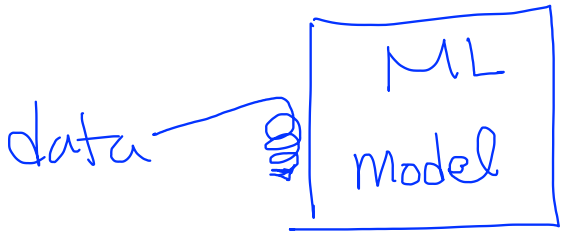
Lecture 7-2

Application & Tips:
Learning and test data sets

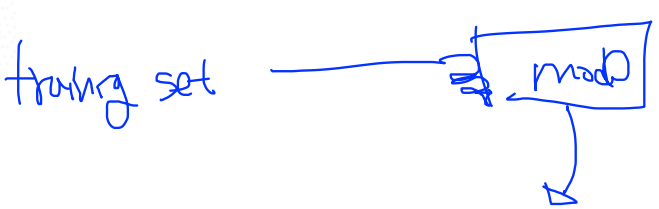
Sung Kim <hunkim+mr@gmail.com>

Performance evaluation: is this good?



Evaluation using training set?

Size	Price
2104	400
1600	330
2400	369
1416	232
3000	540
1985	300
1534	315
1427	199
1380	212
1494	243



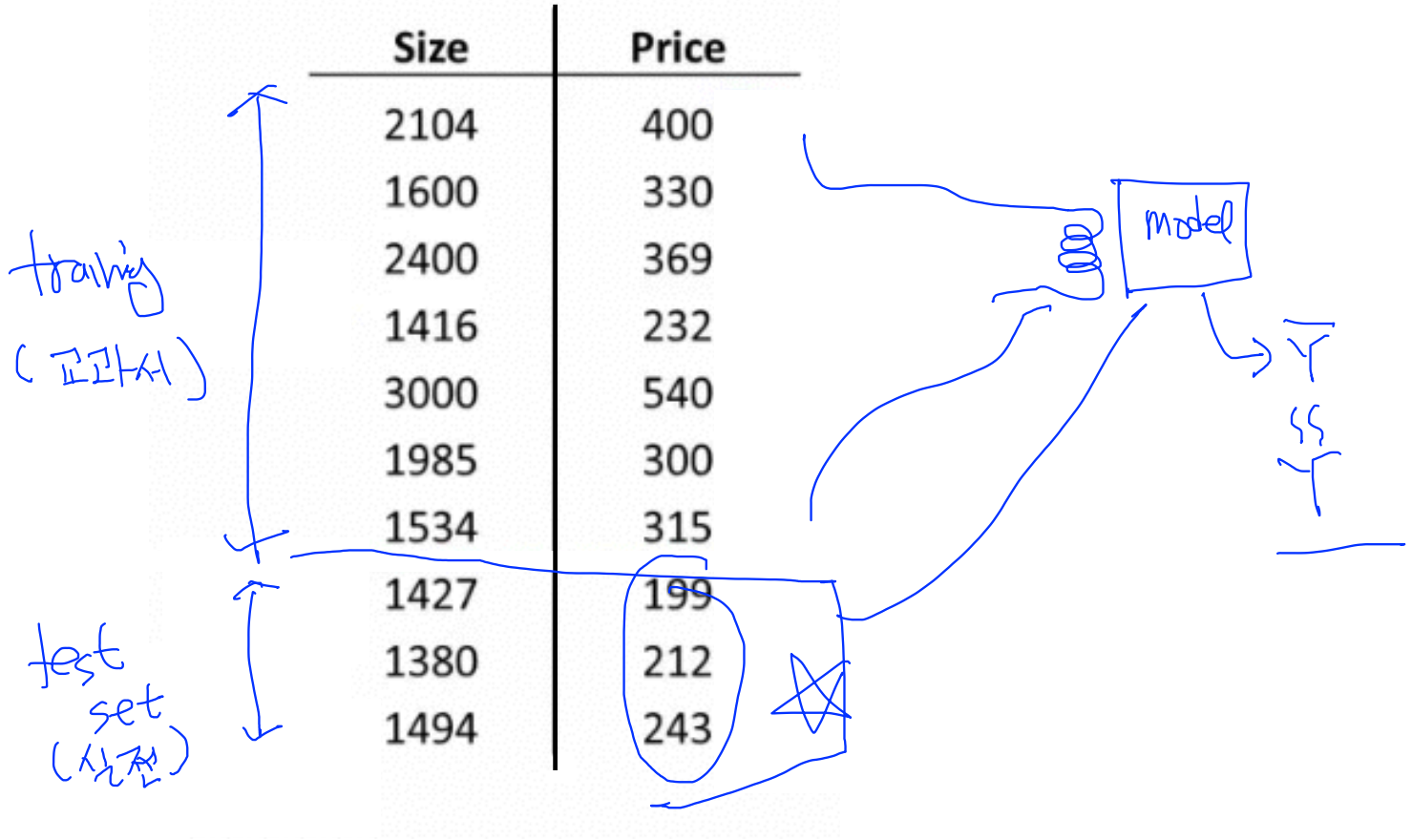
training set으로 학습하고, 다시 training set으로 모델을 평가하는 것은 모델의. 올바른 평가를 할 수 없다

- 100% correct (accuracy)
- Can memorize

Training and test sets

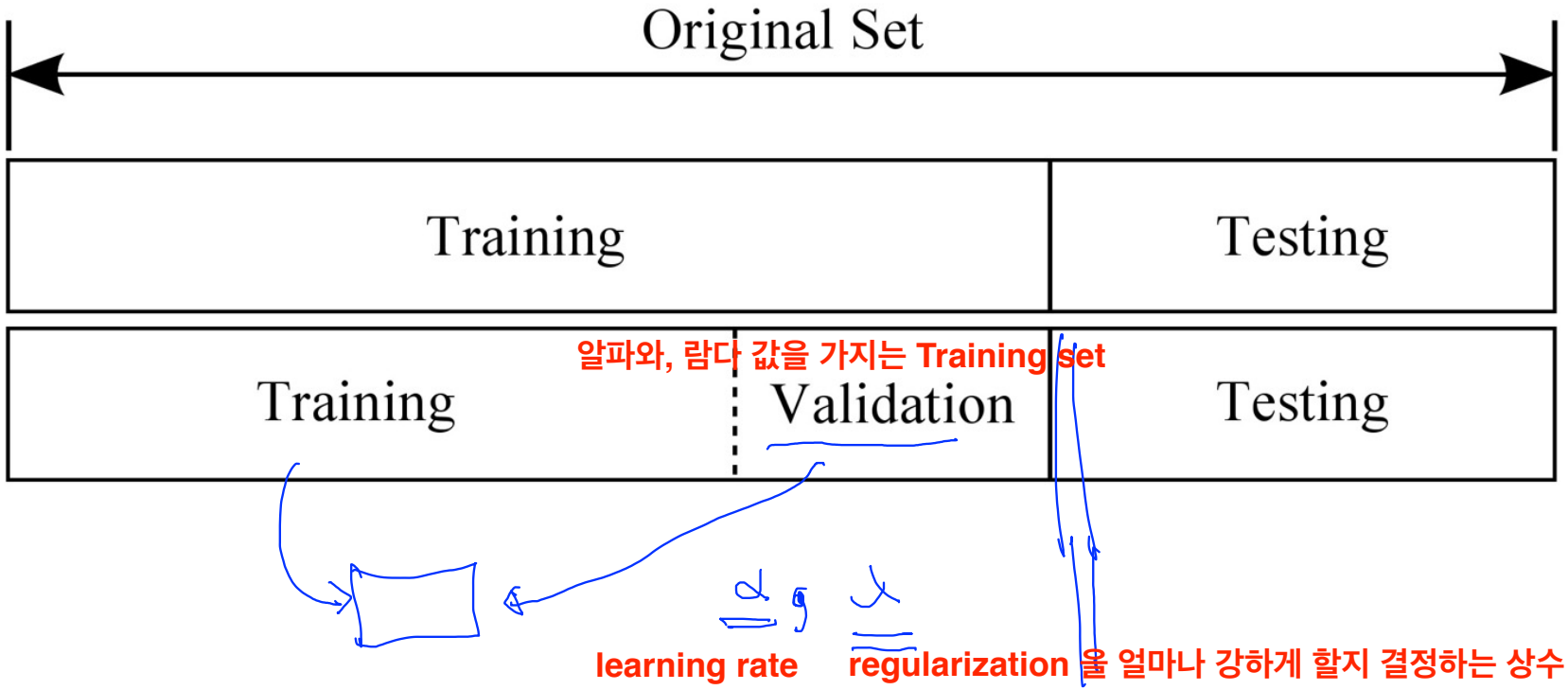
좋은 방법은 데이터를 7:3 정도로 잘라서 70퍼센트(training set)로 학습 시키고,나머지 30퍼센트(test set)로 평가하는것

Size	Price
2104	400
1600	330
2400	369
1416	232
3000	540
1985	300
1534	315
1427	199
1380	212
1494	243



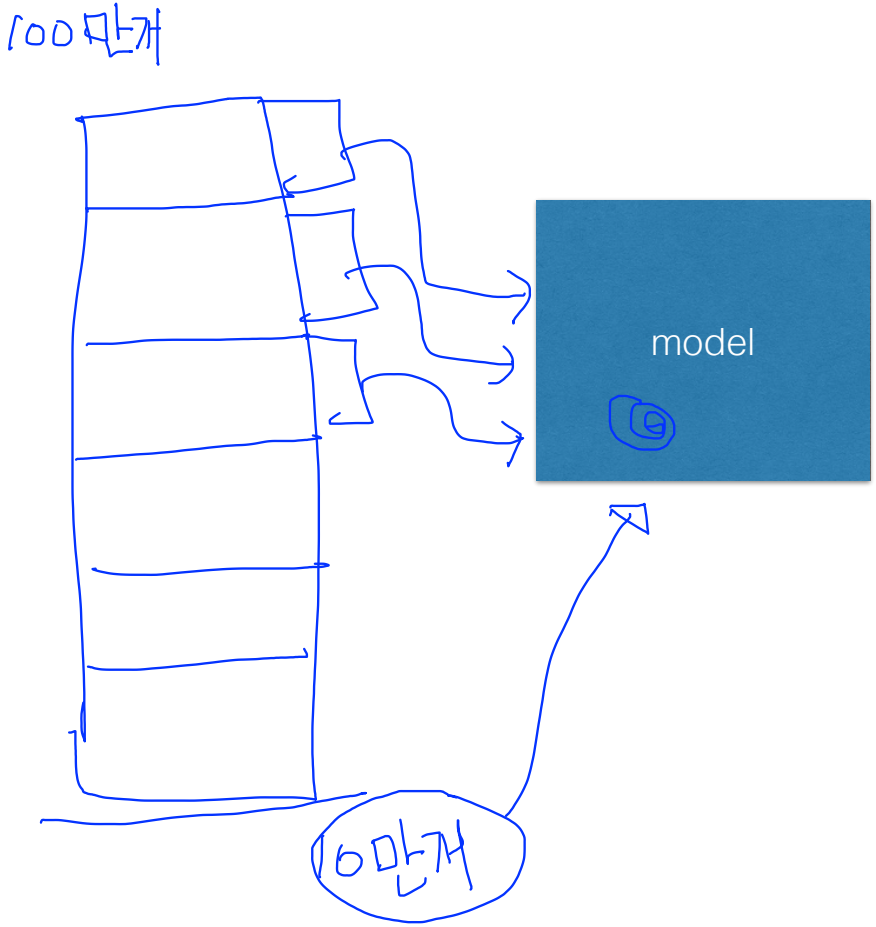
http://www.holehouse.org/mlclass/10_Advice_for_applying_machine_learning.html

Training, validation and test sets



http://www.intechopen.com/books/advances-in-data-mining-knowledge-discovery-and-applications/selecting-representative-data-sets

Online learning



첫 번째 데이터를 학습한 후 나온 모델에
다시 두 번째 데이터 학습 시켜서
새로운 모델 생성. 이런 식으로 누적

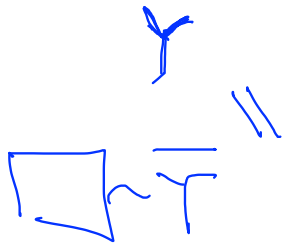
http://www.intechopen.com/books/advances-in-data-mining-knowledge-discovery-and-applications/selecting-representative-data-sets

M NIST Dataset

train-images-idx3-ubyte.gz: training set images (9912422 bytes)
train-labels-idx1-ubyte.gz: training set labels (28881 bytes)
t10k-images-idx3-ubyte.gz: test set images (1648877 bytes)
t10k-labels-idx1-ubyte.gz: test set labels (4542 bytes)

http://yann.lecun.com/exdb/mnist/

Accuracy



- How many of your predictions are correct?
- 95% ~ 99%?
- Check out the lab video