

Does Corporate Expansion Affect the Cost of Living?

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Project Motivation

- Major corporate expansion projects bring jobs to communities
- Governments try to attract corporations for this reason
- Housing prices increased 2% faster in communities with expansion
- Seek to measure if and how corporate expansion impacts housing prices
- Metric: Year-over-year change in median house price



Workflow

Data Acquisition

- NY Dept of Labor
- VA EDP
- Zillow
- Census Bureau
- US Dept of Labor



Feature Engineering

- Made 12 features
- Interaction variables
- Time series
- Current values
- Total of 18 features



Data Modeling

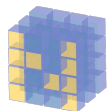
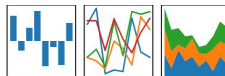
- Random Forest Regression
- Feature effects change dynamically
- $R^2 = 0.65$

 jupyter



pandas

$$y_{it} = \beta'x_{it} + \mu_i + \epsilon_{it}$$

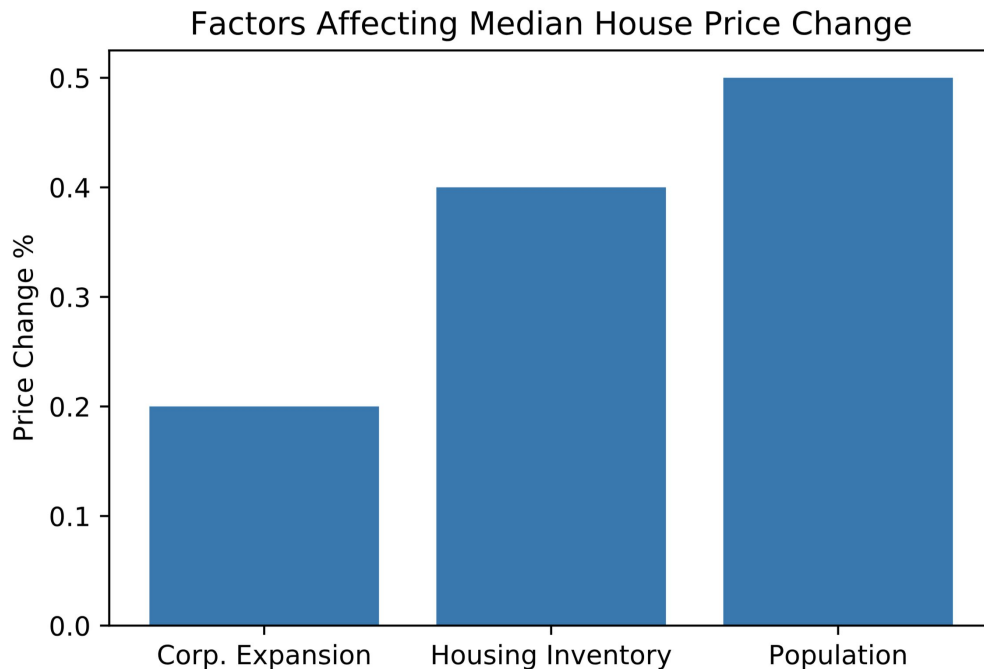


NumPy



Results

- Jobs added by corporate expansion had 2% importance
- On average, expansion increases home prices by 0.2%
- Effect Range: -0.3% to +1.6%
- Other factors increased home prices by 4.0%



Case Study: Expansion of 25,000 Jobs

LOCATION	WITHOUT EXPANSION	WITH EXPANSION	NET EFFECT
Arlington, VA			
Queens, NY			
Richmond, VA			

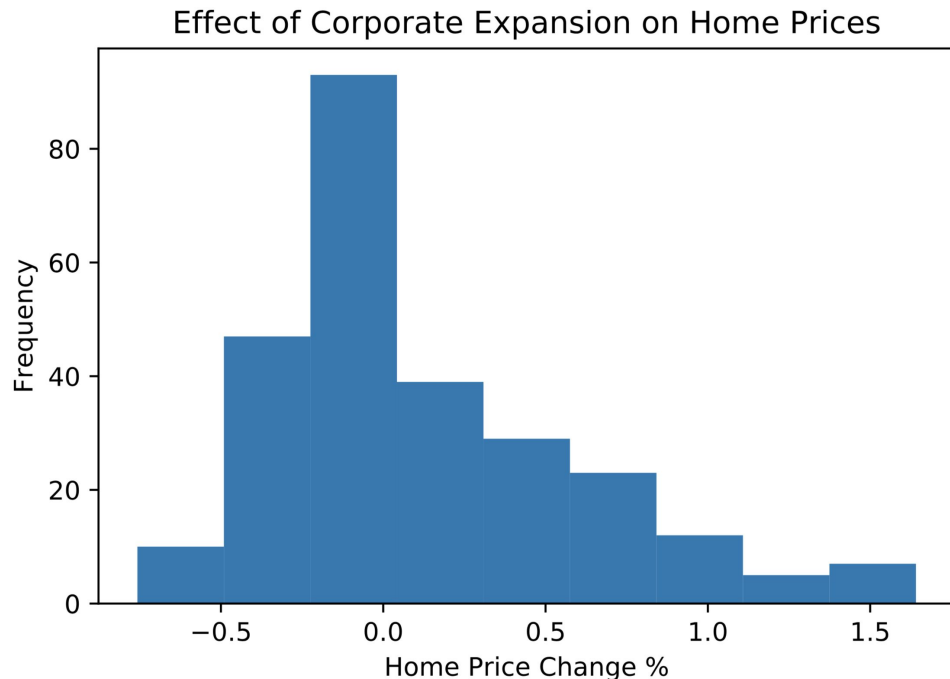
Next Steps

- Analyze price changes based on ZIP Code
- Analyze additional geographic areas
- Analyze long-term effect in periods greater than one year



Conclusion

- Places where corporations expand have higher price increases
- The effect of expansion depends on economics and demographics
- Economic conditions are the main driver of price increases





Thank you!

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