




ARCH

A Regional Coalition for Housing

Working to preserve and increase the supply of housing for low and moderate income households in the King County region.



Home Price – Statistical Analysis

Business Problem: It is difficult to find housing for low to moderate income families. ARCH needs a house pricing tool to make better decisions when advising their clients and when advising local cities on housing policy.



UNDERSTANDING HOME PRICE



**DATA TRENDS
and PATTERNS**



**BASELINE
MODEL**



**FINAL
STATISTICAL
MODEL**

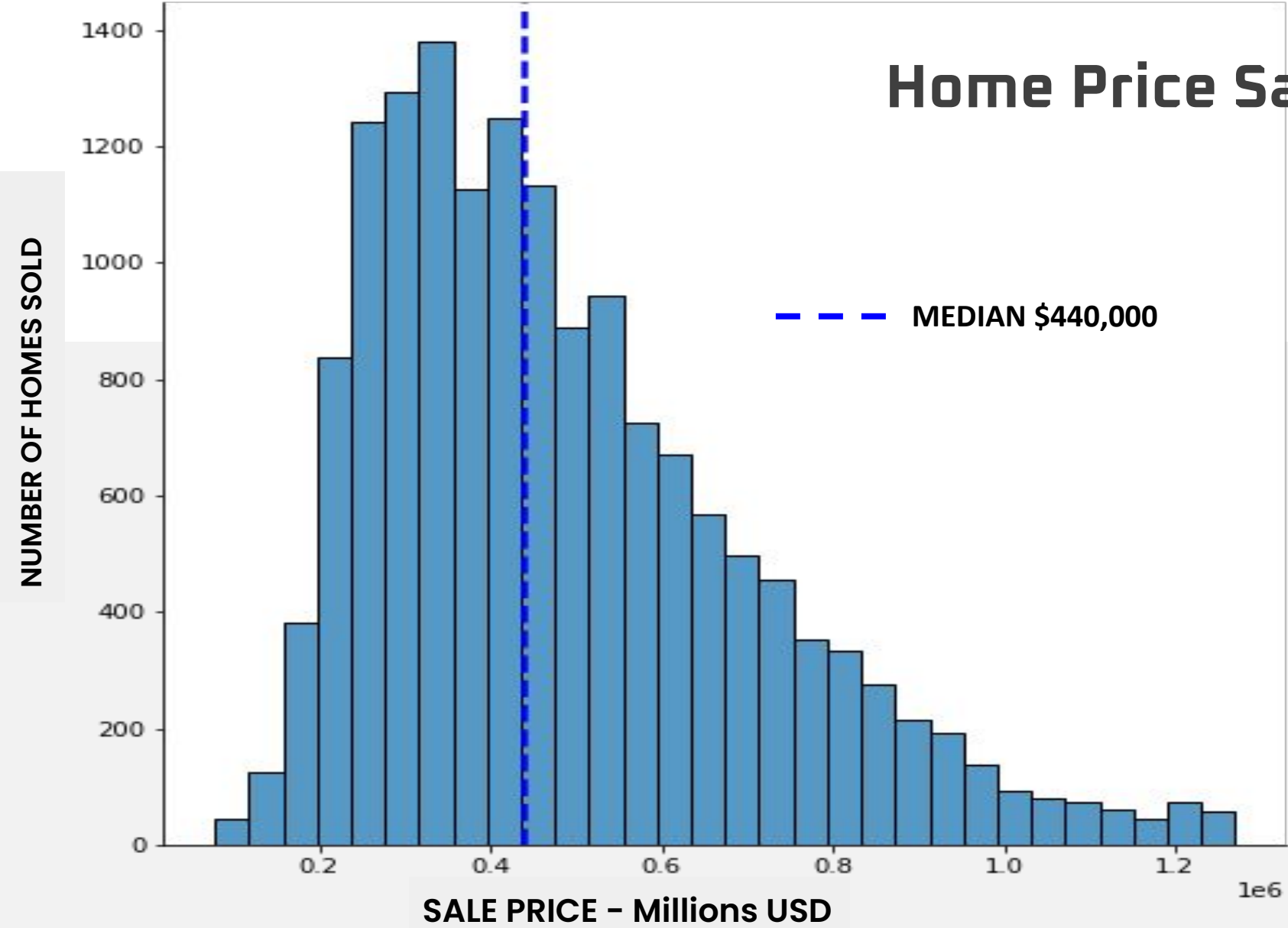
**20,000+ Homes
Sold**

**Years 2014 &
2015**

**Square Foot
Living**

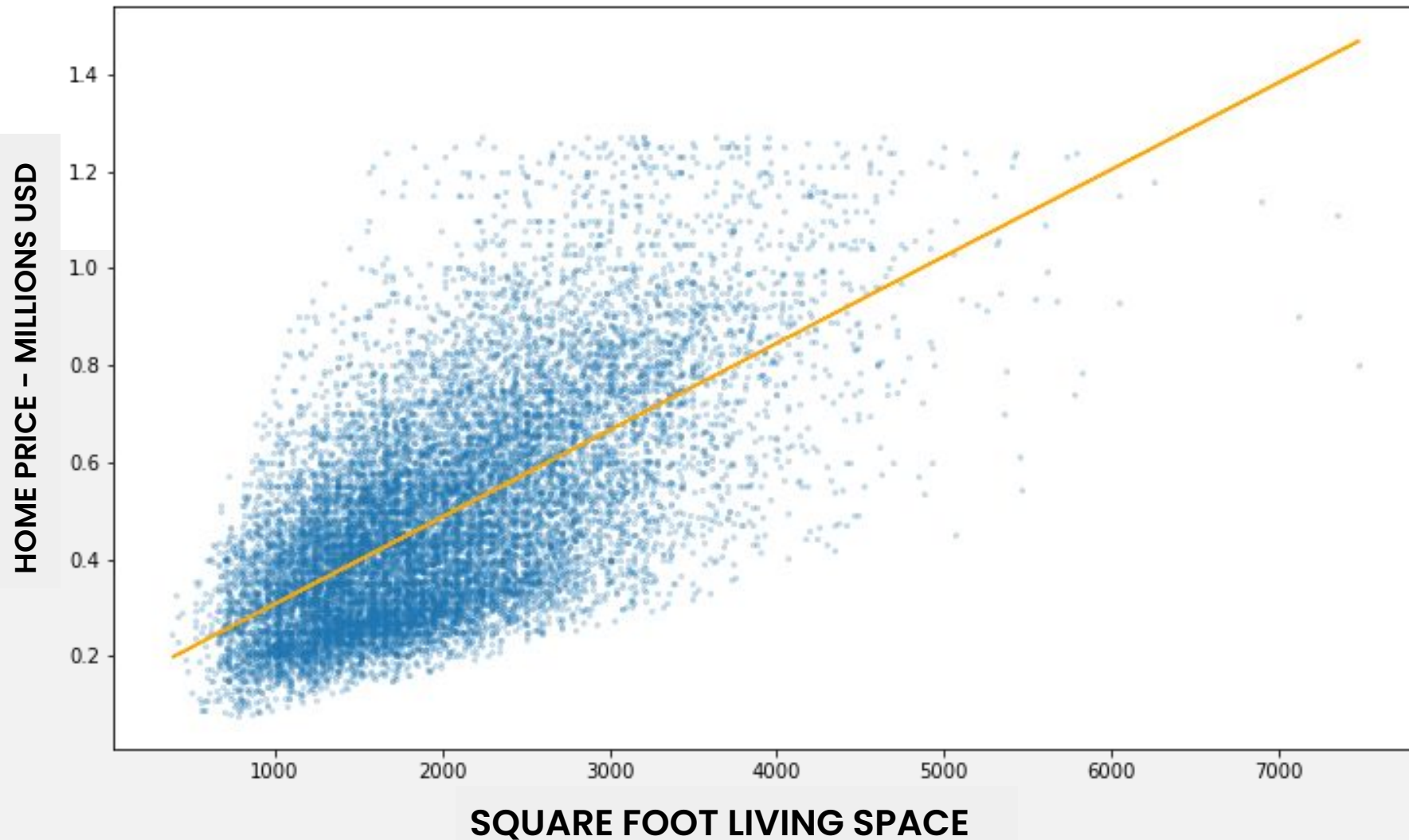
**Includes Multiple
Relevant Features**

Home Price Sales



Baseline Model

Square Footage → 40% Variance



Final Statistical Model

83% Variance of a Home Price



Home Condition

Construction Grade

Zip Code

Lot Size

View

Age of Home

Renovated

Month of Sale

Bedrooms

Bathrooms

Floors

Square Foot Living

Predicted Home Price = \$395,000



Average Error

- \$65,000

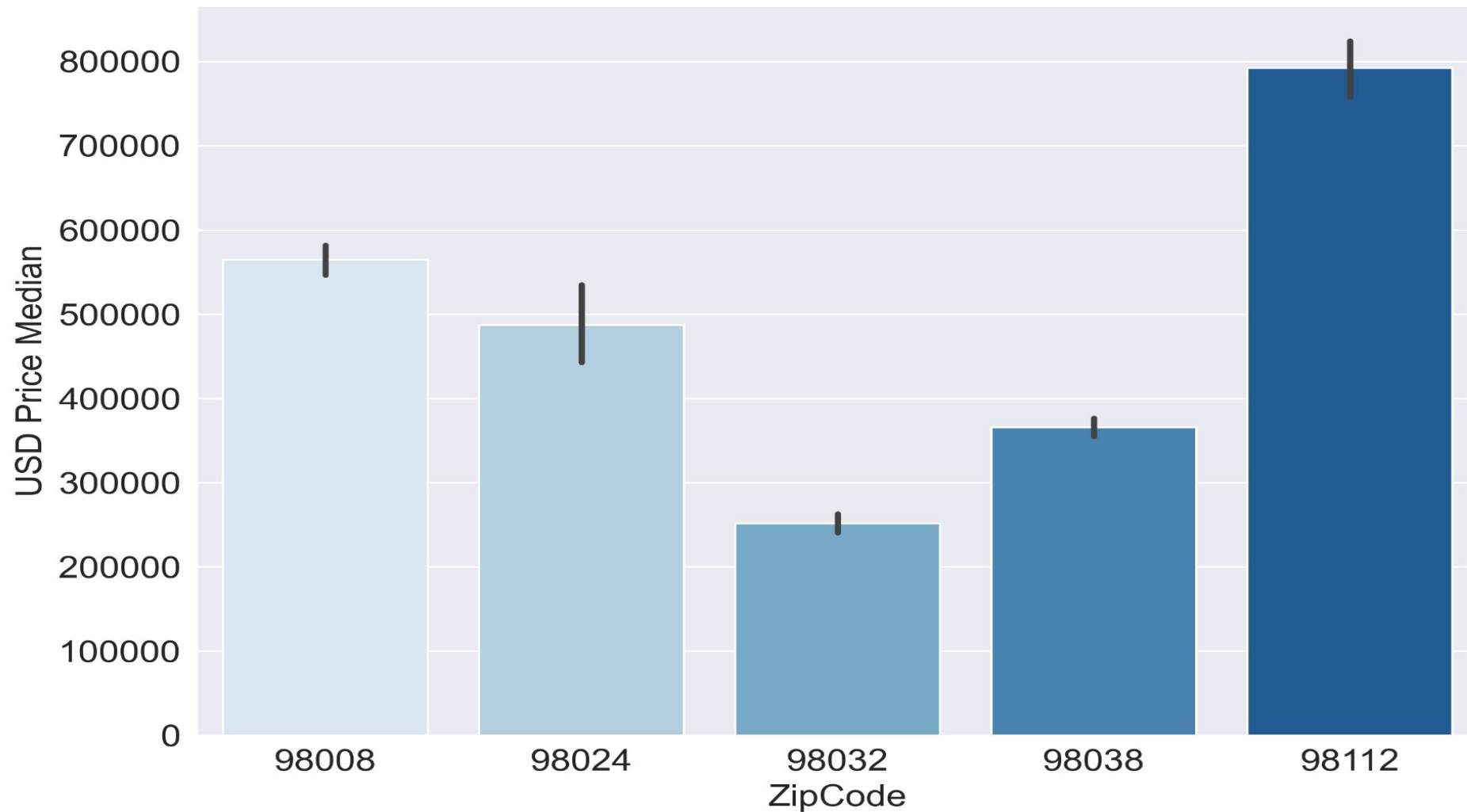
+ \$65,000

Key Numbers

**Square Foot Living =
Increase \$105 per sq ft.**

**Newer Homes =
Decrease \$602 per year**

ZipCode → ~ 10% Home Price



Recommendations

CLIENTS

Median home price of 440 K = 1600 sqft

Limit home searches to below 1600 sqft.

ARCH Organization

Policy push for new home construction below 1600 sqft to bring down housing costs.

Location Recommendation

Further Analysis

ZIPCODES

~ 10% Home Price Variance

- Price Variety Across ZIPCODES
- Price Variety Within ZIPCODES



THANK YOU

JACOB Hansen

flatiron school

jacobmhansen@protonmail.com