

Searching for Emeralds

Explainable and realistic price profiles in the
“Emerald City” (Seattle-Metro Area)

For Gemstone Developer’s consideration





Team Intros and Agenda

Meet the Team



Ryan Moore
Data Scientist



Diego Fernandez
Data Scientist

Agenda

01

Team Objective - The Bottom Line

02

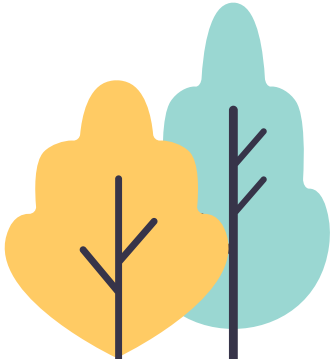
Location Strategy

03

Model Process

04

Recommendations and Considerations



The Bottom Line

“We don’t know what we don’t know”

Mitigate risk by choosing locations where sale price fluctuations can be explained by design choices




Location Strategy





DATA FILTERING

- Active real estate markets by ZIP code (300+ sales)
- 

DATA SCOPE

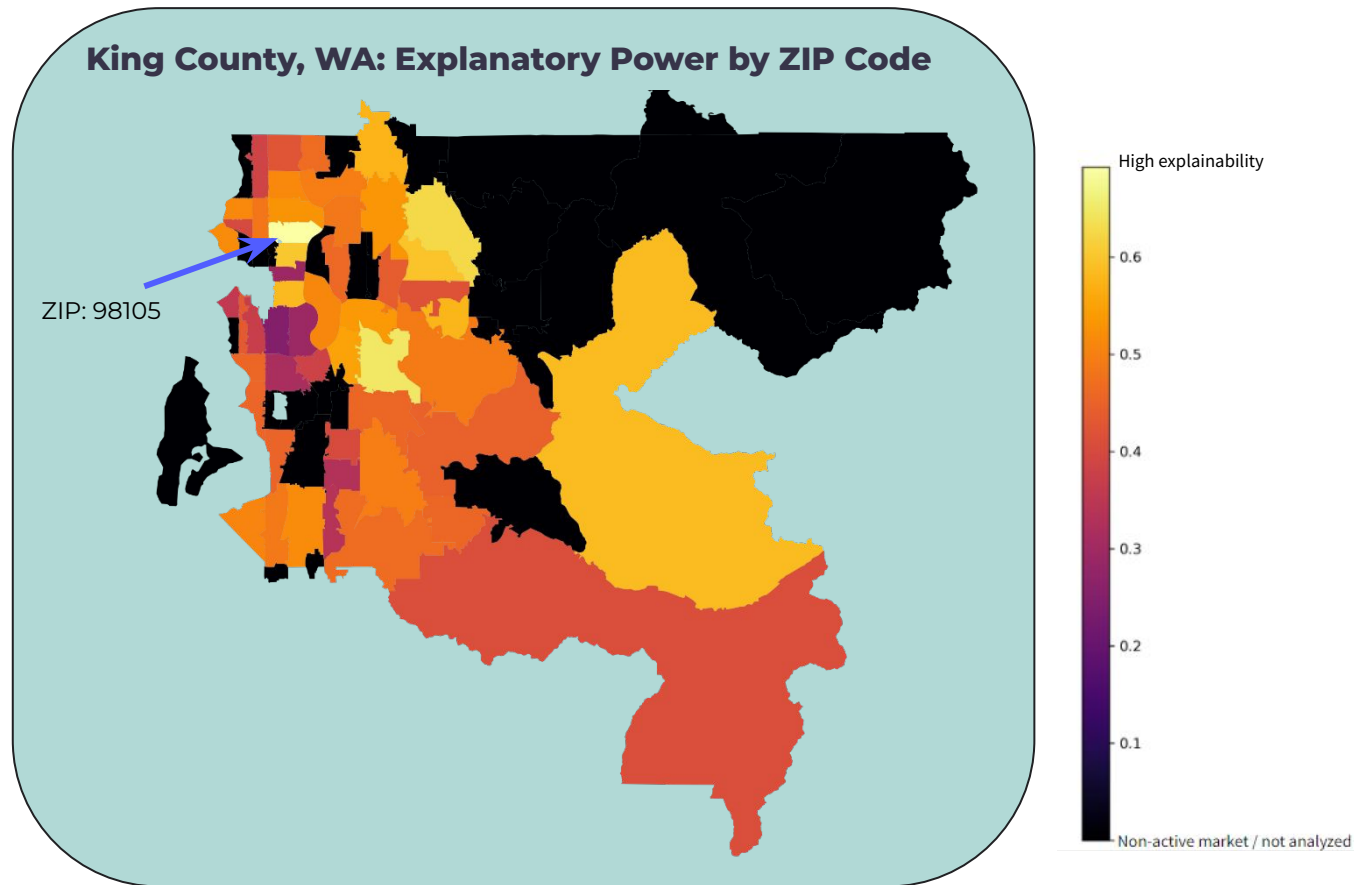
- June 2021 - June 2022
- King County, WA
- Sale prices and attributes

KEY ATTRIBUTES

- Square footage
- Number of floors
- Condition
- Construction grade
- Heating type



Location Strategy: Results



Modeling Process



Model Evolutions: A “Goldilocks” Approach

Too Little

“Your sale price will likely be mean sale price of the area”



Too Much

“Fluctuations can be well explained, but will consider possibly irrelevant elements”



Just Right

“Fluctuations can be well explained and the design process is flexible”



[Example: Zip code 98105]

Attributes needed for explanatory power

| | | | |
|--------------------|---|---|---|
| Square Footage | ✗ | ✓ | ✓ |
| No. of Floors | ✗ | ✓ | ✓ |
| Maint. Condition | ✗ | ✓ | ✓ |
| Construction grade | ✗ | ✓ | ✓ |
| Heating Type | ✗ | ✓ | |

Explanatory Power:

~0%

~70%

~70%



Recommendations and Considerations



Our Recommendations to You



**CHOOSE
EXPLAINABLE
LOCATIONS TO
MITIGATE RISK**



**INTEGRATE
EXPLANABILITY
INTO DESIGN**



**EMPHASIZE
COST
BENEFIT**



Further Considerations

Additional Considerations and Limitations

| | |
|---------------------|---|
| KEY ATTRIBUTES ONLY | Model only considers a limited list of design attributes * |
| TOP LINE ONLY | Model only considers impact on expected sale price |
| RED TAPE | Model does not consider regulatory requirements |
| NEIGHBORHOOD IMPACT | Model does not consider neighborhood impact |

* - Albeit, only those that materially impact price predictability



THANK YOU

Questions?



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