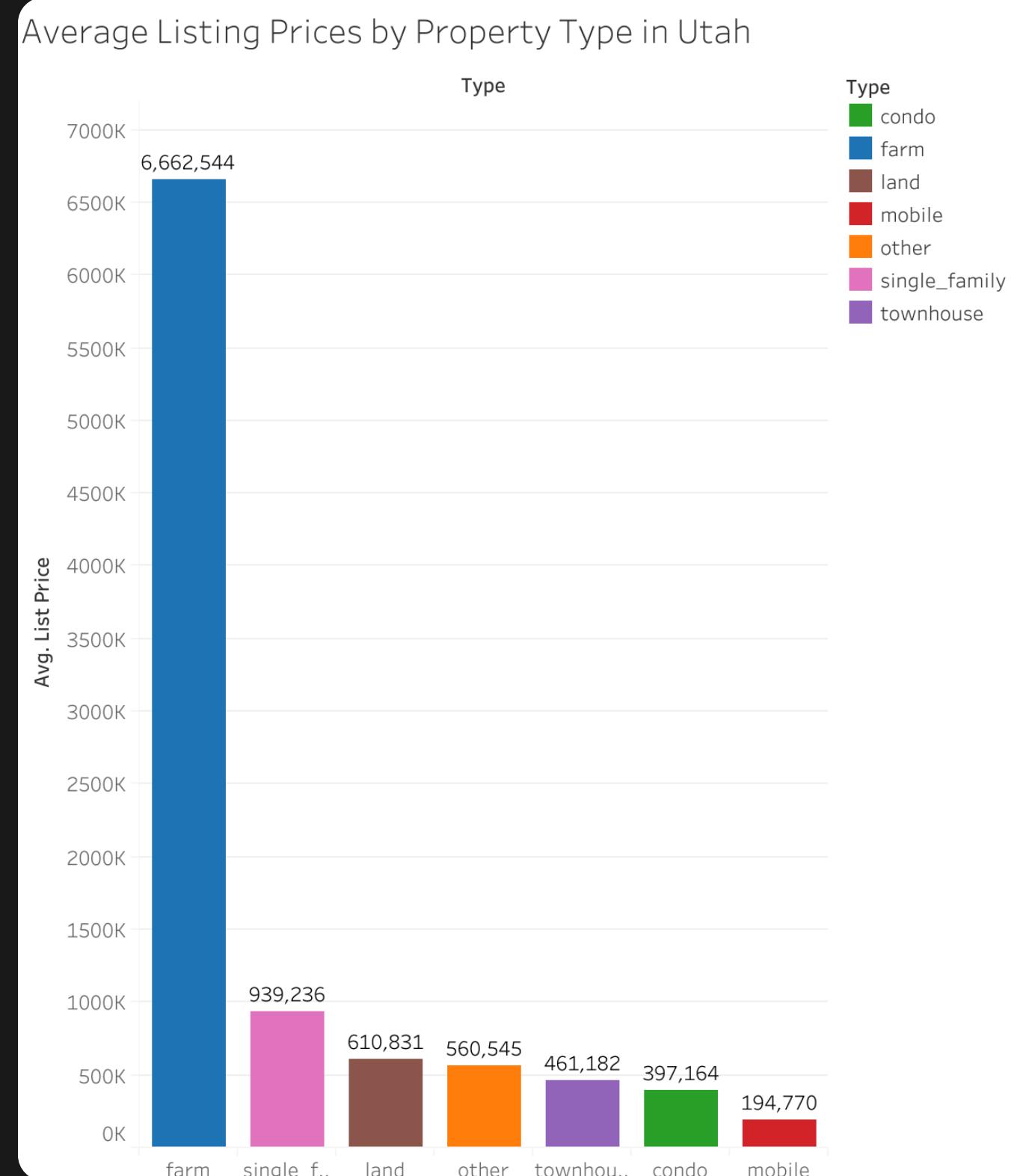
- Bedroom count impacts price significantly
- Farm properties are the most expensive

Tested with a T-test

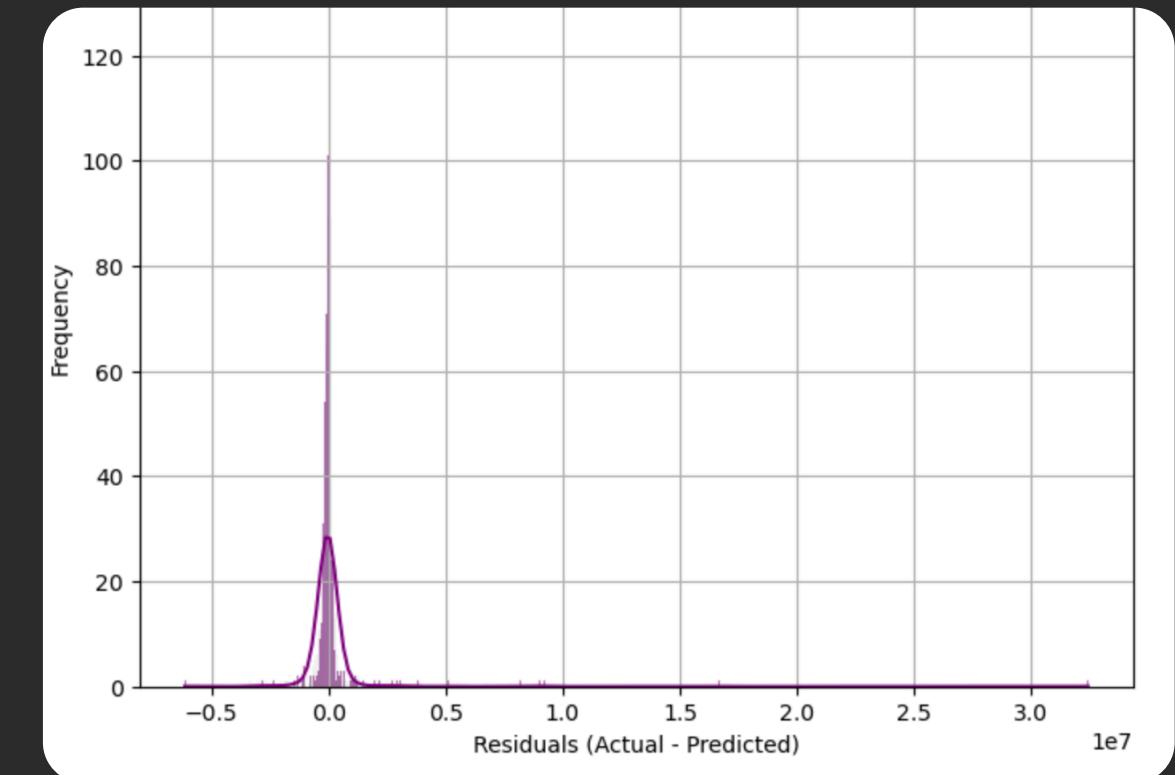
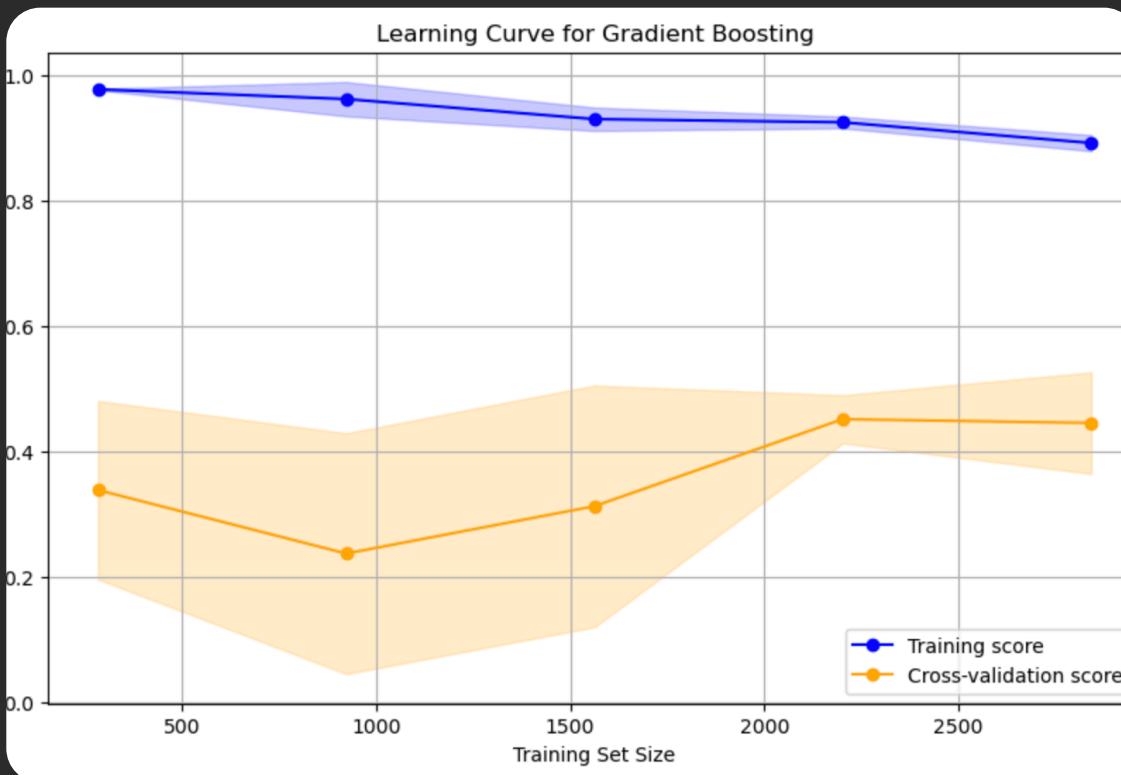
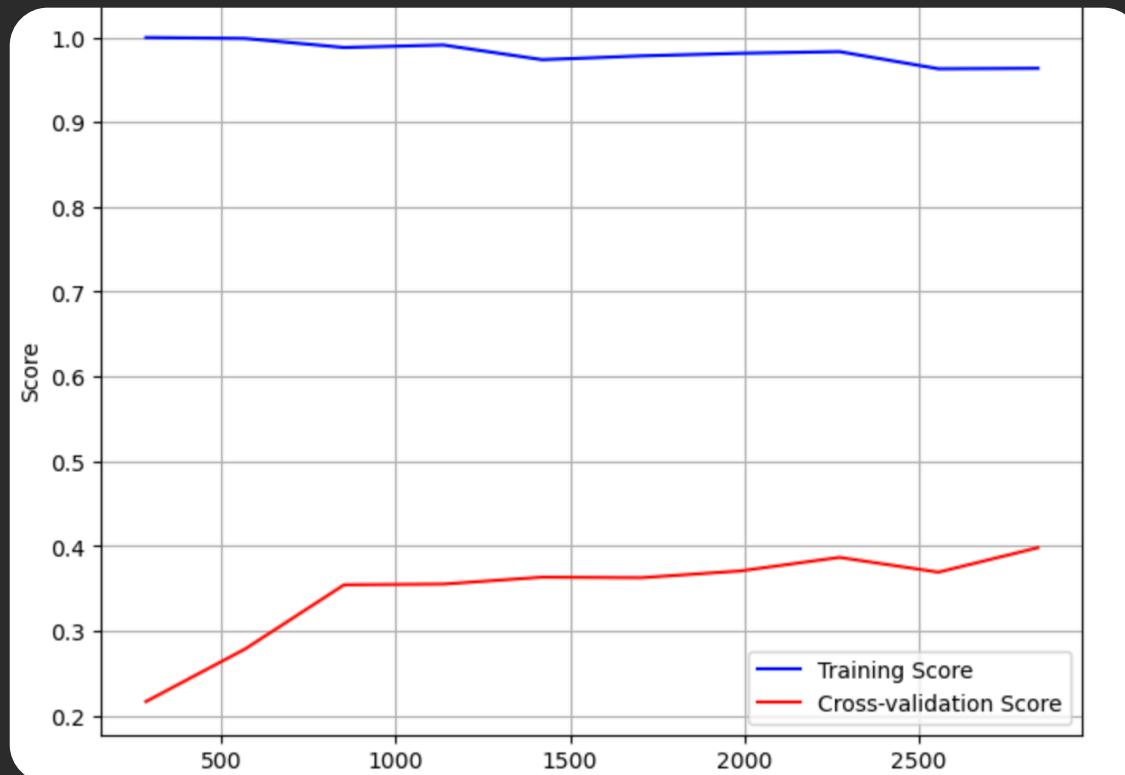
- Properties built after 2000 are valued higher
- Garage presence has no significant effect

Tested with an Analysis of Variance

- Lot size and garages weakly correlates with price



Top 3 Models Tested



K-Nearest Neighbors

99.54% Accuracy

Top Performance

Gradient Boosting

56% - 65% Accuracy

Moderate Performance

Random Forest

52%

Underperformed



KNN in Action

Utility:

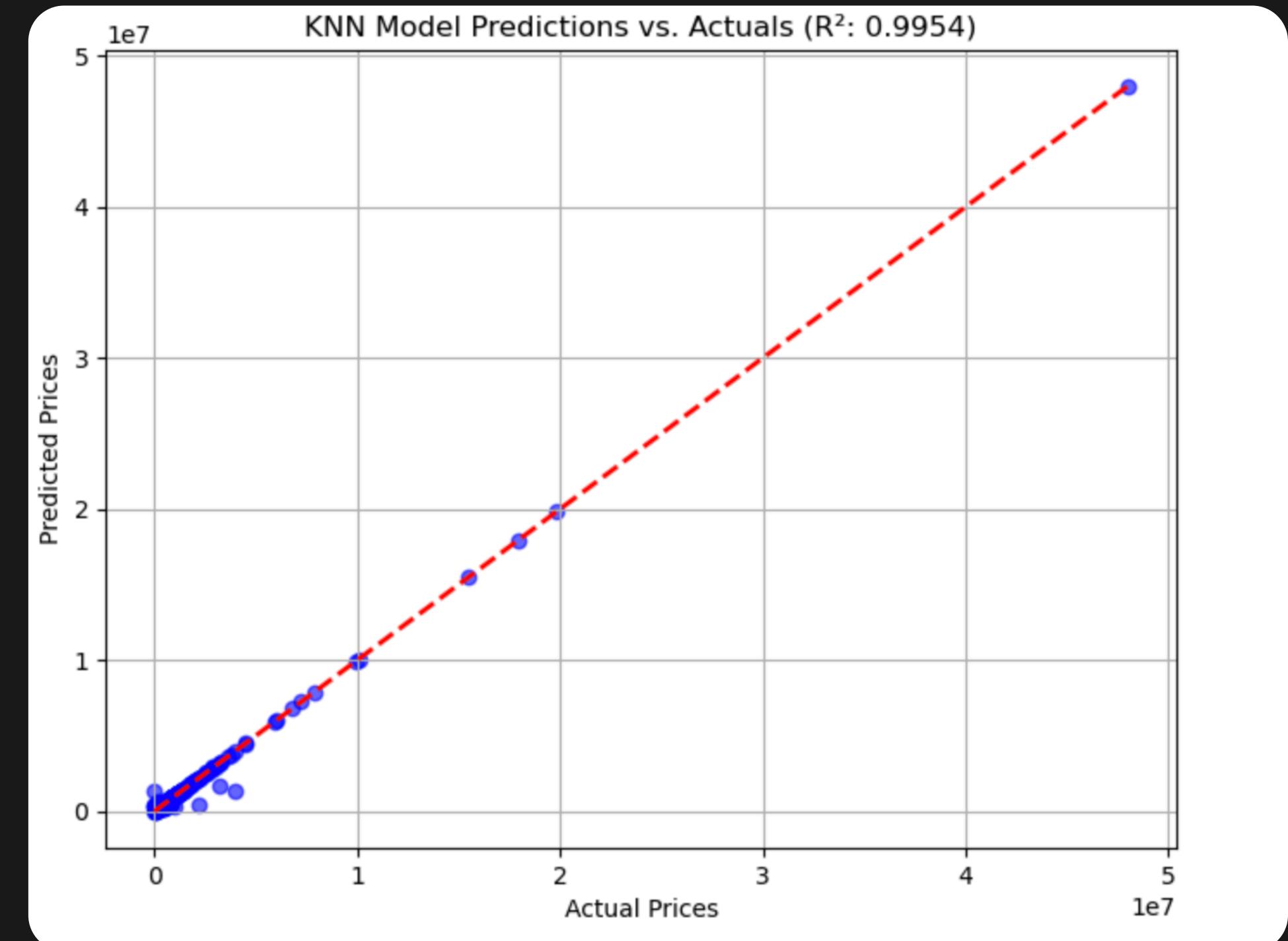
Provides accurate price estimates based on property features

Target Users:

Real estate professionals, investors, and analysts

Potential Impact:

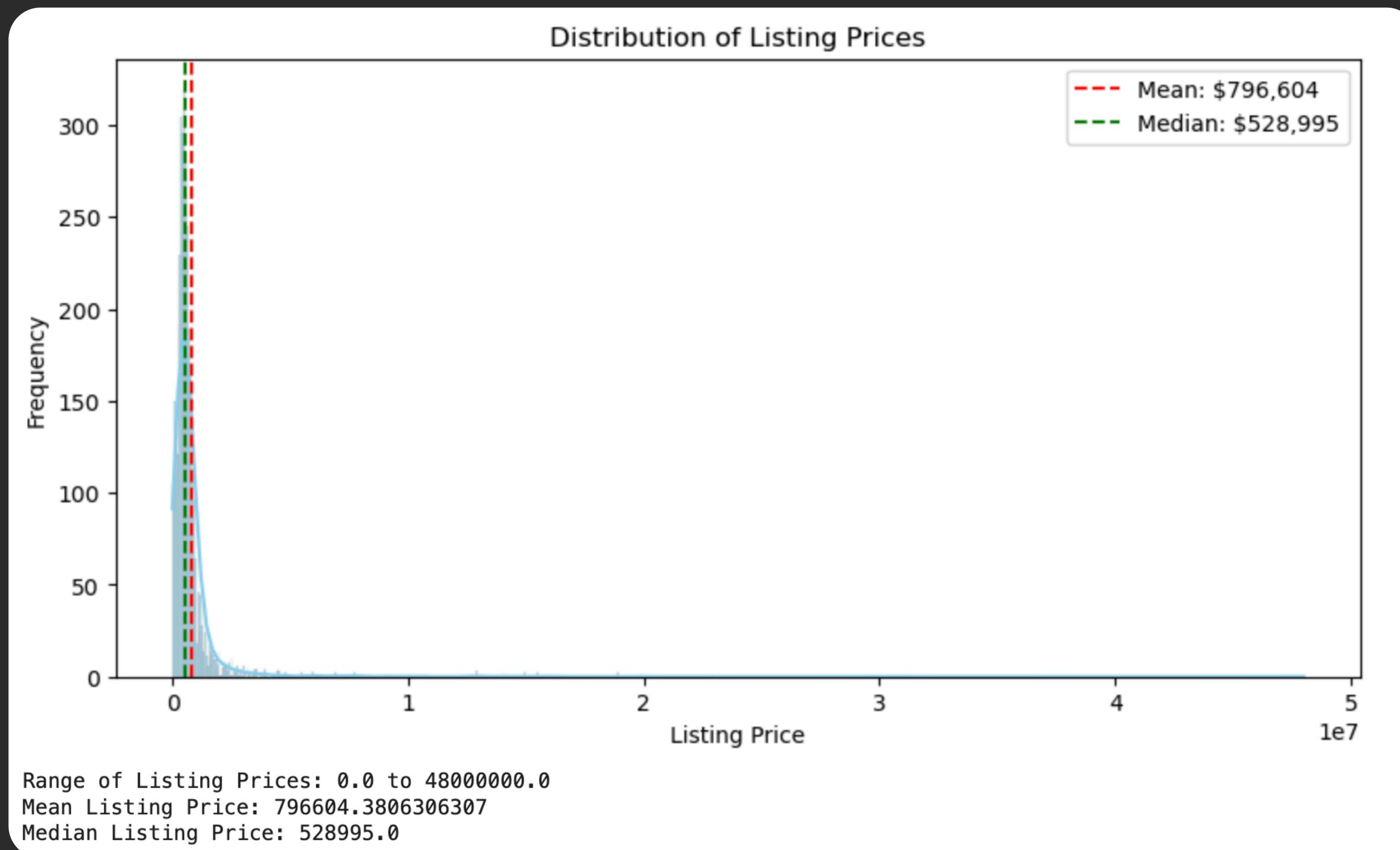
Better pricing strategies, informed investments



Trends in Utah Real Estate

Listing Prices

Median vs. Outliers



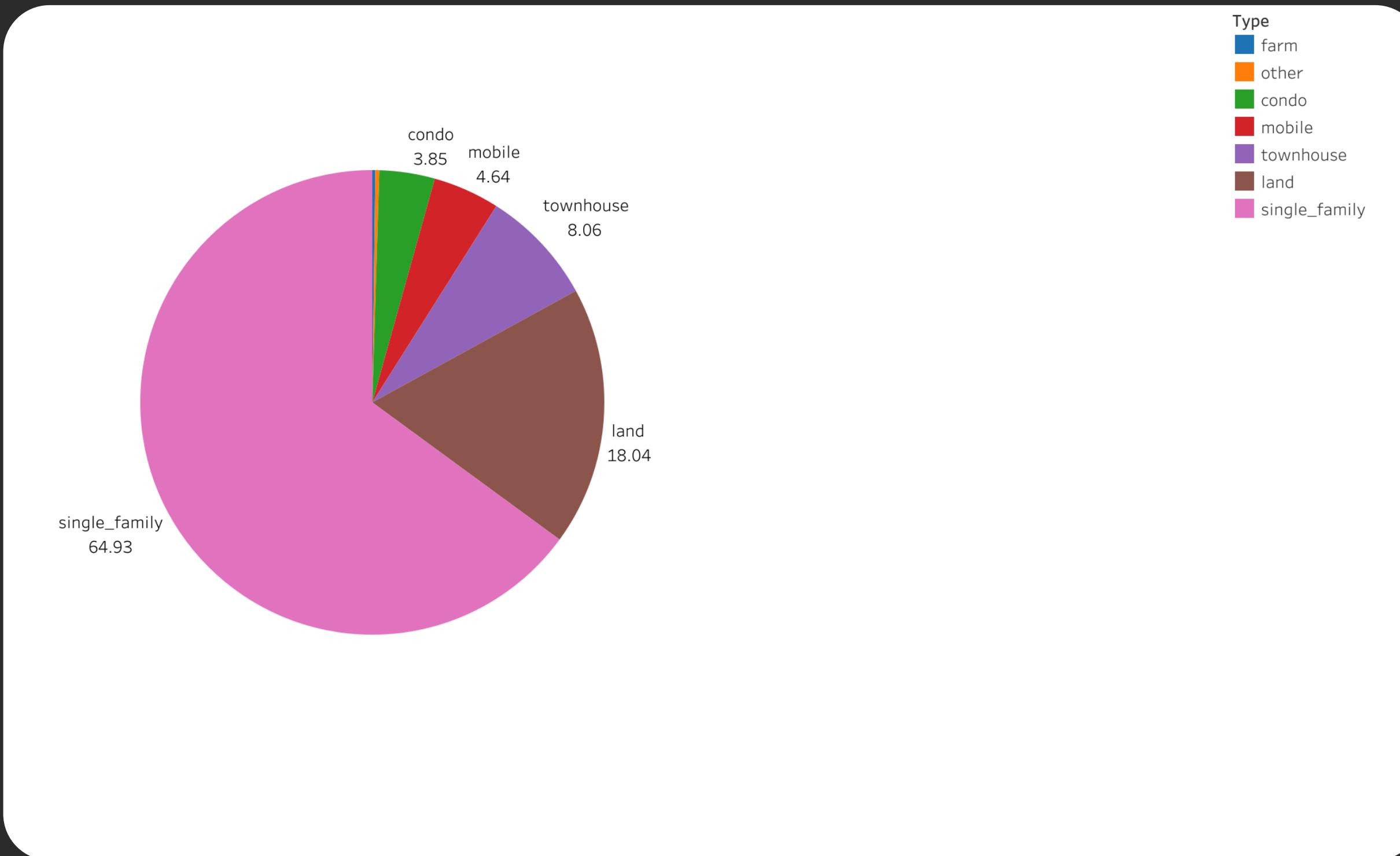
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Trends in Utah Real Estate

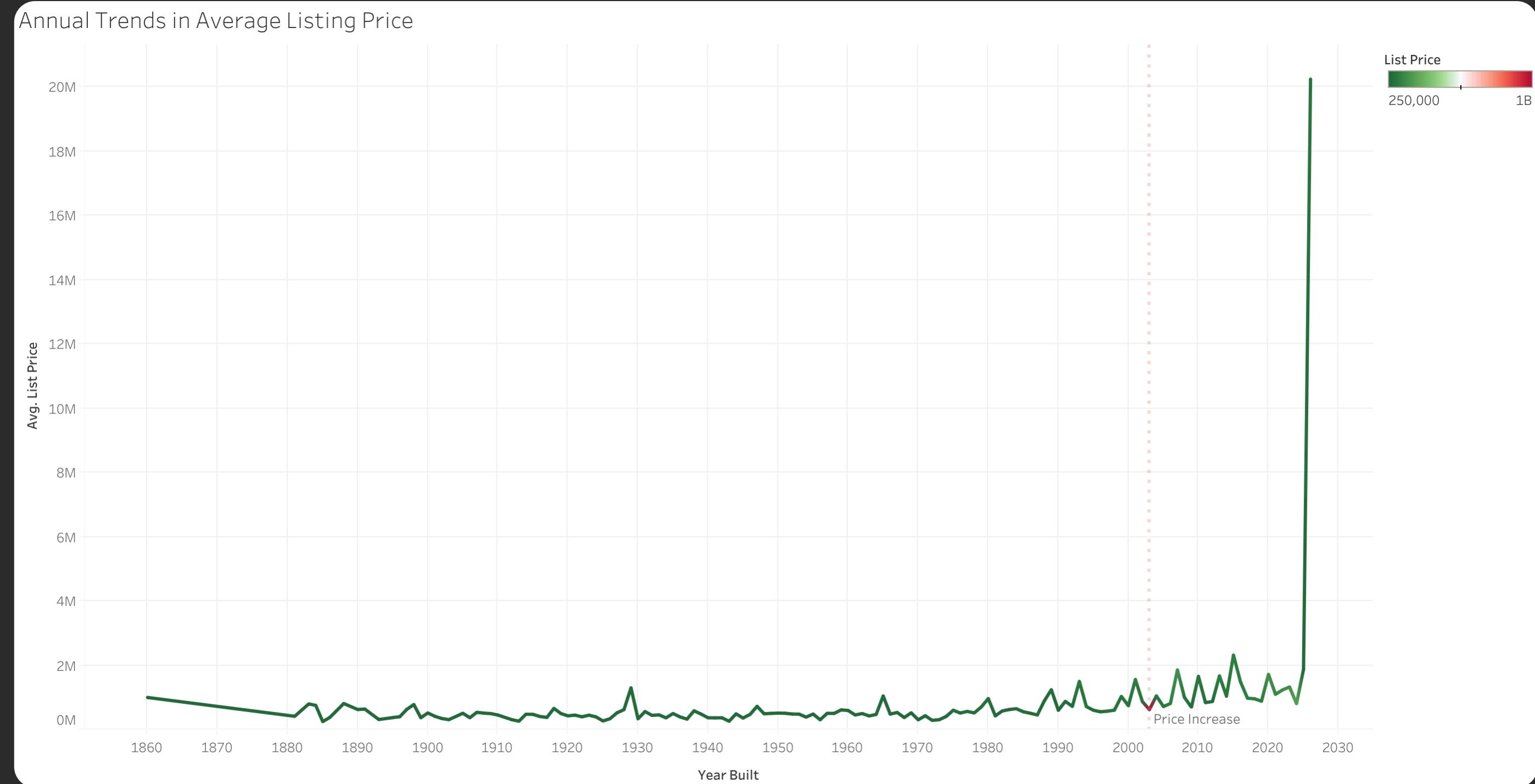
Property Types

Market share by Property Type



Trends in Utah Real Estate

Temporal Trends
Annual changes in average prices

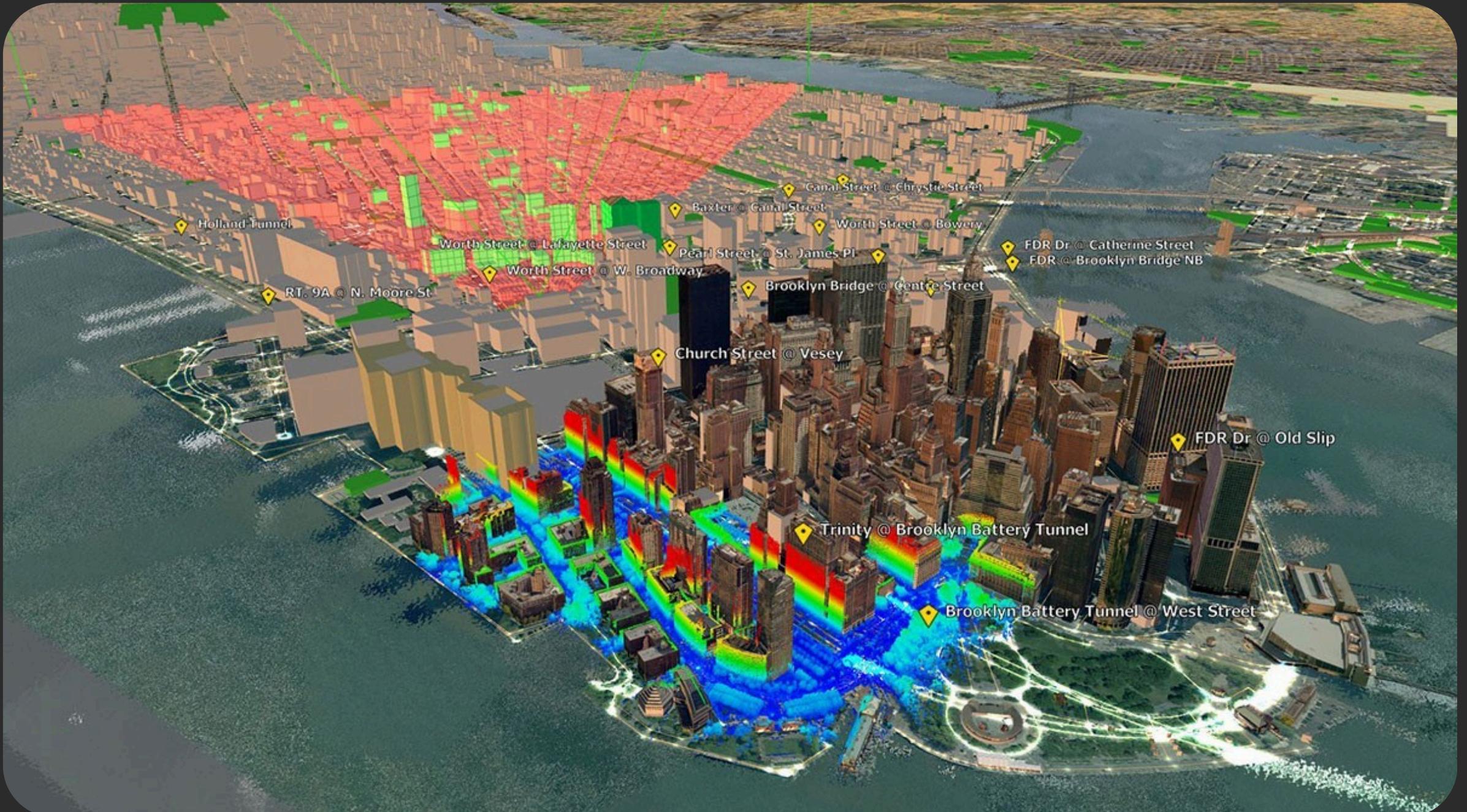


Appendix & Next Steps

External Resources: Apify API,
Realtor.com data

FUTURE DIRECTIONS

- Develop geospatial models for location insights.
- Build user-friendly dashboards integrating these findings.
- Explore advanced modeling techniques like deep learning.



Contact Us

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