

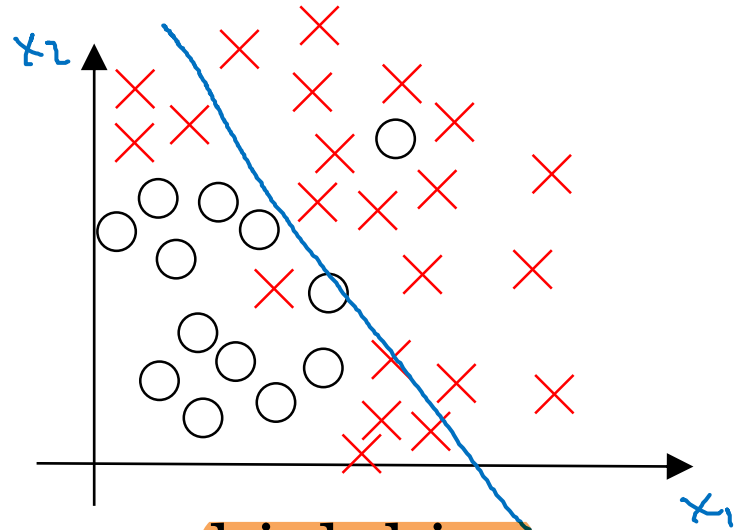


deeplearning.ai

Setting up your
ML application

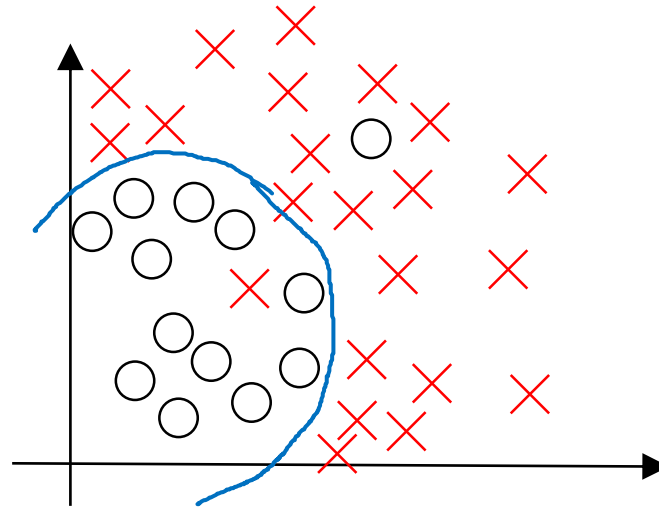
Bias/Variance

Bias and Variance

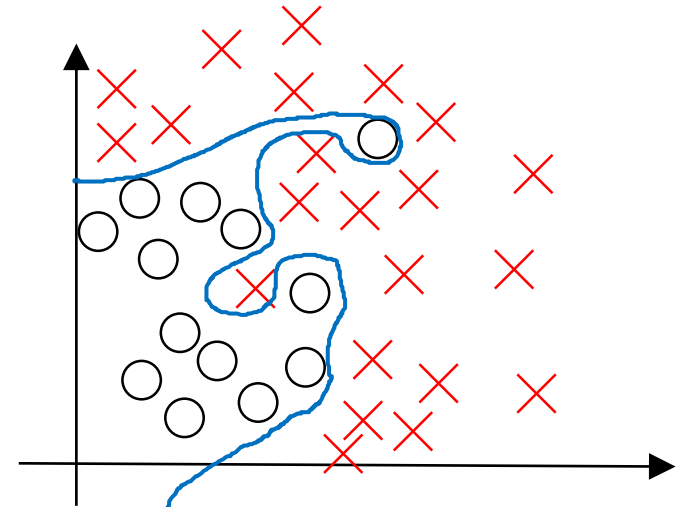


high bias

underfitting



→ “just right”

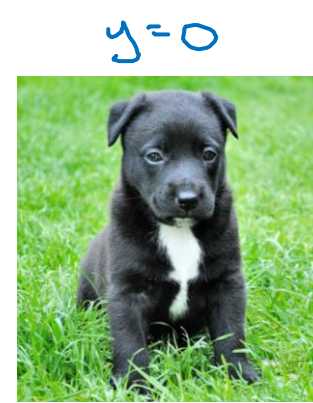
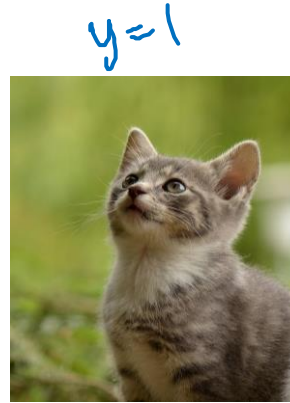


high variance

overfitting

Bias and Variance

Cat classification



Train set error:

Dev set error:

10%

11%

high variance

15% \swarrow

16% \swarrow

high bias

15%

30%

high bias
& high variance

0.5%

1%

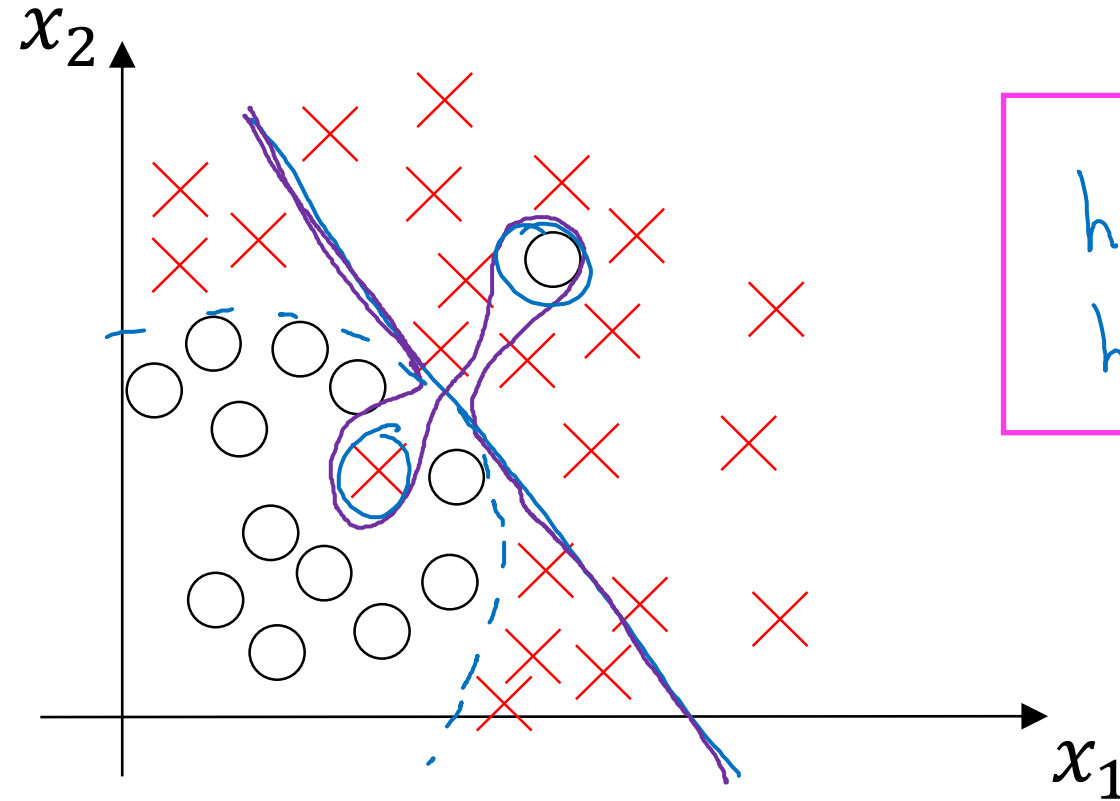
low bias
low variance

Human: ~0%

Optimal (Bayes) error: ~~~0%~~ 15%

Blurry images

High bias and high variance



high bias
high variance

The (purple) line here has both high bias as well as high variance



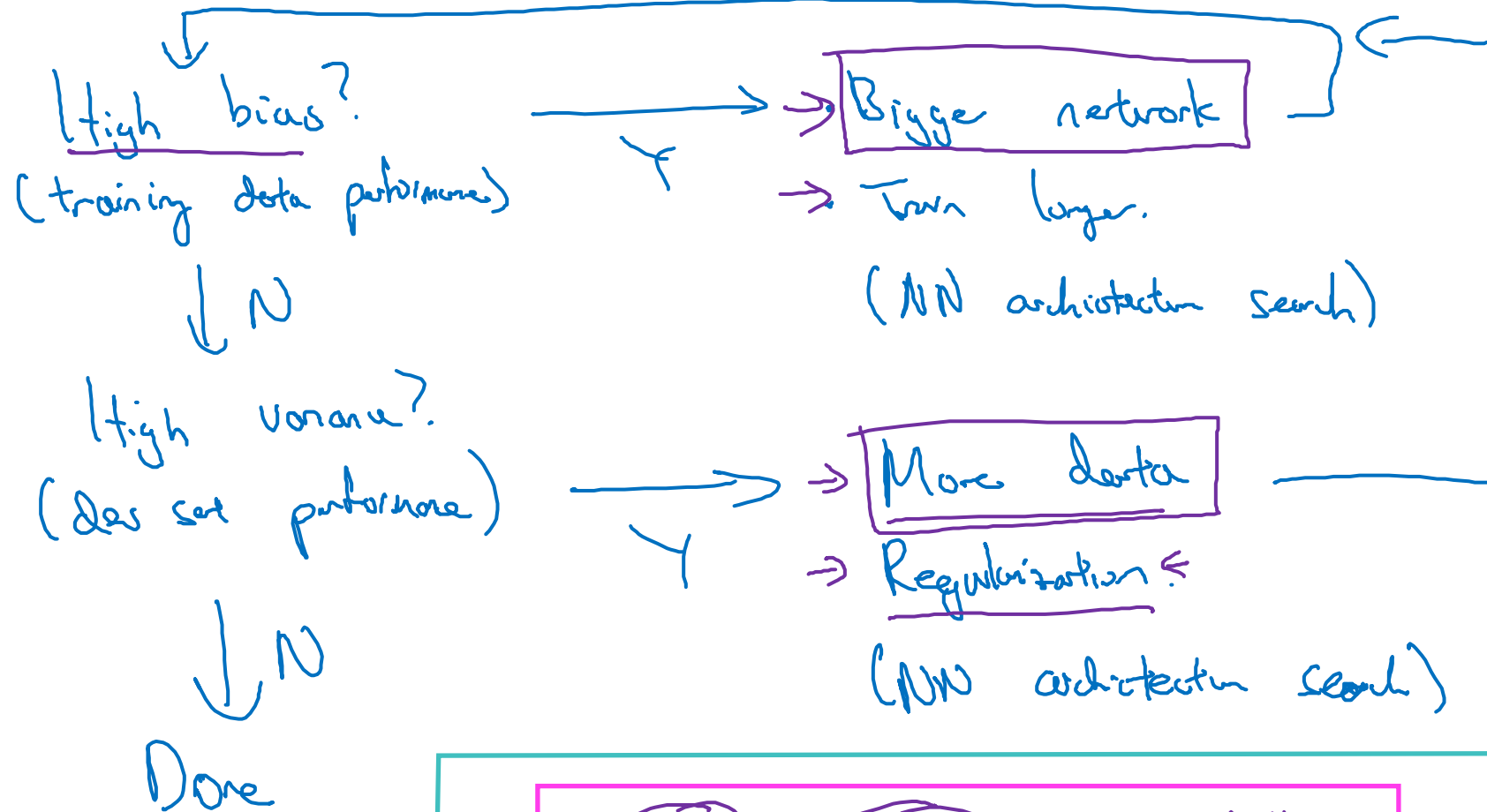
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Setting up your
ML application

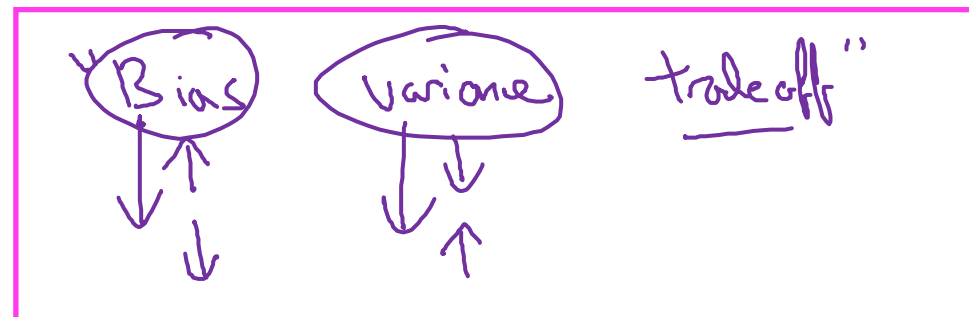
Basic “recipe”
for machine learning

Basic “recipe” for machine learning

Basic recipe for machine learning



Workflow /
Basic recipe
for machine
learning



The Trade-off
between Bias and
Variance