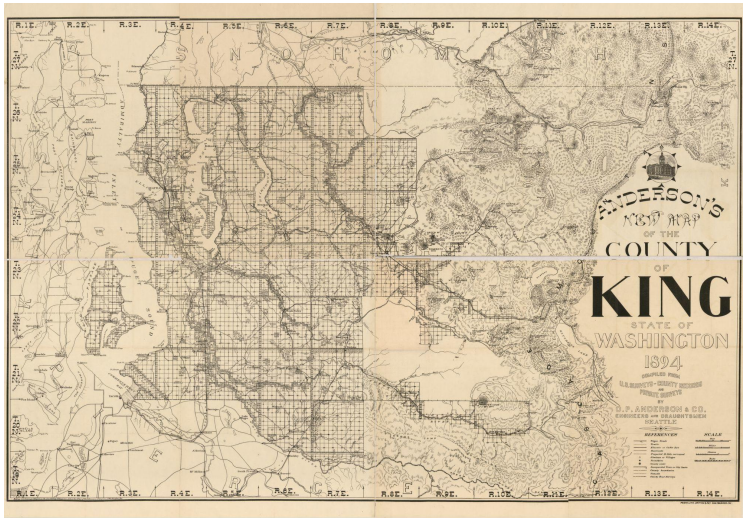
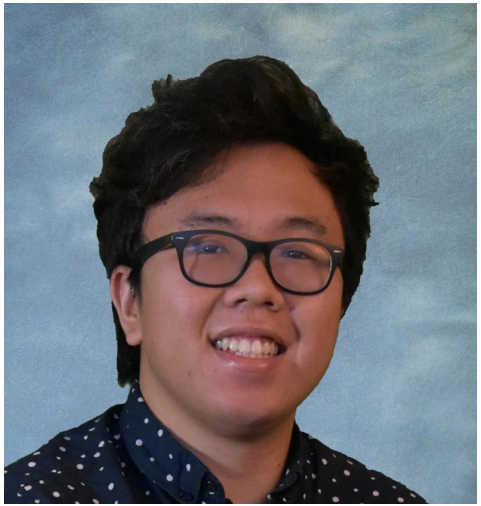
King County Construction 301



Howard S. Wright
a Balfour Beatty company

Data Science Team

Brian Reynolds
Data Scientist
Github



Peter Vuong
Data Scientist
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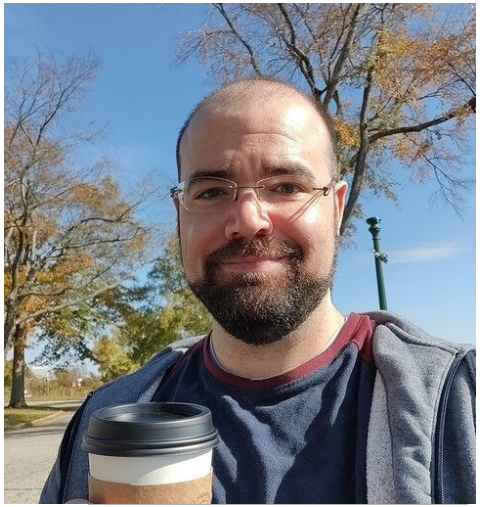

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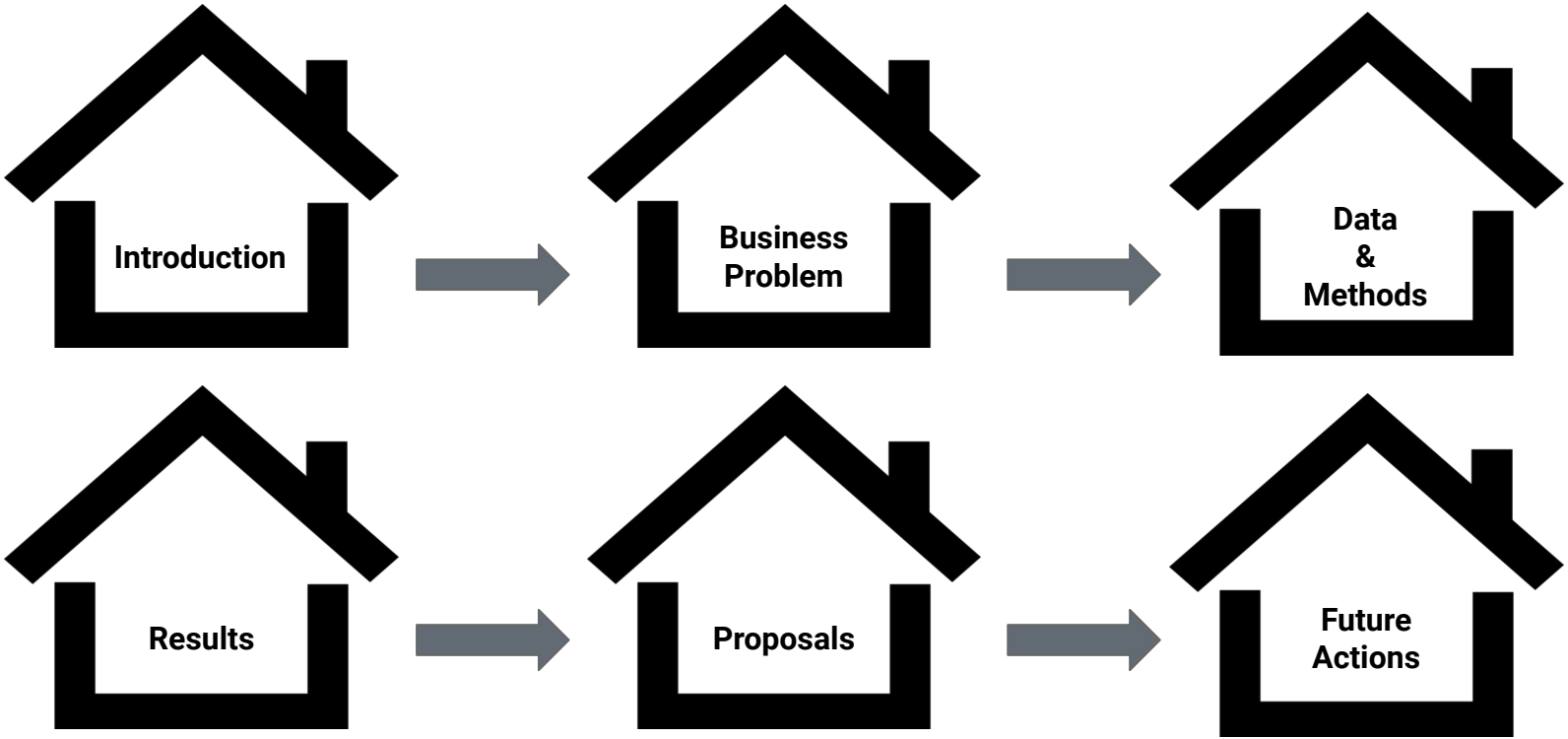
Data Scientist
Github

Agenda


Introduction
Business Problem
Data & Methods
Results
Proposals
Future Actions

Bottom Line Upfront

Square Footage ✓

Location ✓

Home quality ✓

Business Problem

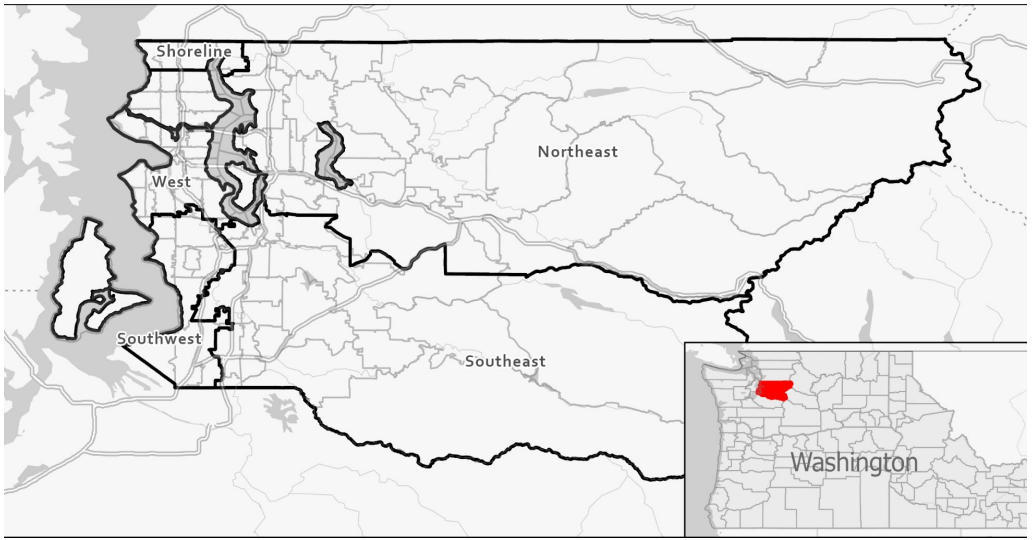
What should HSW focus on when building homes?

- Location?
- Beds/Baths?
- Home Quality?
- Square Footage?
  - Building Footprint
  - Total Living Space

Data & Methods

King County Data

- KC Housing Data, 2014-15
- King County Census Data
- Spatial analysis and modeling



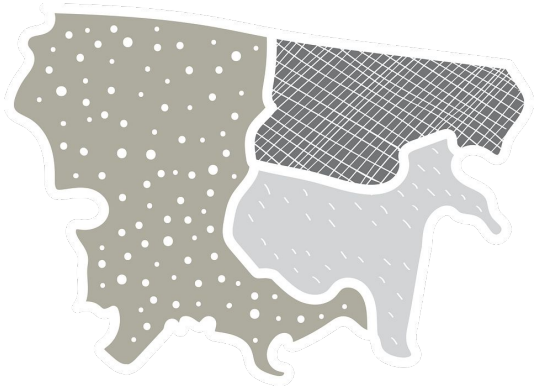
Findings

Model Accounts for 68% of Variation in Price

House Size

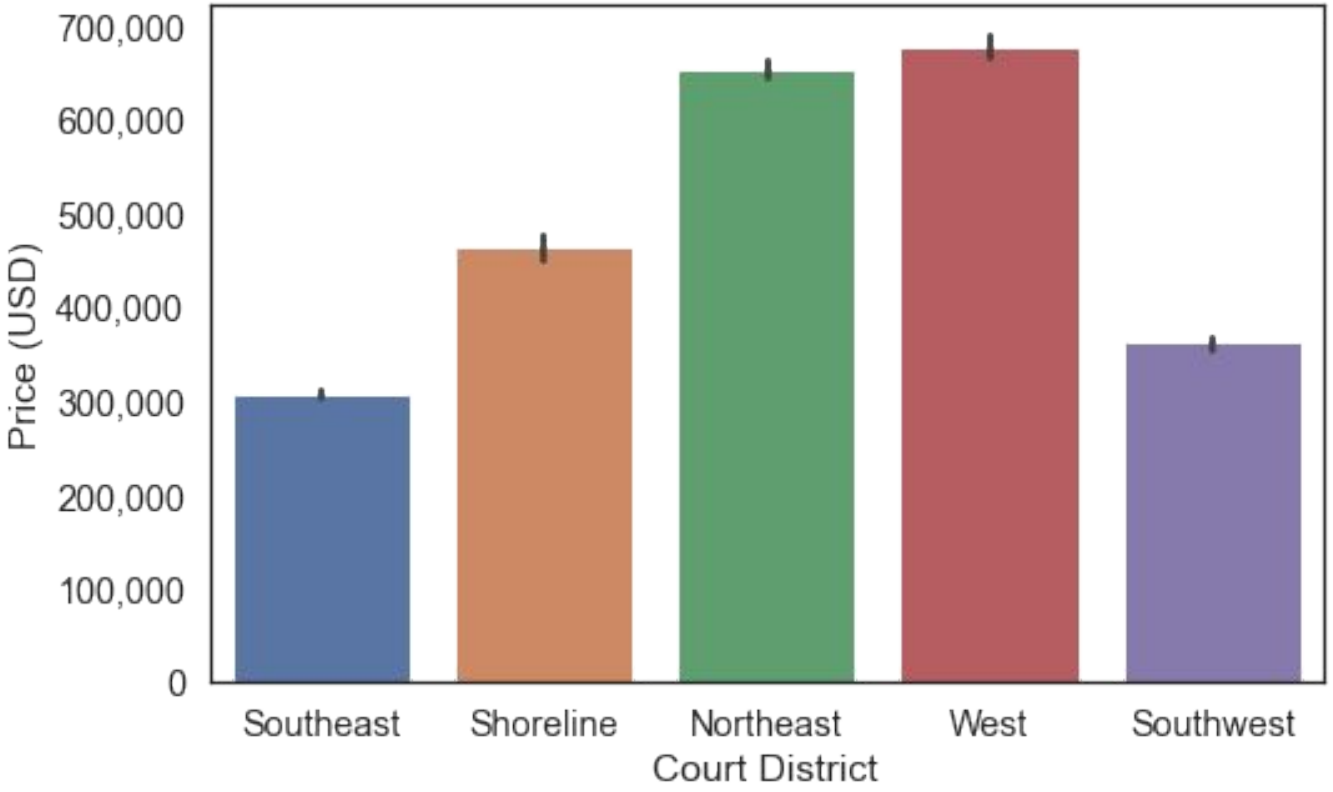
1 SQFT = $175

Region

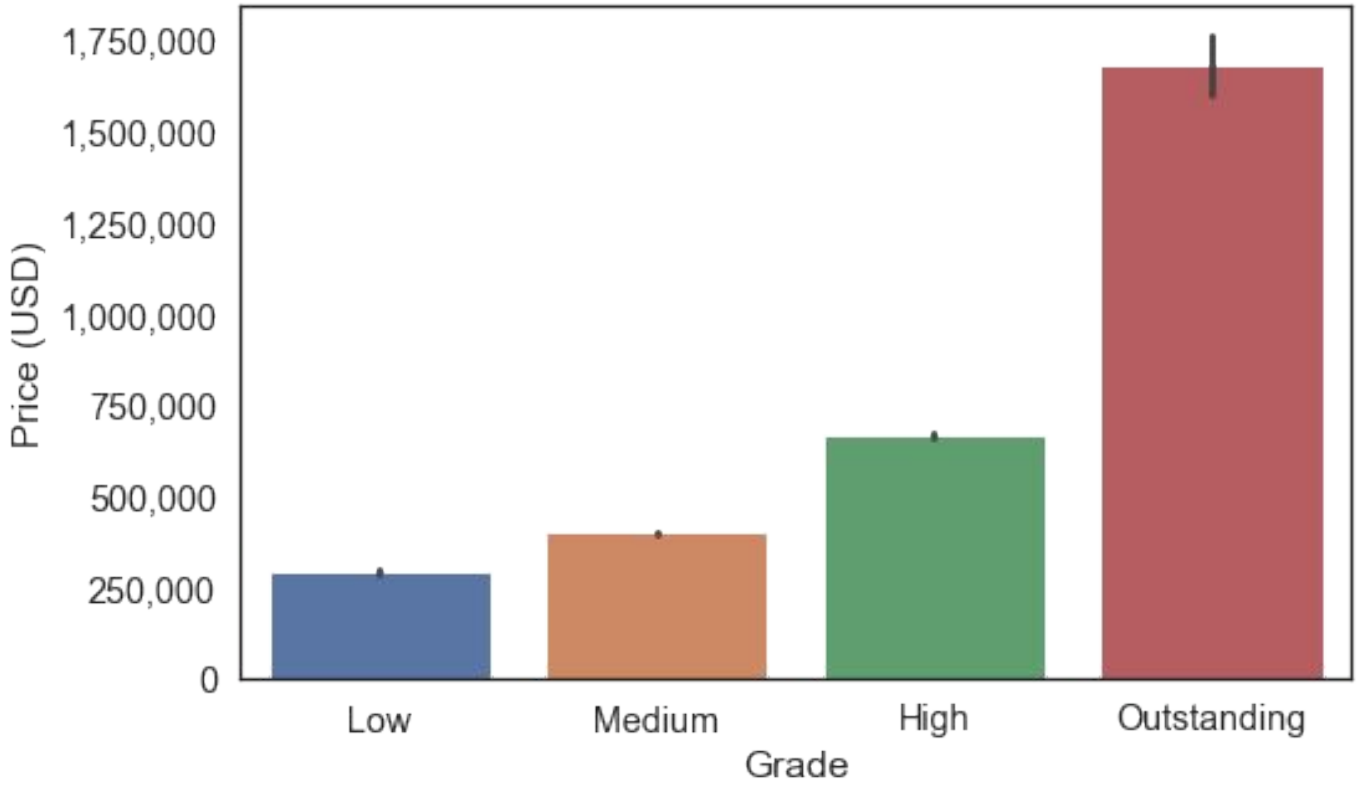


House Quality

Average Price by Region



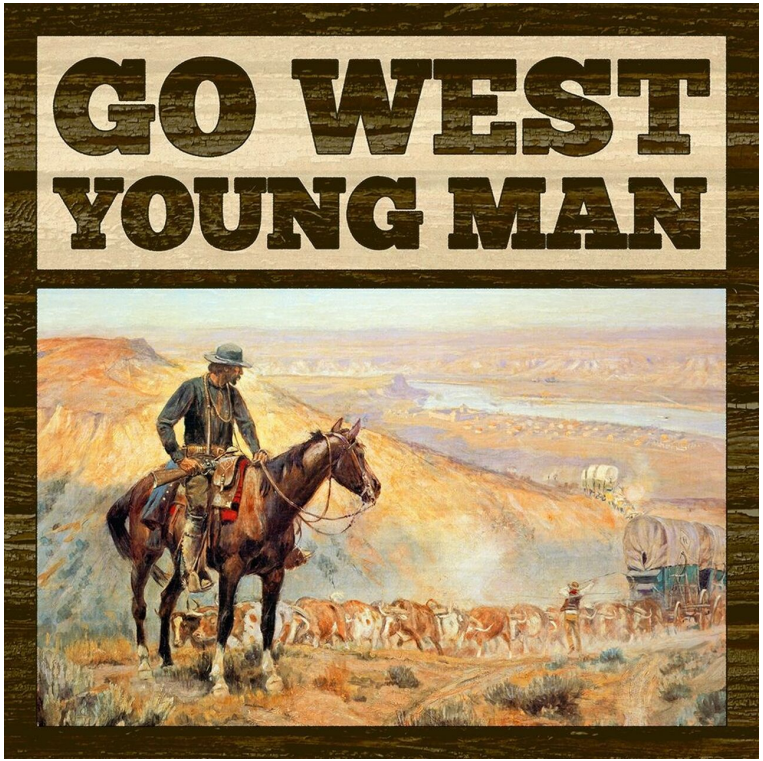
Average Price by House Quality



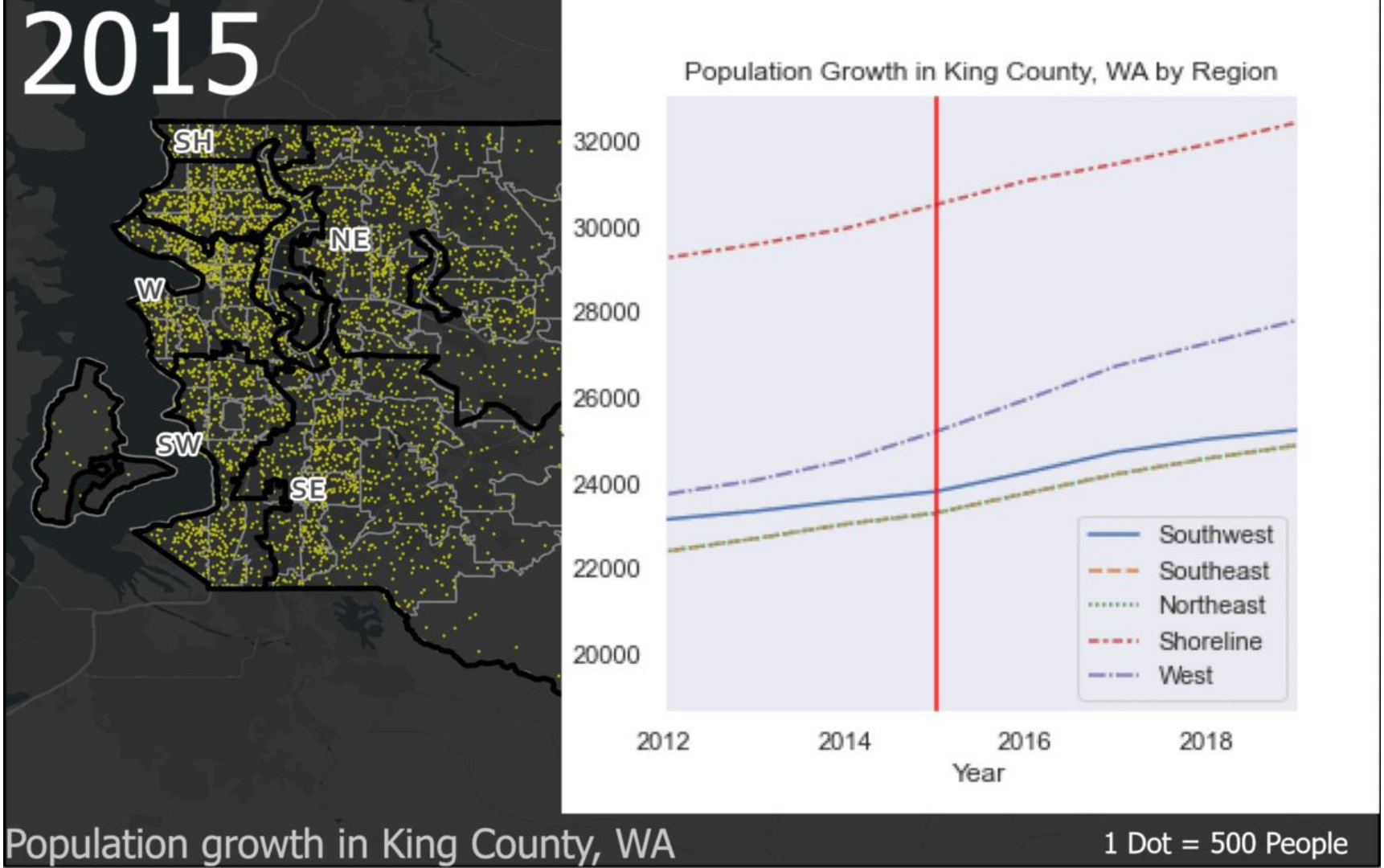
Proposals

Proposals

- Build more homes in the West
- Maximize square footage
- Maximize quality



Future Considerations


2015
SH
NE
W
SW
SE
Population Growth in King County, WA by Region
32000
30000
28000
26000
24000
22000
20000
2012
2014
2016
2018
Year
Southwest
Southeast
Northeast
Shoreline
West
Population growth in King County, WA
1 Dot = 500 People

Future Considerations

- Home demand by region & buyer demographics
- Eco friendly home building
- Analysis of construction costs

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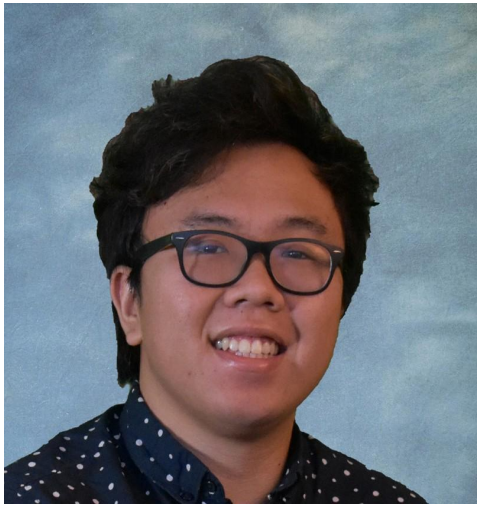

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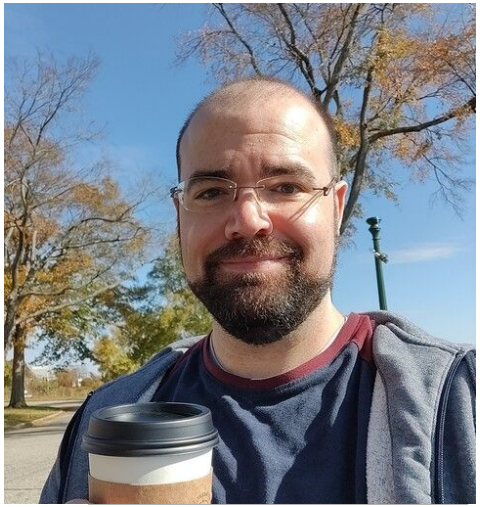

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Questions? Comments? Concerns?

Appendix

HSW Crane, Title Slide, Accessed 2/15/22

1894 KC Map, Title Slide, Accessed 2/15/22

Business Problem image, Accessed 2/15/22

Housing Materials, Data & Methods, Accessed 2/15/22

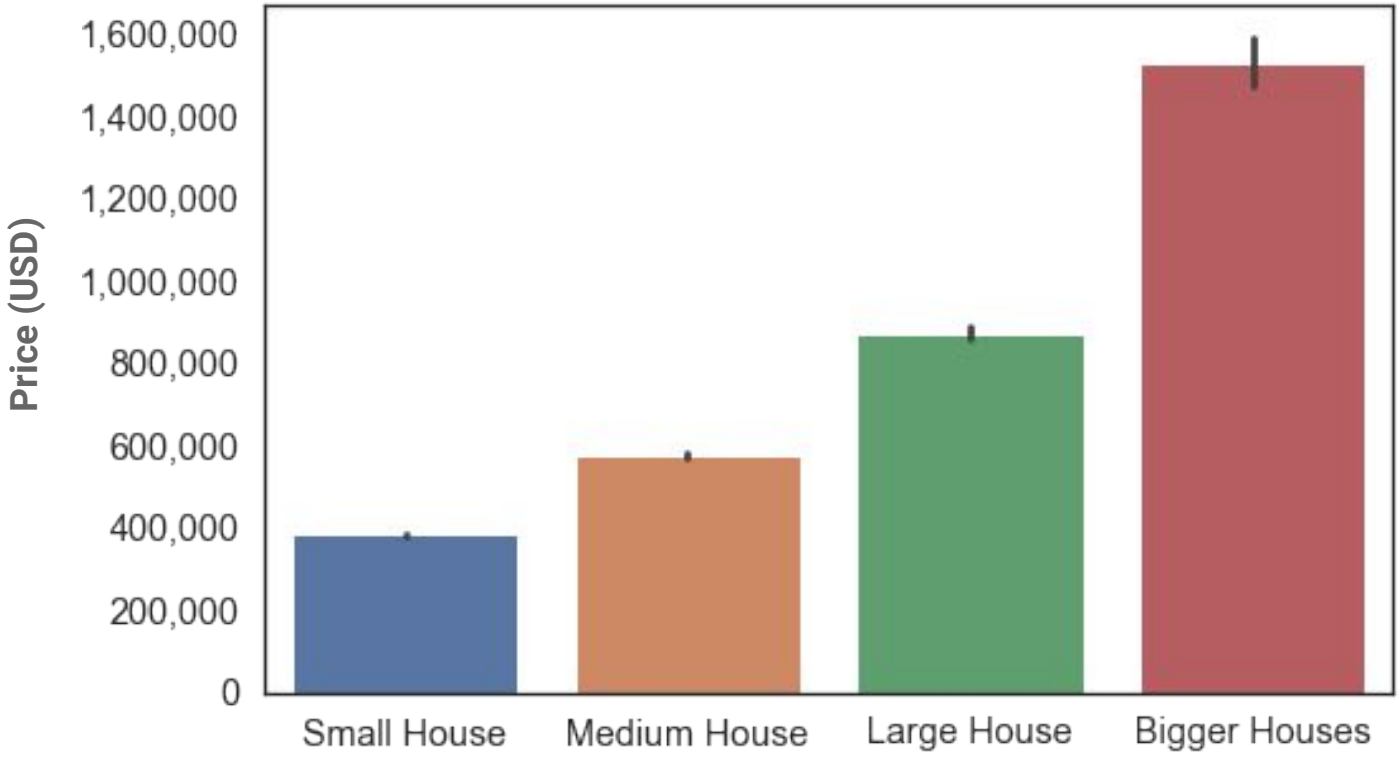
Wikimedia.org, Bottom Line Upfront Slide, Accessed 2/16/22

Seattle House, Results, Accessed 2/16/22

Cartoon Shack, Model, Accessed 2/17/22

Population Growth, Results slide, Accessed 2/17/22

Go West, Recommendations, Accessed 2/17/22

Plant Building, Future Considerations, Accessed 2/17/22

Average Price by House Size