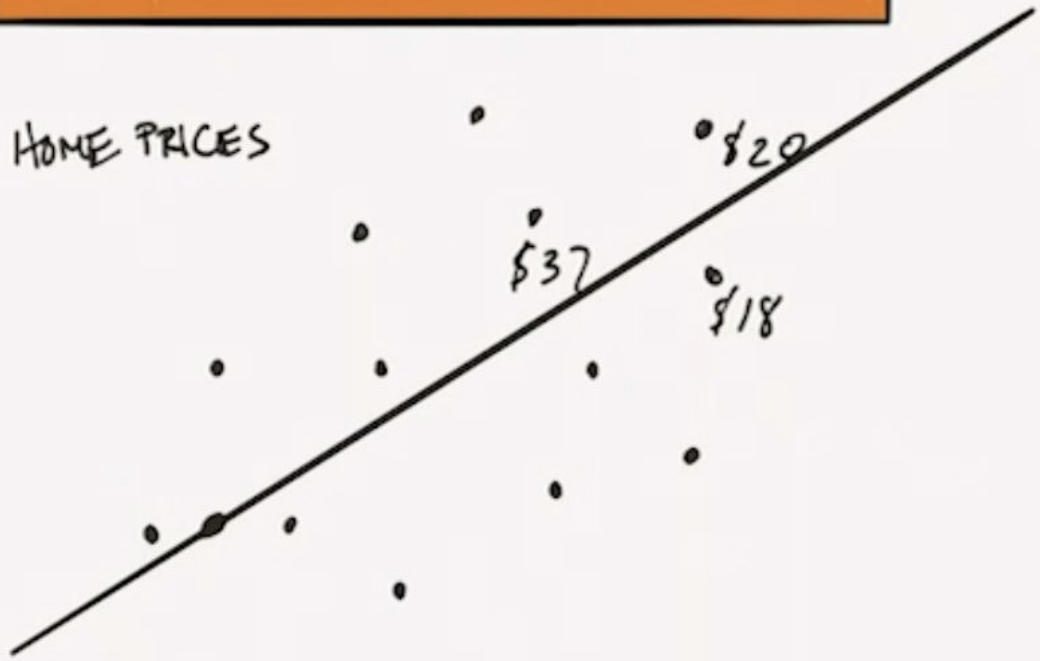
Regression and Questions for Thoughts

Week 7 Video 4

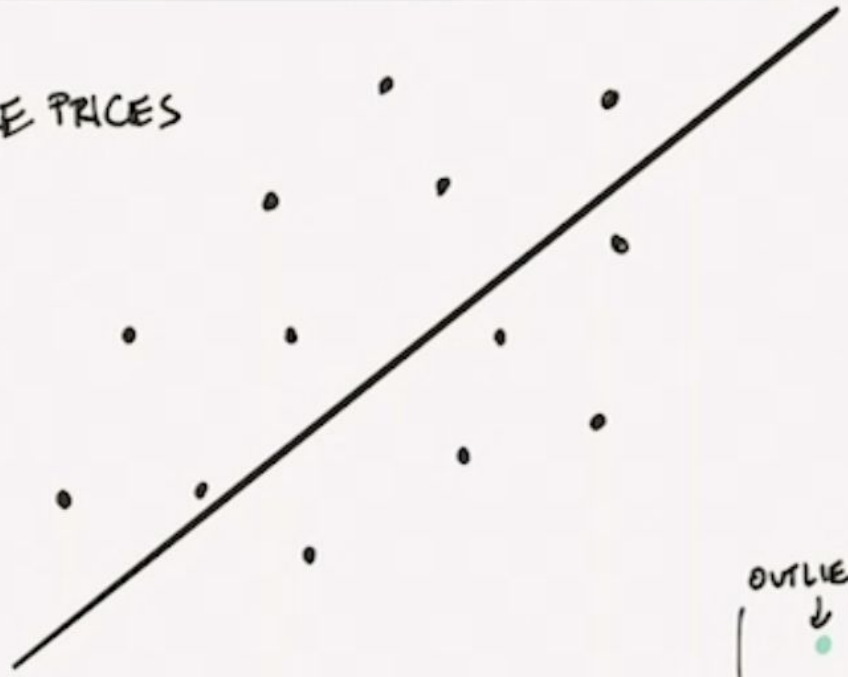
REGRESSION

PREDICTING HOME PRICES



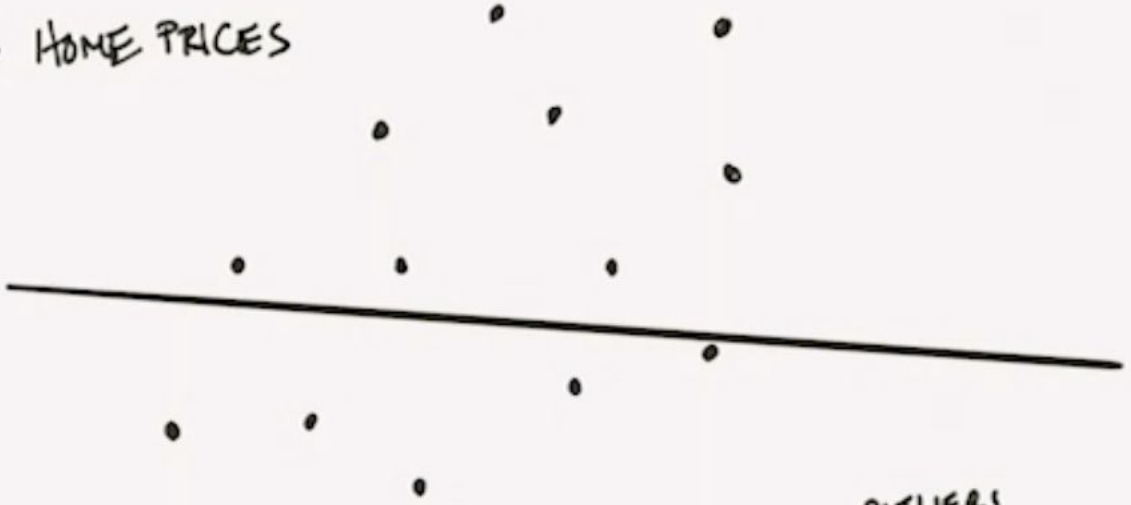
REGRESSION

PREDICTING HOME PRICES



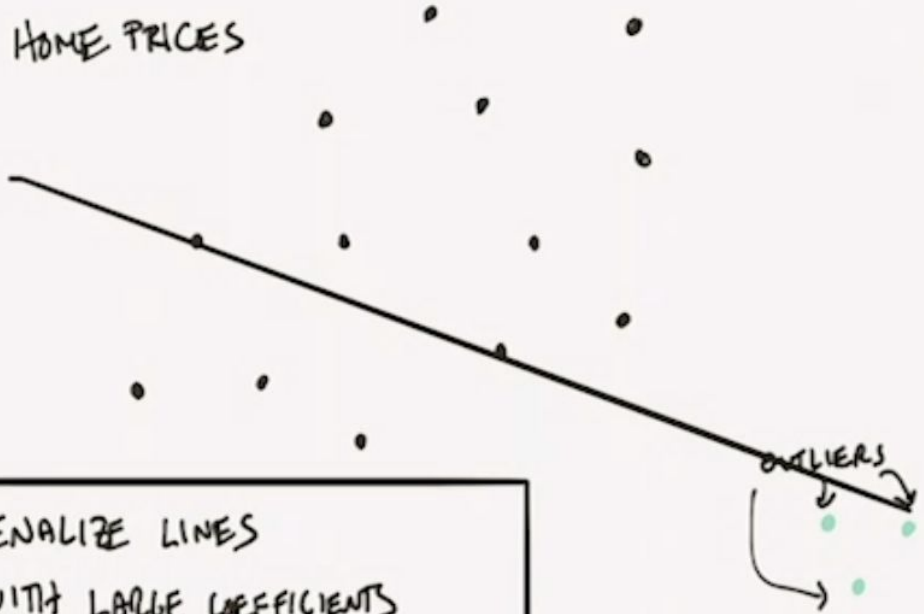
REGRESSION

PREDICTING HOME PRICES



REGRESSION

PREDICTING HOME PRICES



IDEA: PENALIZE LINES WITH LARGE COEFFICIENTS

REGRESSION

PREDICTING HOME PRICES

OUTLIERS

IDEA: PENALIZE LINES WITH LARGE COEFFICIENTS

REGRESSION

PREDICTING HOME PRICES

OUTLIERS

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?