



# PRICING HOUSES IN KING COUNTY

INSIGHTS FROM A MACHINE LEARNING MODEL

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# PROBLEM STATEMENT

- MARKET PRICING UNCLEAR
- ESTATE AGENT KNOWLEDGE KEPT PRIVATE
- RESIDENTS UNSURE HOW TO MAXIMISE HOME VALUE

# AIMS

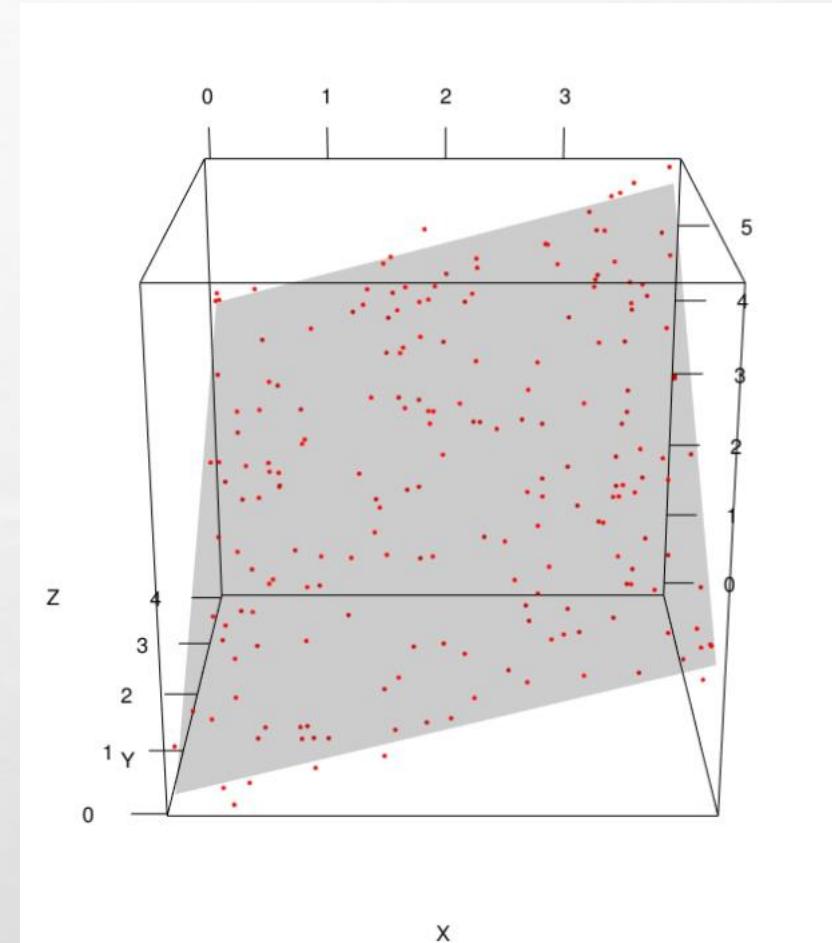
- **SIMPLIFY PRICING MECHANISMS**
- **INCREASE PUBLIC UNDERSTANDING OF MARKET PRICING**
- **QUANTIFY STRATEGIES FOR MAXIMISING VALUE**

# METHODOLOGY

- PUBLIC DATABASE EXISTS
- OVER 21,000 HOUSE SALES
- DETAILS INCLUDING PRICE, AREA, WATERFRONT, ZIP CODE ETC

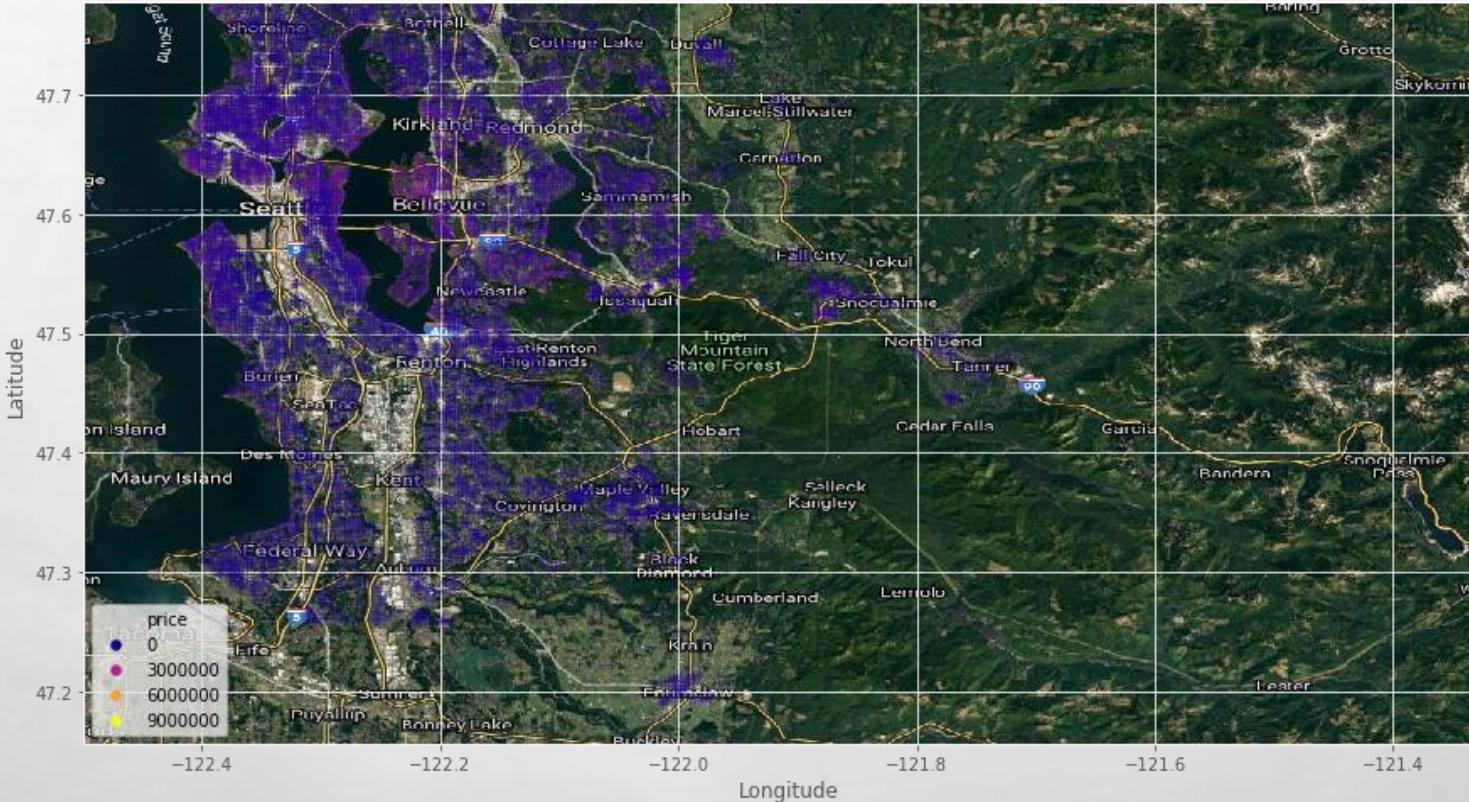
# METHODOLOGY

- **LINEAR MULTIVARIATE REGRESSION MODEL**
- **FEATURE SELECTION**
- **CROSS VALIDATION**



# INSIGHTS: WHERE?

Sold House Location and Price by Longitude and Latitude



# INSIGHTS: WHAT?

- **DOUBLE THE BATHROOMS, 15% MORE VALUABLE.**
- **RENOVATED HOUSES ARE 6% MORE VALUABLE.**
- **EVERY GRADE HIGHER GIVES AN 18% HIGHER PRICE.**

# INSIGHTS: HOW?

- INPUT HOUSE DETAILS
- RETURN SUGGESTED PRICE
- 86% ACCURACY



# INSIGHTS: WHAT NEXT?

- USE THE MODEL TO PREDICT YOUR HOME'S PRICE!
- TURN THAT HALF BATHROOM INTO A FULL BATHROOM!
- RENOVATE OLD HOUSES!
- STRIVE FOR A HIGHER GRADE!



# FURTHER WORK

- USE NON-LINEAR MODELS SUCH AS A NEURAL NETWORK
- USE MORE DATA ON RENOVATIONS
- EXPLORE FURTHER HOME IMPROVEMENT SUGGESTIONS

# THANK YOU!

