

# Exploratory Data Analysis (EDA) Project

## SPICED Academy

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March 1, 2024

## Assignment Prompt

*"Amy Williams (seller): organized crime type of person, sells several central houses (top 10%) over time, needs average outskirts houses over time to hide from the FBI."*

# Assessing Client's Needs

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Houses won't be used for living, so **price** is the **only relevant factor**.

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We want to study the way price evolves:

- Geographically
- Temporally

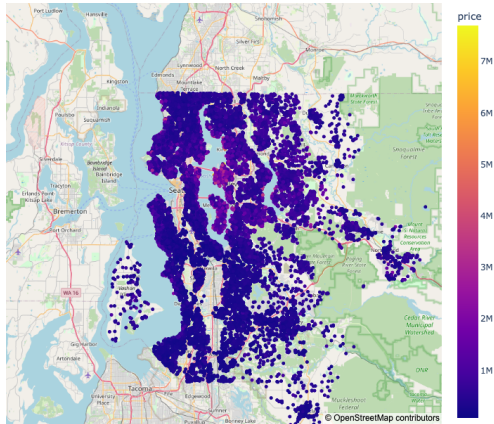


# Geographic Analysis

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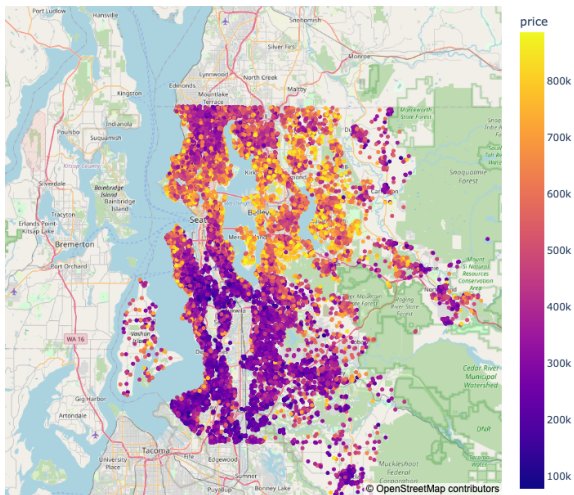


But note that there are many more cheap than expensive houses:

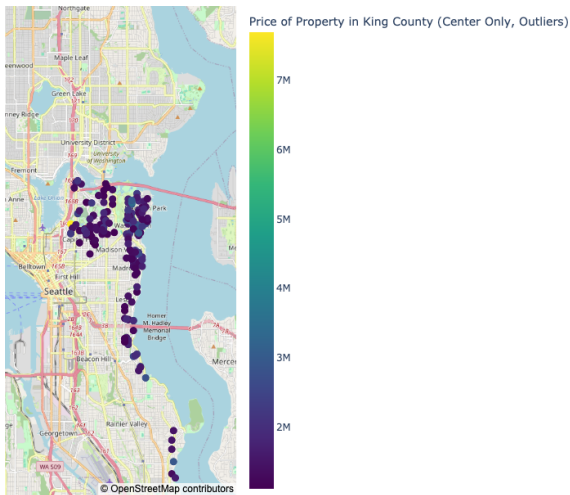
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## Price distribution for bottom 90% property:

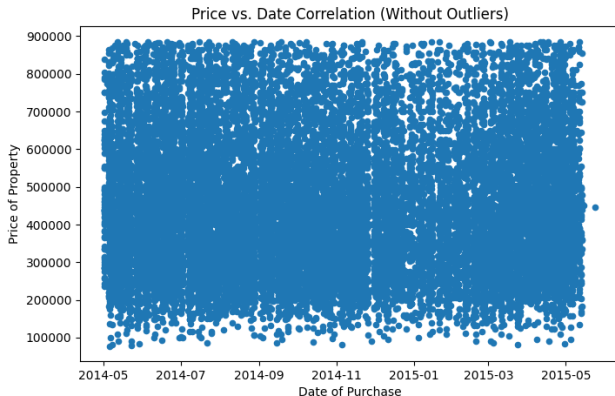


## Price distribution for top 10% property in the center:

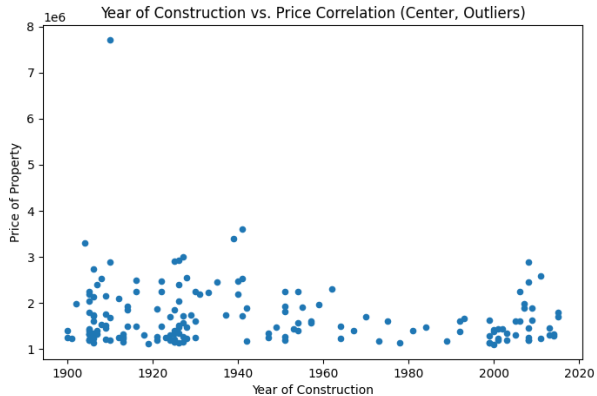


# Temporal Analysis

Price of housing vs. date of purchase for bottom 90% property on the outskirts:



Price of housing vs. year of construction for top 10% property in the center:





# Insights

Geographic insights:

- **Most expensive** property in central Seattle is located on the **west shore** of Lake Washington and in northern downtown.
- **Cheapest** property on the outskirts is located in the **southern part** of the King County.

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Temporal insights (tentative): patterns are **independent of**:

- The **date of purchase** of the property.
- The **year of construction** of the property.

# Recommendations

Selling and buying tips for Amy:

- Central property on the West Shore of Lake Washington should only be sold at a very high price (minimum \$2M).
- Purchase strategy should focus on south of the county.
- Property in the southern part of King County should be bought at a very low price only (maximum \$400k).
- No rush to sell or buy, at least within the next year, since price is likely to remain constant (tentative).
- Further research recommended to clarify time dependence.