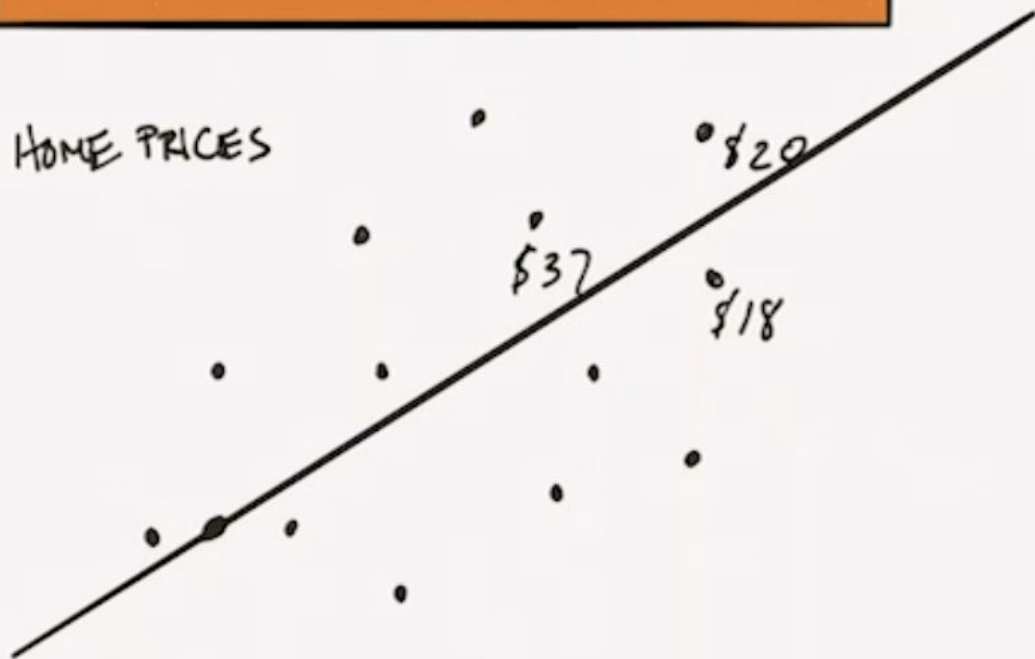


Regression and Questions for Thoughts

Week 7 Video 4

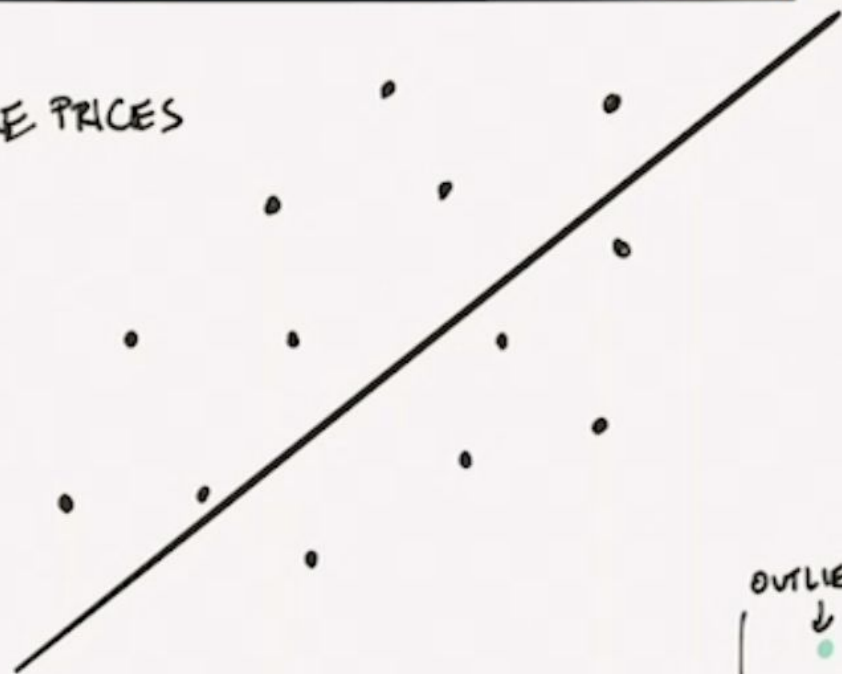
REGRESSION

PREDICTING HOME PRICES



REGRESSION

PREDICTING HOME PRICES

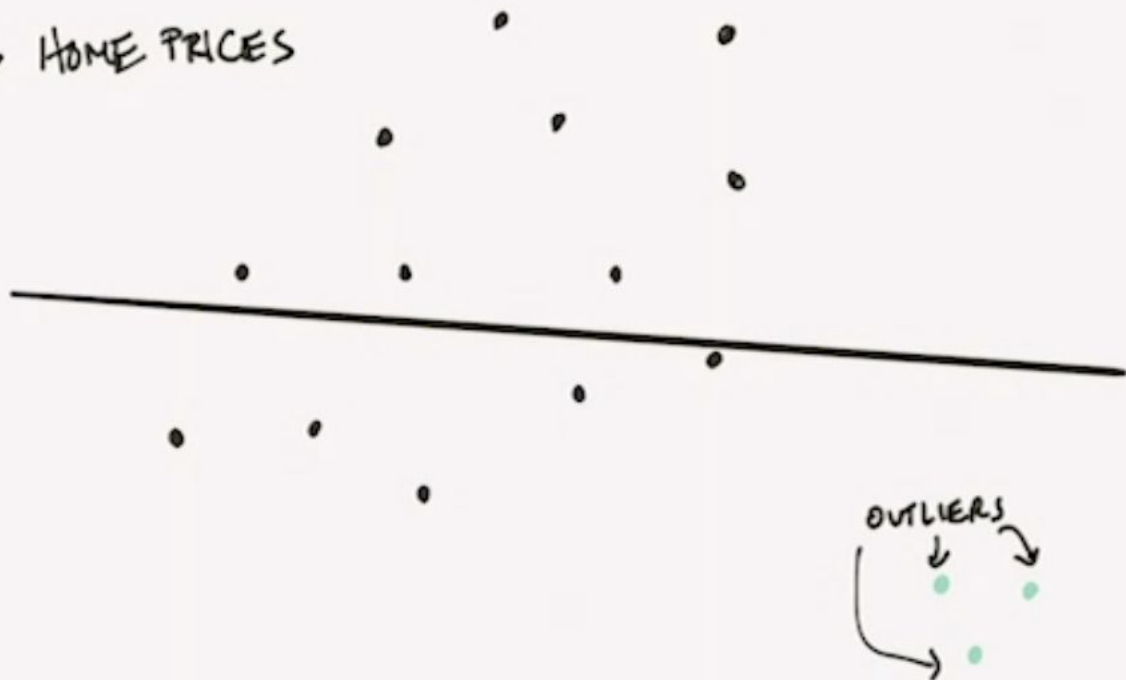


OUTLIERS

Three green dots are shown in the bottom-right corner of the plot area. Three curved arrows originate from the word 'OUTLIERS' and point to each of the three green dots, identifying them as outliers.

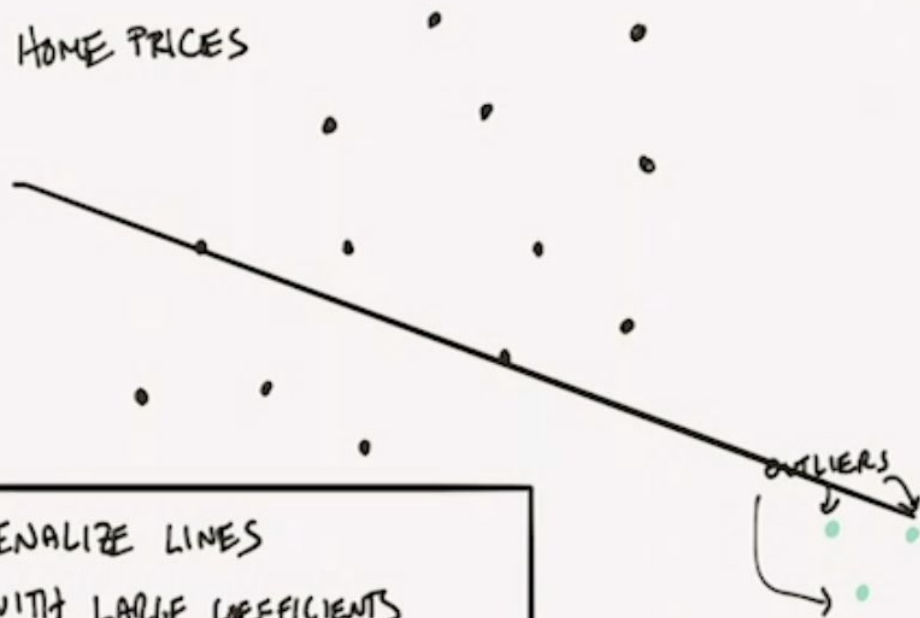
REGRESSION

PREDICTING HOME PRICES



REGRESSION

PREDICTING HOME PRICES



IDEA: PENALIZE LINES
WITH LARGE COEFFICIENTS

REGRESSION

PREDICTING HOME PRICES



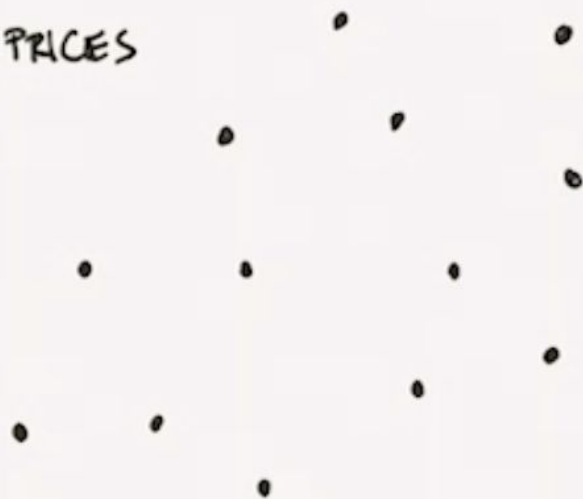
IDEA: PENALIZE LINES
WITH LARGE COEFFICIENTS

OUTLIERS

A diagram showing three green dots representing outliers. Two arrows point from the word "OUTLIERS" to the top two dots, and a single arrow points to the bottom dot. The dots are arranged in a triangular pattern.

REGRESSION

PREDICTING HOME PRICES



RIDGE REGRESSION

MINIMIZE "LOSS + COEFF SIZE"



CORE STATS IDEA

IN CERTAIN "TOY" SCENARIOS
YOU CAN PROVE

- MINIMIZE "LOSS + COEFFICIENT SIZE"
OUTPERFORMS
- MINIMIZE "LOSS"

THE BIG QUESTIONS

- DO WE HAVE FAST ALGORITHMS FOR FINDING "SIMPLE" CLASSIFIERS WITH SMALL LOSS?
TRAINING
- HOW CAN WE CERTIFY THE PERFORMANCE OF A MODEL ON UNSEEN DATA?