Predicting House Prices with the King's County Housing Data Set

Module 1: Exploratory Data Analysis

-Sarabi Eventide

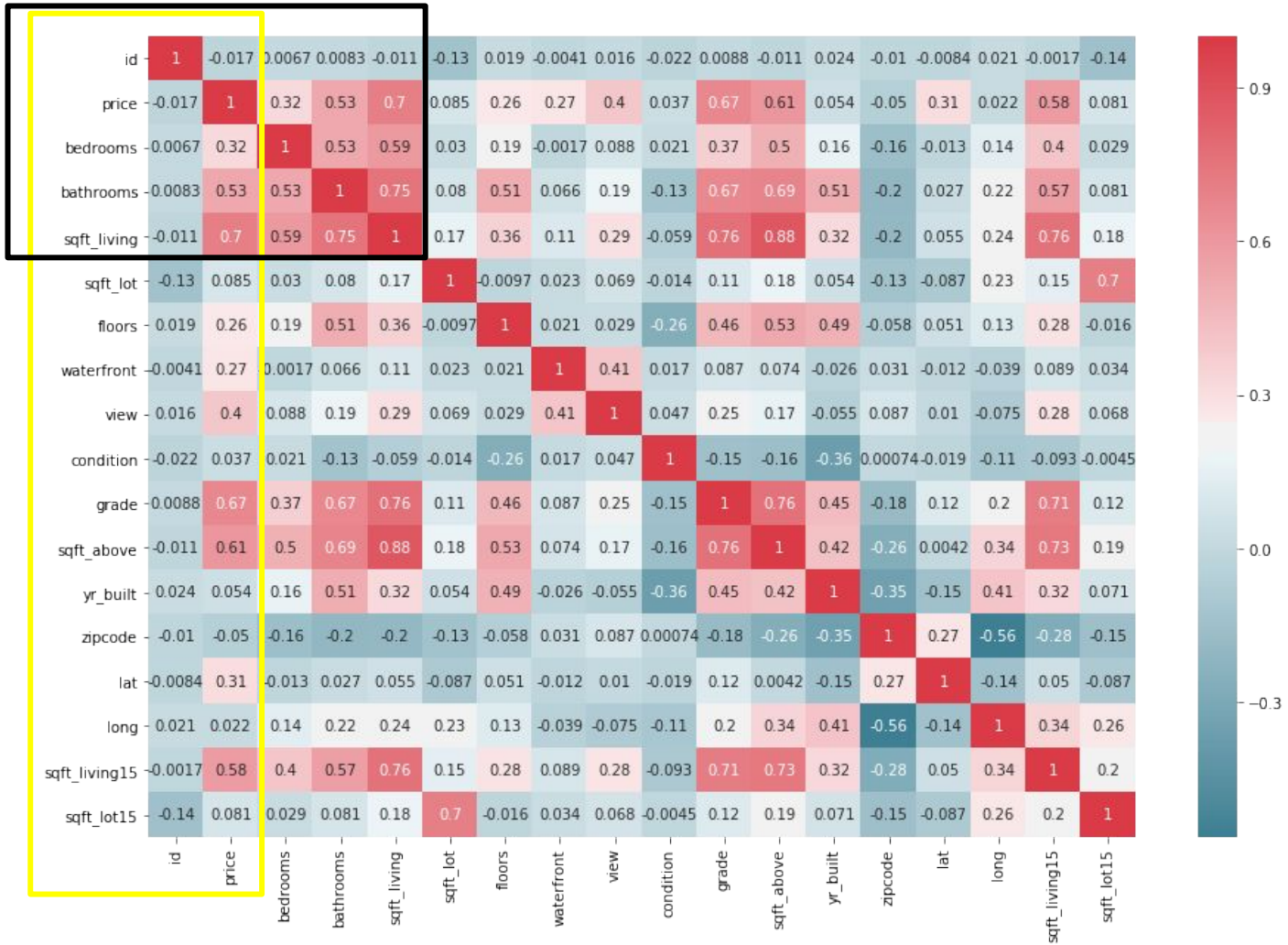
Which house costs more?

Maximize profits

Purpose

1. Clean the Data
2. Explore the Relationships
3. Model the Data
4. Make Predictions

Methodology Overview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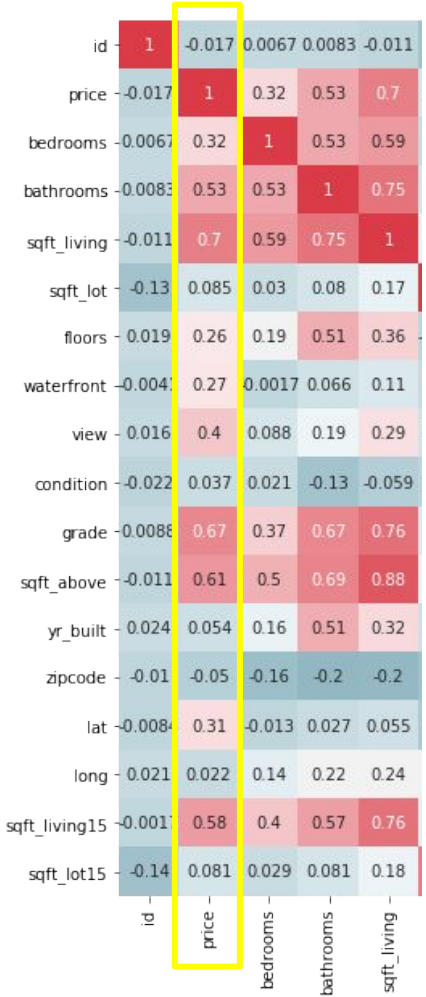
price -0.017 1 0.32 0.53 0.7 0.085 0.26 0.27 0.4 0.037 0.67 0.61 0.054 -0.05 0.31 0.022 0.58 0.081
bedrooms 0.0067 0.32 1 0.53 0.59 0.03 0.19 -0.0017 0.088 0.021 0.37 0.5 0.16 -0.16 -0.013 0.14 0.4 0.029
bathrooms 0.0083 0.53 0.53 1 0.75 0.08 0.51 0.066 0.19 -0.13 0.67 0.69 0.51 -0.2 0.027 0.22 0.57 0.081
sqft_living -0.011 0.7 0.59 0.75 1 0.17 0.36 0.11 0.29 -0.059 0.76 0.88 0.32 -0.2 0.055 0.24 0.76 0.18
sqft_lot -0.13 0.085 0.03 0.08 0.17 1 -0.0097 0.023 0.069 -0.014 0.11 0.18 0.054 -0.13 -0.087 0.23 0.15 0.7
floors 0.019 0.26 0.19 0.51 0.36 -0.0097 1 0.021 0.029 -0.26 0.46 0.53 0.49 -0.058 0.051 0.13 0.28 -0.016
waterfront 0.0041 0.27 0.0017 0.066 0.11 0.023 0.021 1 0.41 0.017 0.087 0.074 -0.026 0.031 -0.012 -0.039 0.089 0.034
view 0.016 0.4 0.088 0.19 0.29 0.069 0.029 0.41 1 0.047 0.25 0.17 -0.055 0.087 0.01 -0.075 0.28 0.068
condition -0.022 0.037 0.021 -0.13 -0.059 -0.014 -0.26 0.017 0.047 1 -0.15 -0.16 -0.36 0.00074 -0.019 -0.11 -0.093 -0.0045
grade 0.0088 0.67 0.37 0.67 0.76 0.11 0.46 0.087 0.25 -0.15 1 0.76 0.45 -0.18 0.12 0.2 0.71 0.12
sqft_above -0.011 0.61 0.5 0.69 0.88 0.18 0.53 0.074 0.17 -0.16 0.76 1 0.42 -0.26 0.0042 0.34 0.73 0.19
yr_built 0.024 0.054 0.16 0.51 0.32 0.054 0.49 -0.026 -0.055 -0.36 0.45 0.42 1 -0.35 -0.15 0.41 0.32 0.071
zipcode -0.01 -0.05 -0.16 -0.2 -0.2 -0.13 -0.058 0.031 0.087 0.00074 -0.18 -0.26 -0.35 1 0.27 -0.56 -0.28 -0.15
lat -0.0084 0.31 -0.013 0.027 0.055 -0.087 0.051 -0.012 0.01 -0.019 0.12 0.0042 -0.15 0.27 1 -0.14 0.05 -0.087
long 0.021 0.022 0.14 0.22 0.24 0.23 0.13 -0.039 -0.075 -0.11 0.2 0.34 0.41 -0.56 -0.14 1 0.34 0.26
sqft_living15 0.0017 0.58 0.4 0.57 0.76 0.15 0.28 0.089 0.28 -0.093 0.71 0.73 0.32 -0.28 0.05 0.34 1 0.2
sqft_lot15 -0.14 0.081 0.029 0.081 0.18 0.7 -0.016 0.034 0.068 -0.0045 0.12 0.19 0.071 -0.15 -0.087 0.26 0.2 1
id price bedrooms bathrooms sqft_living sqft_lot floors waterfront view condition grade sqft_above yr_built zipcode lat long sqft_living15 sqft_lot15
0.9 0.6 0.3 0.0 −0.3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sqft_lot15 -0.14 0.081 0.029 0.081 0.18
id
price
bedrooms
bathrooms
sqft_living

Price = Grade + Square Footage (Living Space)

Findings

price = -601518.57 + (97905.64 * grade)
+ (188.74 * sqft_living)

The numbers

Which house costs more?

- Location, Location, Location
- Effects of renovation

Next Steps

Questions, comments, concerns?