Structuring Machine Learning Projects Week 1

Satisfying and Optimizing metric

Optimizing metric

- Do better as well as possible

Satisficing metric
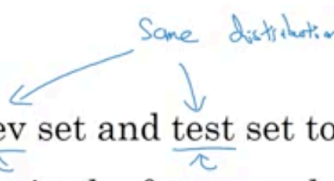
- Just satisfy it

Train / dev / test distributions

Train/dev/test distributions

Guideline

Same distribution

Choose a dev set and test set to reflect data you expect to get in the future and consider important to do well on.

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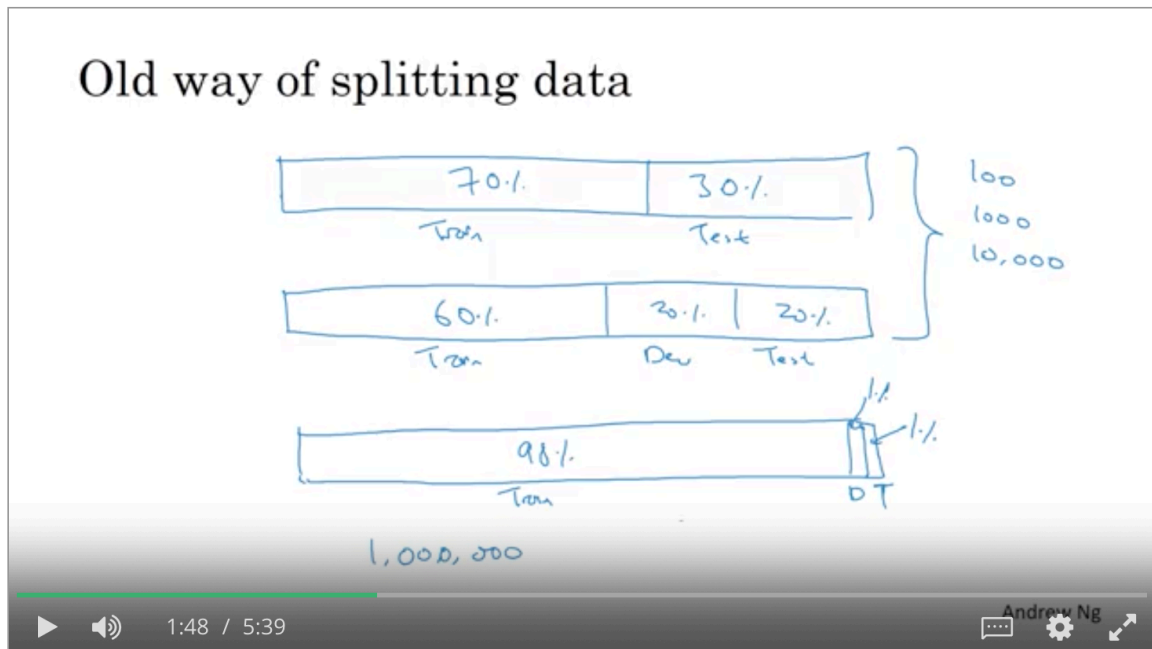- Choose dev and test set from same distribution

- Train set can be chosen from different distribution

Size of dev and test set

Size of the dev and test sets

Improving your model performance

Improving your model performance

Reducing (avoidable) bias and variance

Human-level	Train bigger model
Avoidable bias →	Train longer/better optimization algorithms — momentum, RMSprop, Adam
Training error	NN architecture/hyperparameters search RNN CNN
Variance	More data
Dev error	Regularization — L₂, dropout, data augmentation
	NN architecture/hyperparameters search

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