

EDA Project: KC Housing Data



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Setting

Economic data analyst team of big realtor

Client:

- Zachary Brooks
- Investor: Historical houses in best locations
- Wants to sell one of his objects (when?)
- Should he renovate?



https://papiphotos.remax-im.com/Person/102166429/MainPhoto_cropped/MainPhoto_cropped.jpg

KC Housing Dataset

- Seattle metropolitan area
- Covers May 2014 to May 2015
- 19 features of sold houses including
 - Living/Lot space
 - (Bath)Room numbers
 - Grade/Condition/View/Waterfront
 - Age/Renovation
 - Location
 - Price
- 21.600 sales



Hypotheses

1. Seasonality in the housing market
2. How does age influence the price?
3. Are renovations worth it?
4. What is the influence of located on historic house prices?

1. Seasonality

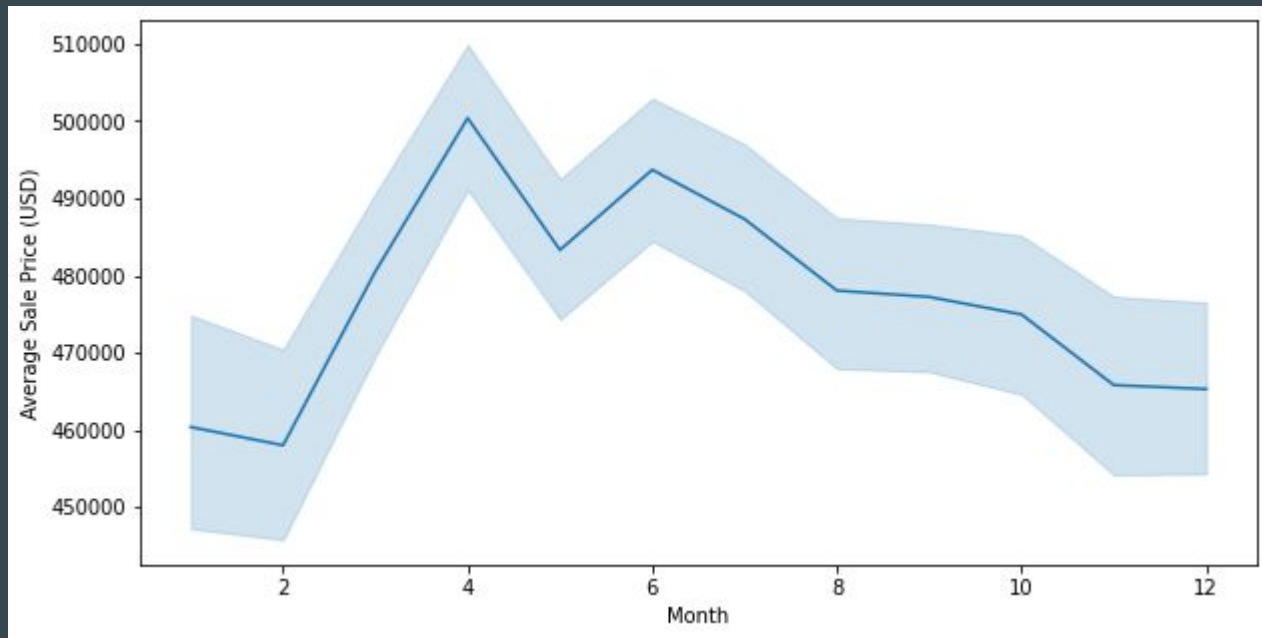
Seasonality in US housing market

- School year
- Winter break
- Sun, vegetation

Observed in dataset

Buy in winter

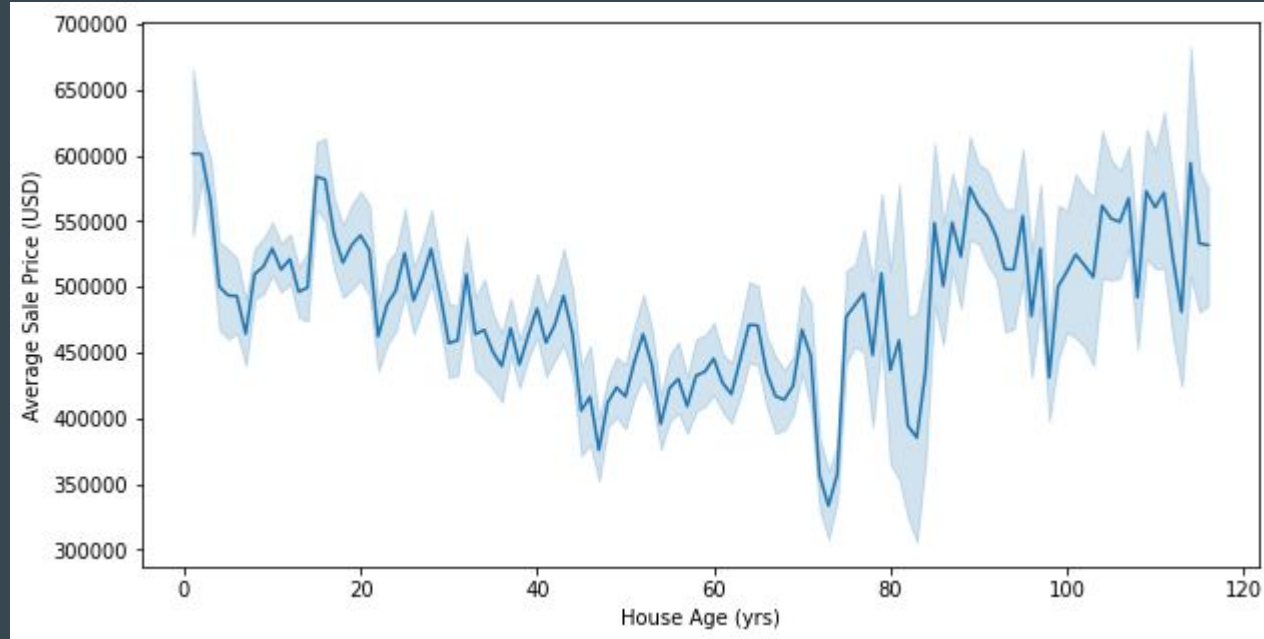
Sell in spring or early summer



2 - Influence of Age

Prices decrease with age

Old houses increase
with age



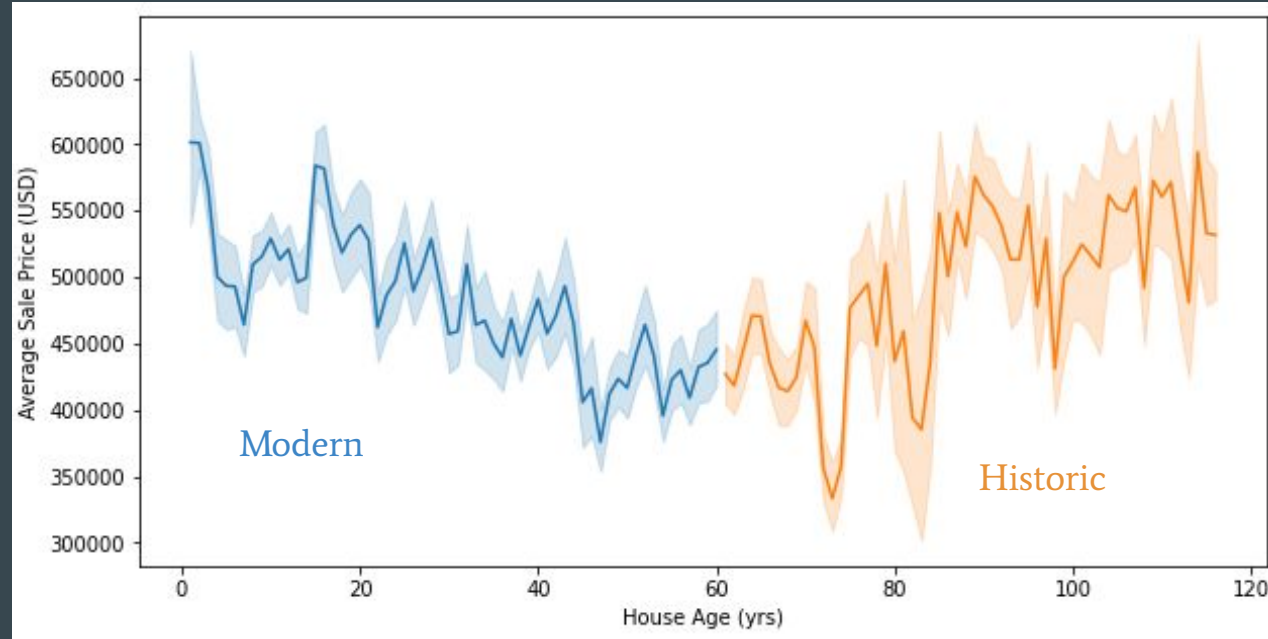
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Reasoning:

- **Modern:** Bigger, better condition
- **Historic:** Priced as an asset, location?



3 - Renovation?

Overall: +25% price increase

Interesting for expensive houses (luxury renovation)

Risk Reward Ratio?

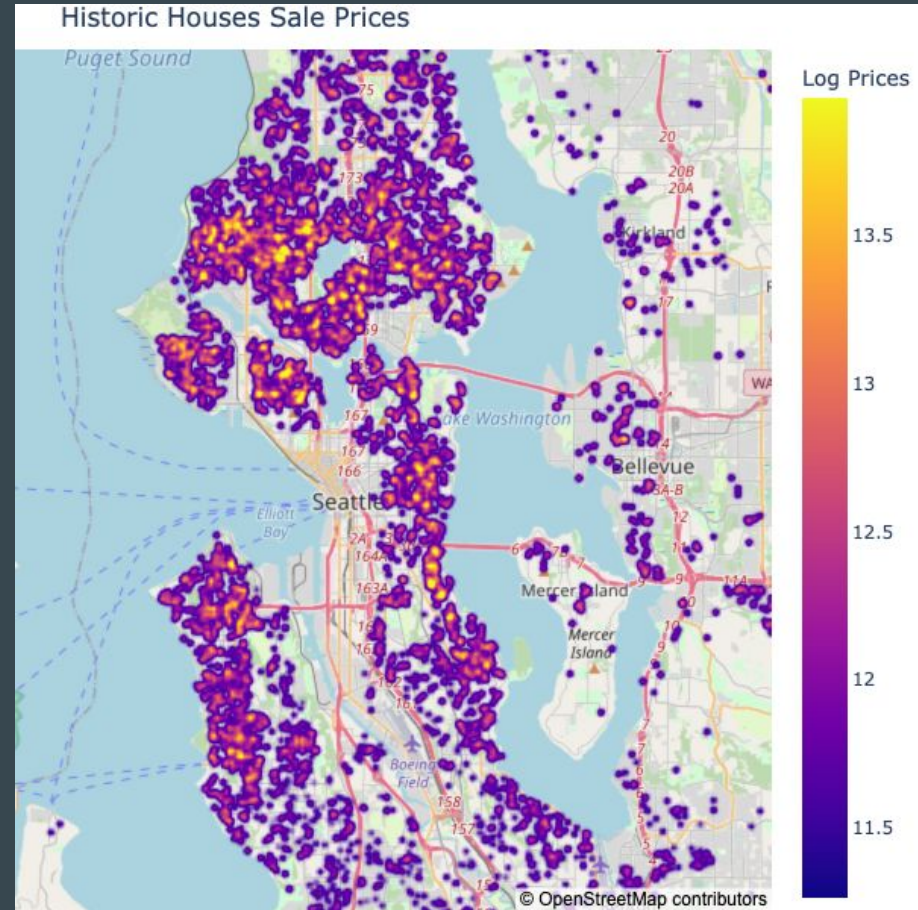


<http://www.seattleconstructioninc.com>

4 - Location of historic houses

More central

Price difference due to location?



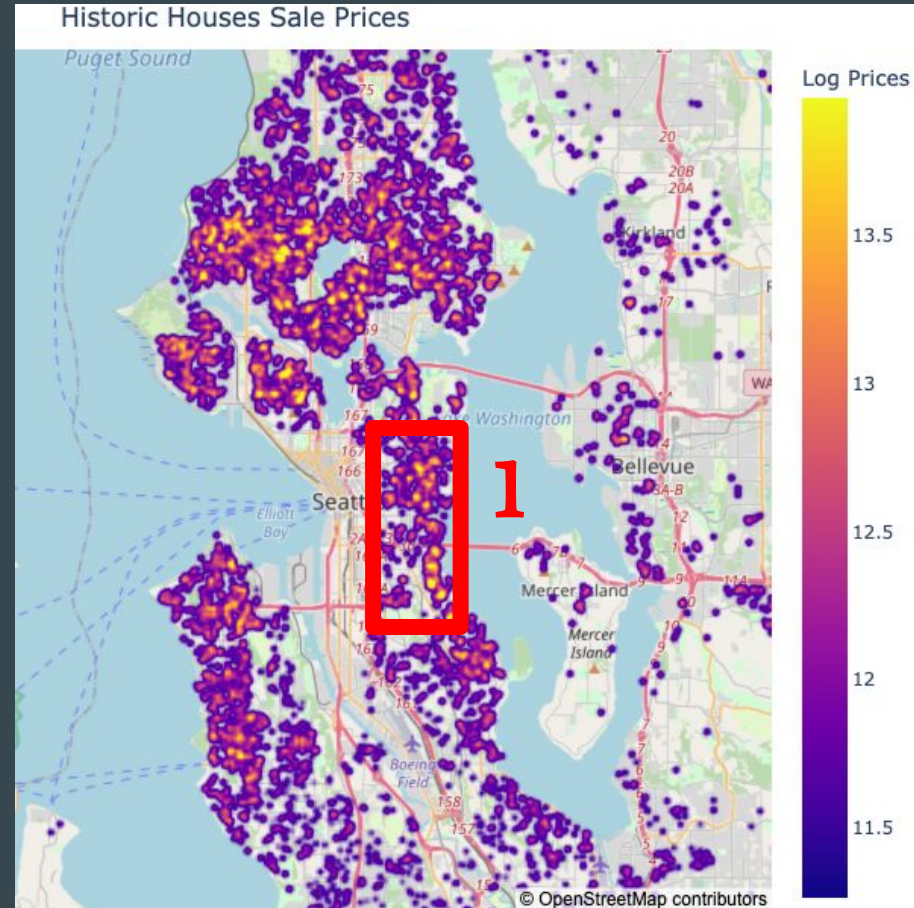
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Comparison to modern houses:

	Price	Living area	Grade
1	+10%	+10%	-8%



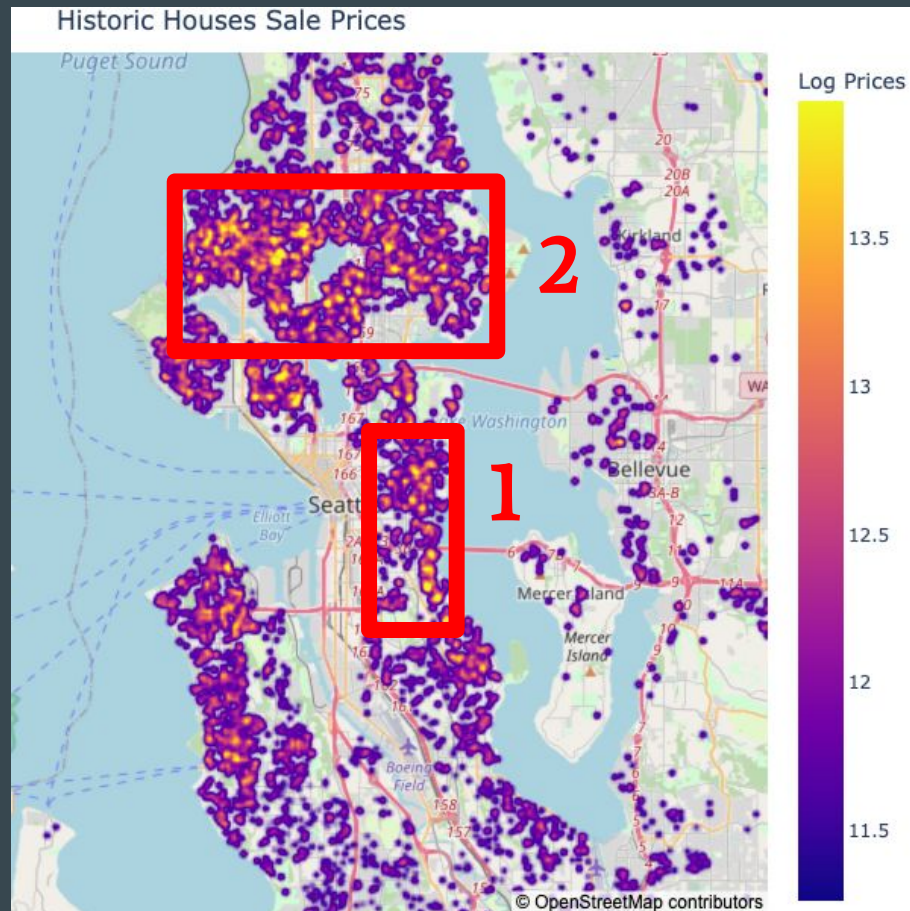
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Comparison to modern houses:

	Price	Living area	Grade
1	+10%	+10%	-8%
2	+5%	-8%	-12%



Summary: Recommendations

1. Make use of seasonality
2. Medium aged houses might profit from the “historic” boost
3. Question the need for renovations
4. Location is key for investing

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