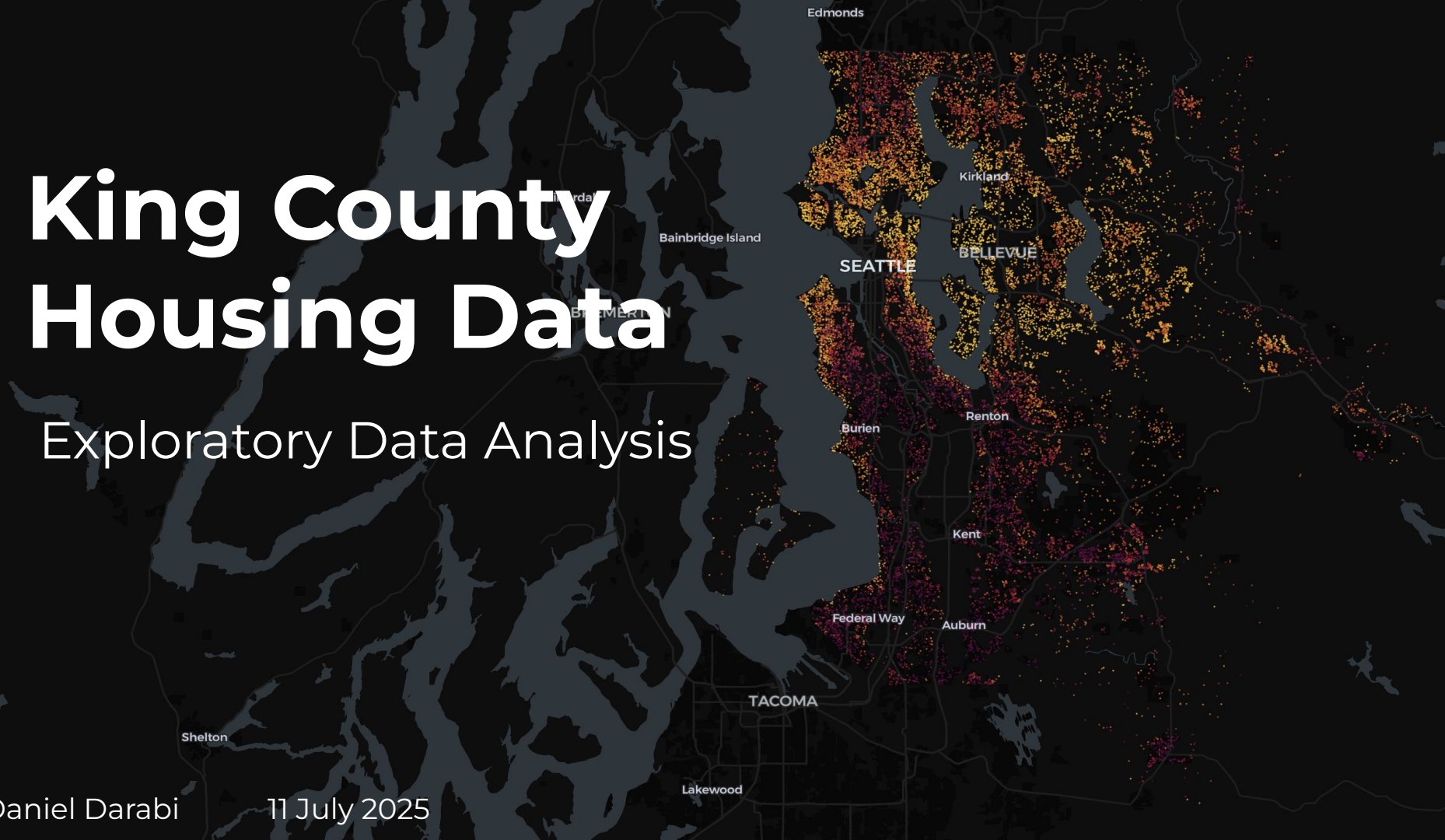


King County Housing Data

Exploratory Data Analysis





Jennifer
Montgomery

Role: Buyer

Property Type: Waterfront,
fully renovated

Budget: High –
“show-off” tier

Quality Bar: Top-graded
finishes, A-rated schools

Motivation: Prestige
& quick resale

Timing: Needs to close
within 1 month

Exit Plan: Intends to
resell in ≤ 1 year

Investment Lens: Strong
appreciation potential

Requirements Simulation



Client Requirement → Data Mapping → Hypothesis

Client Requirement	Mapped Data Column(s)	Hypothetical Condition
Waterfront only	waterfront	waterfront = 1 — must have direct water access
Fully renovated	yr_renovated	yr_renovated > 0 and preferably recent (last 5–10 years)
Show-off / luxury budget	price	Top 20% of price values in the dataset
Top finishes & build quality	grade	High grade (12–13 = luxury tier)
High-demand location	zipcode, lat, long	ZIPs near Seattle / Bellevue, desirable coordinates
Scenic view	view	view score \geq 2–4 (better view, higher prestige)
Spacious luxury	sqft_living, sqft_above, bedroomsNumber, bathroomsNumber	Large living area and more beds/baths indicate luxury
A-rated schools	zipcode	Cross-check ZIPs with known top school districts
Fast closing	Not in dataset	Must check listing or seller readiness offline
Strong resale potential	Combination	Location + waterfront + renovation + high grade = better resale

Hypothesis SQL Query

SELECT

kchd.*, kchs."date", kchs.price

FROM

king_county_house_details kchd

LEFT JOIN

king_county_house_sales kchs

ON

kchd.id = kchs.house_id

WHERE

kchd.waterfront = 1

AND kchd.yr_renovated > 0

AND kchs.price >= (

SELECT PERCENTILE_CONT(0.60)

WITHIN GROUP (**ORDER BY** price)

FROM king_county_house_sales)

AND kchd.grade >= 10

AND kchd.view >= 1

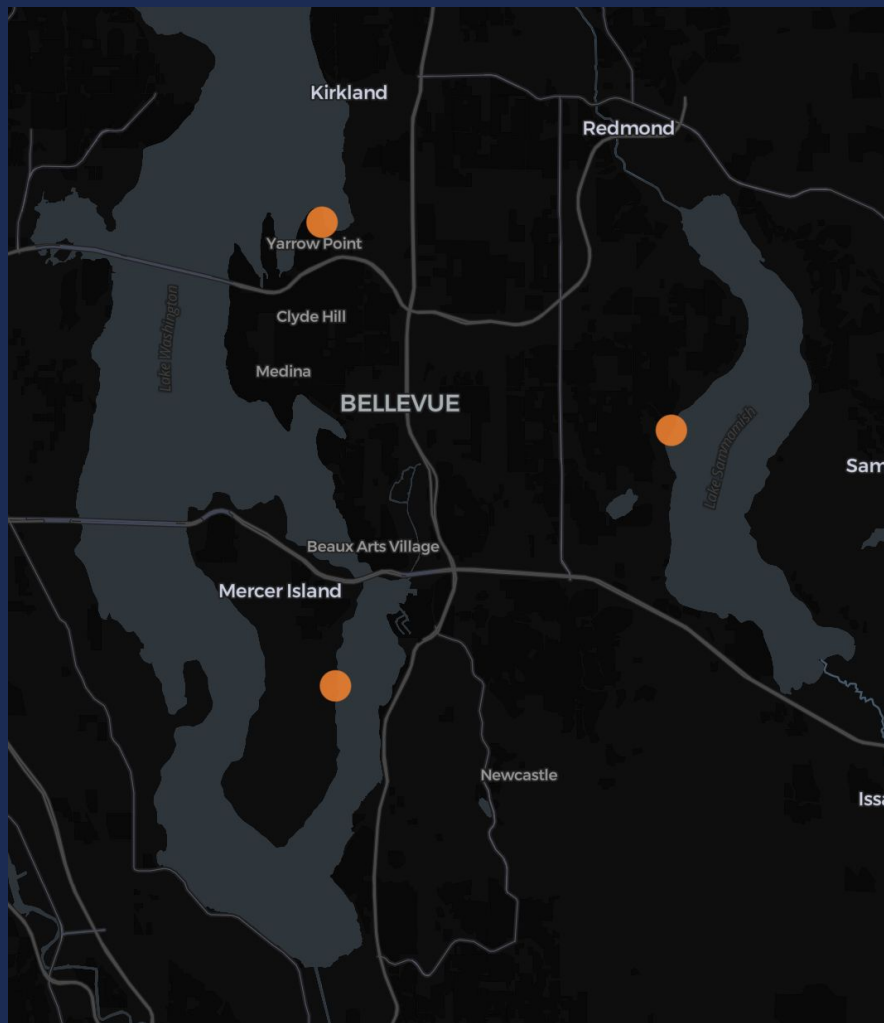
AND kchd.zipcode **IN** (98004, 98039, 98040, 98006, 98074, 98075)



Jennifer
Montgomery

Your 3 Best Matches:

- Mercer Island
- Yarrow Point
- Lake Sammamish



1. Yarrow Point (98004)

- \$ 7.06 M
- 10 040 ft² living
- 37 325 ft² lot
- 5 bed / 4.5 bath
- Grade 11 finishes
- Renovated 2010
- View score 2
- Prime Lake Washington shoreline
- A-rated Bellevue schools



2. Mercer Island (98040)

- \$ 4.67 M
- 9 640 ft² living
- 13 068 ft² lot
- 5 bed / 6.8 bath
- Grade 12 finishes
- Renovated 2009
- View score 4
- Direct Lake Washington frontage
- A-rated Mercer Island schools



3. Lake Sammamish (98006)

- \$ 1.80 M
- 2 790 ft² living
- 13 295 ft² lot
- 3 bed / 3 bath
- Grade 10 finishes
- Renovated 1989
- View score 4
- Lake Sammamish private dock
- A-rated Issaquah/Bellevue schools



First Hypothesis

Houses located near Seattle and Bellevue are generally more expensive.

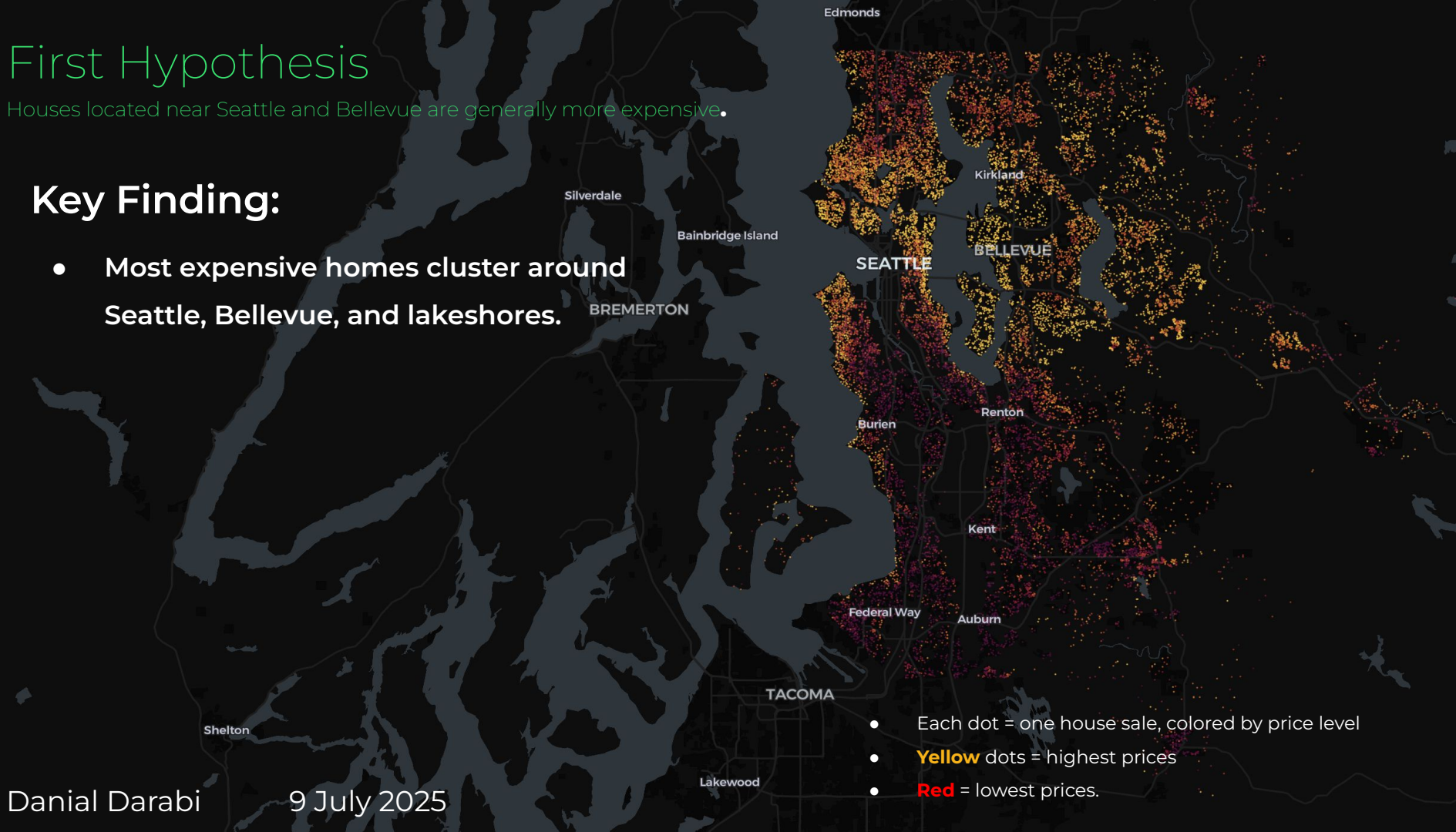
- **located near Seattle**
 - $47.534 < \text{lat} < 47.6712$
 - $-122.101 < \text{long} < -122.519$
- **more expensive**
 - Price

First Hypothesis

Houses located near Seattle and Bellevue are generally more expensive.

Key Finding:

- Most expensive homes cluster around Seattle, Bellevue, and lakeshores.

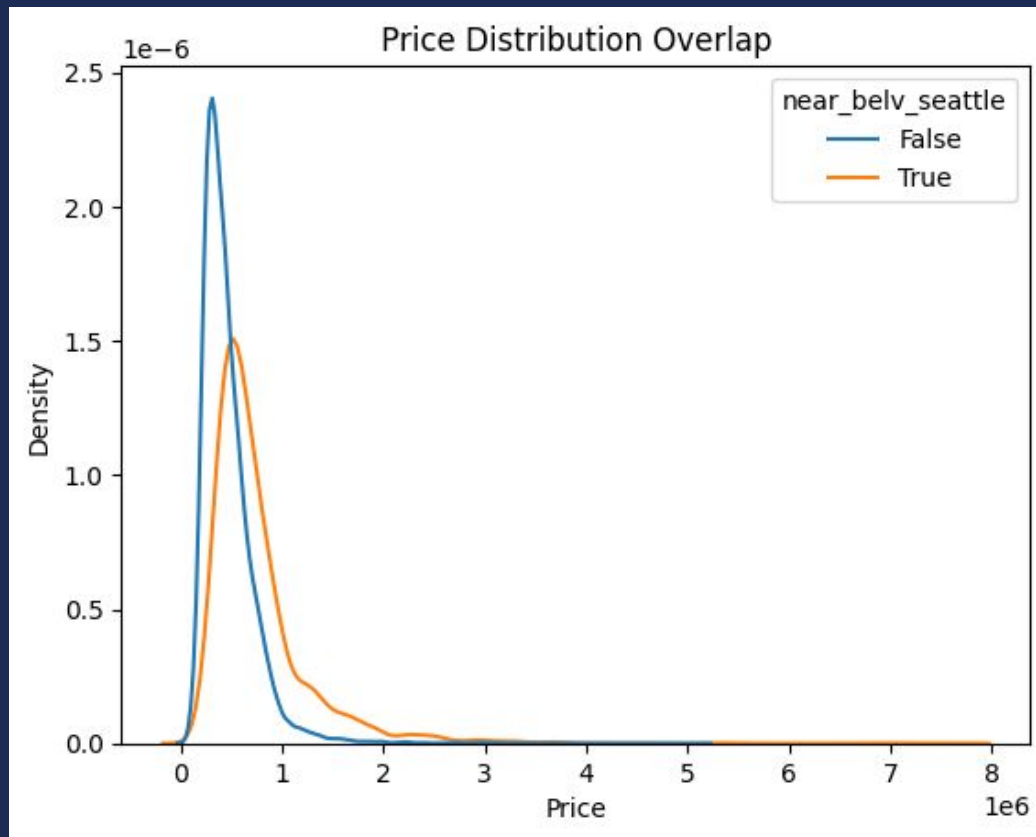


First Hypothesis

Houses located near Seattle and Bellevue are generally more expensive.

Key Finding:

- House prices near Bellevue/Seattle are generally higher, with their distribution shifted to the right compared to other areas.



Second Hypothesis

Homes with bigger living spaces tend to cost more.

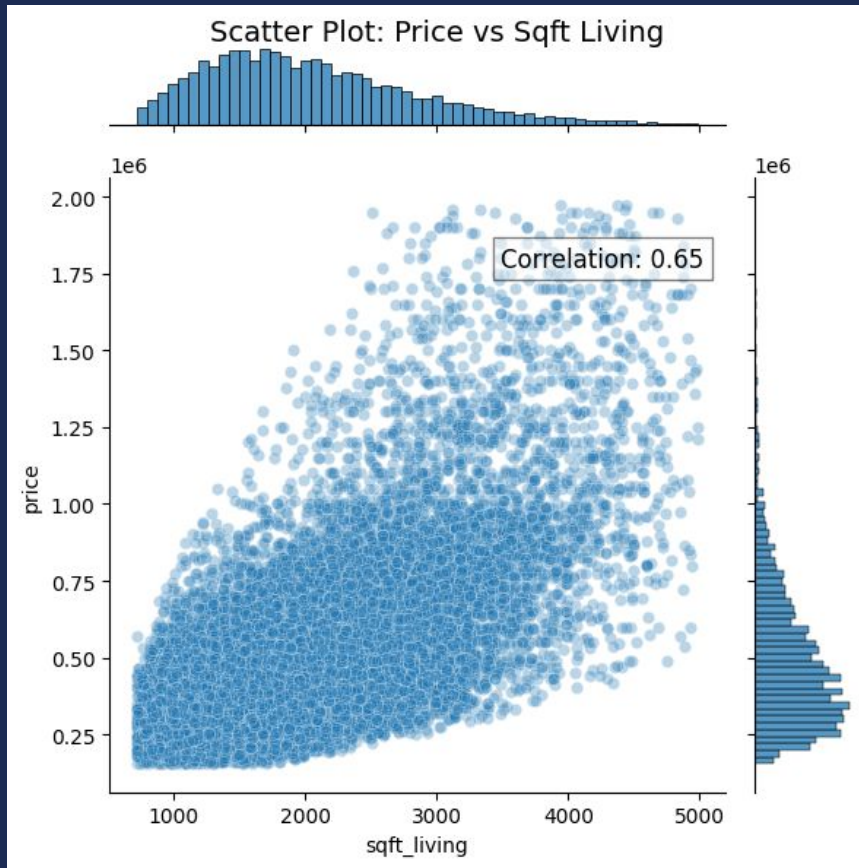
- **bigger living spaces**
 - Sqft_livingsquare
- **cost more**
 - Price

Second Hypothesis

Homes with bigger living spaces tend to cost more.

Key Finding:

- There is a strong positive correlation (0.65) — larger living areas are clearly associated with higher house prices.



Third Hypothesis

Homes with waterfront usually sell for higher prices.

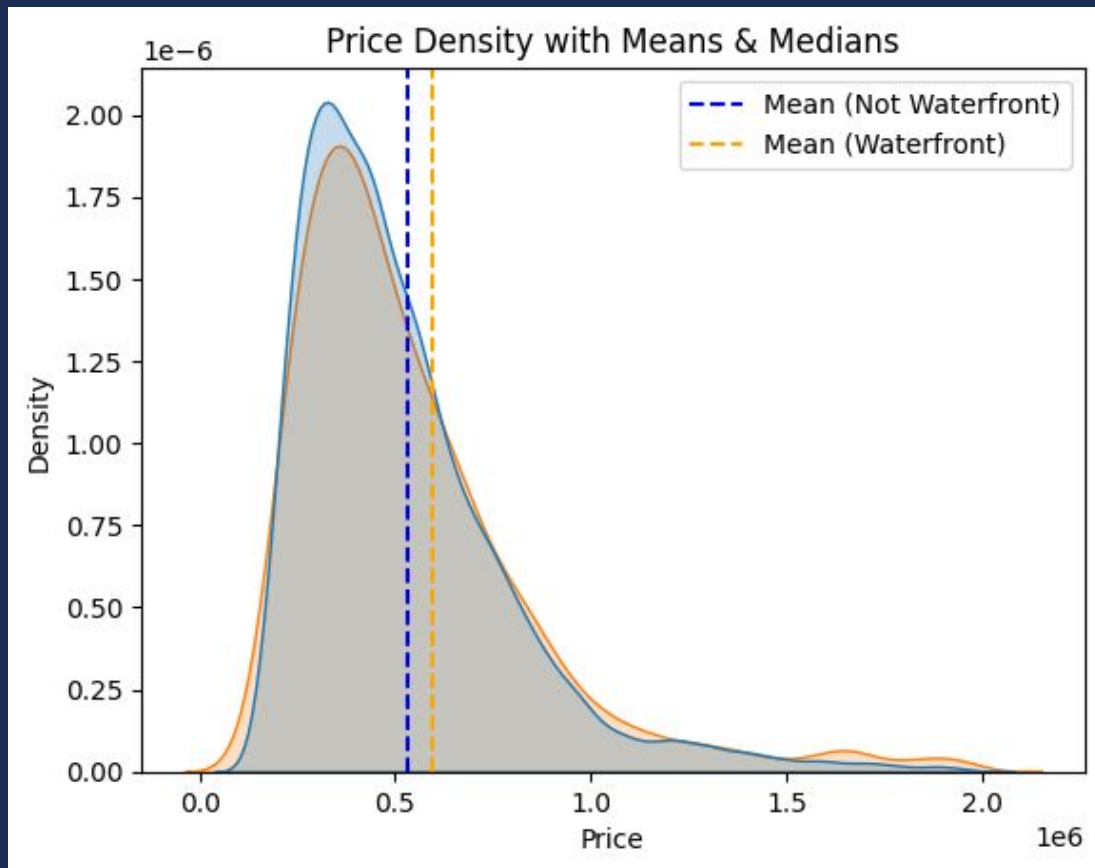
- **Homes with waterfront**
 - Waterfront
- **higher prices**
 - Price

Third Hypothesis

Homes with waterfront usually sell for higher prices.

Key Finding:

- The mean price for waterfront homes is noticeably higher than for non-waterfront homes, confirming a clear premium for waterfront properties.



THANKS!

Do you have any questions?