

Inference

vs

~~Prediction~~

vs

MACHINE LEARNING

LivArea Beds Baths \$

⌈
⌈
⌈
⌈

exchangable/independent

? : how to predict \$

→ how well can we predict?

→ is LivArea USEFUL to predict?

TASK Focus

Learn to DO SOME TASK
TRAIN/PRACTICE

vars : LOTS.

linear, TREES, ENSEMBLES, Neural Nets...

set aside data: how well did we do?

GRANULAR DATA (one row per customer)

Forecasting

total/cum...

time

not independent!

examples

- stock market
- retail sales
- disease...?

? : Relationships between 2-3 variables

variables: small 2-6

model types: linear models

validation: does model

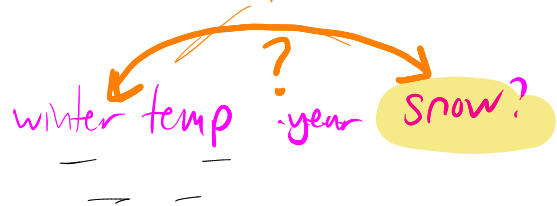
Stats fit assumptions?
resid predicted

naive models, ARIMA, ETS, ... NN

more tricky...

Inference

vs



? is there a relationship?
between two variables

KNOWLEDGE

#vars 2-6

meaningful? ESSENTIAL

validation? assumptions?
checks?



~~Prediction~~

vs

Machine Learning

LivArea #outlets #Bed #ba \$

? how well can we predict \$?

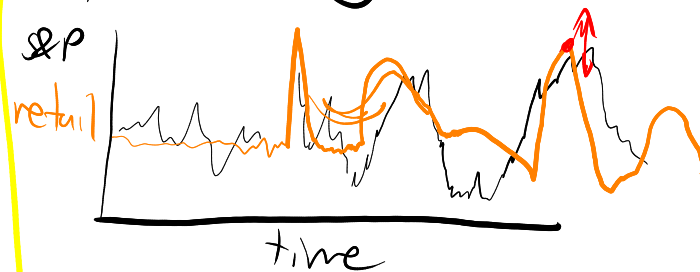
TASK

#vars LOTS eg IMAGES.

not Essential.

hold out some data —
how well do we do?

Forecasting



? will # go up or down?