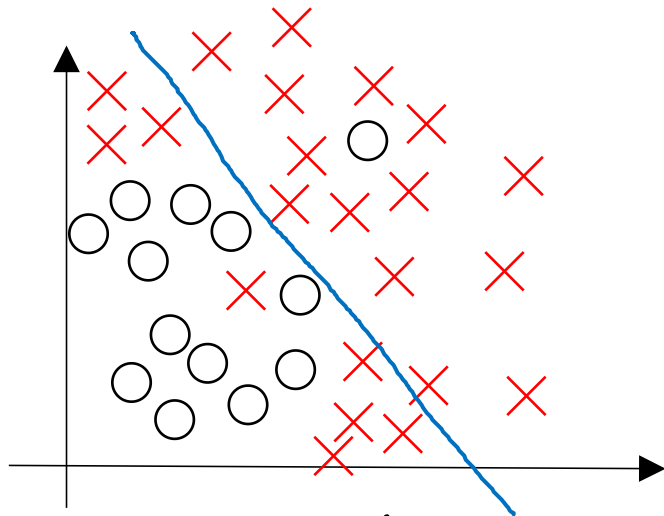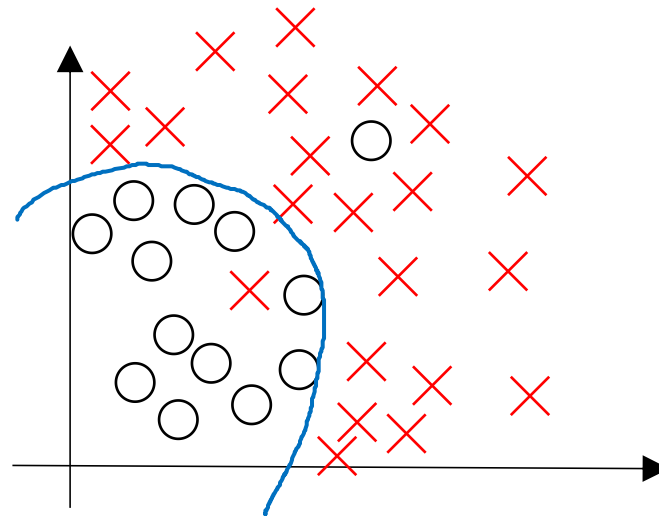Comparing to human-level performance
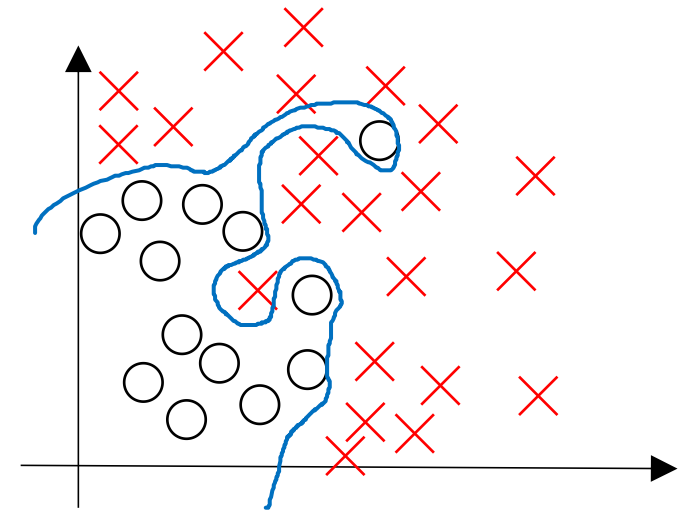
Avoidable bias

deeplearning.ai

Bias and Variance

high bias
Underfitting

"just right"

high variance
Overfitting.

Andrew Ng

Bias and Variance

Cat classification

Human-level ≈ 0% ....

Training set error: ___ %   5%   5%   5%

Dev set error: 1%   6%   0%   %

high variance   high bias   high bias   low bias
                              high variance   low variance

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Cat classification example

Humans (≈ Bayes)

Training error   8%   8 %

Dev error   10% 10 %

1%   7.5%

7% | 0.5% | Avoidable bias

2% | 2% | Variance | Variance

2%

Focus on bias   Focus on variance
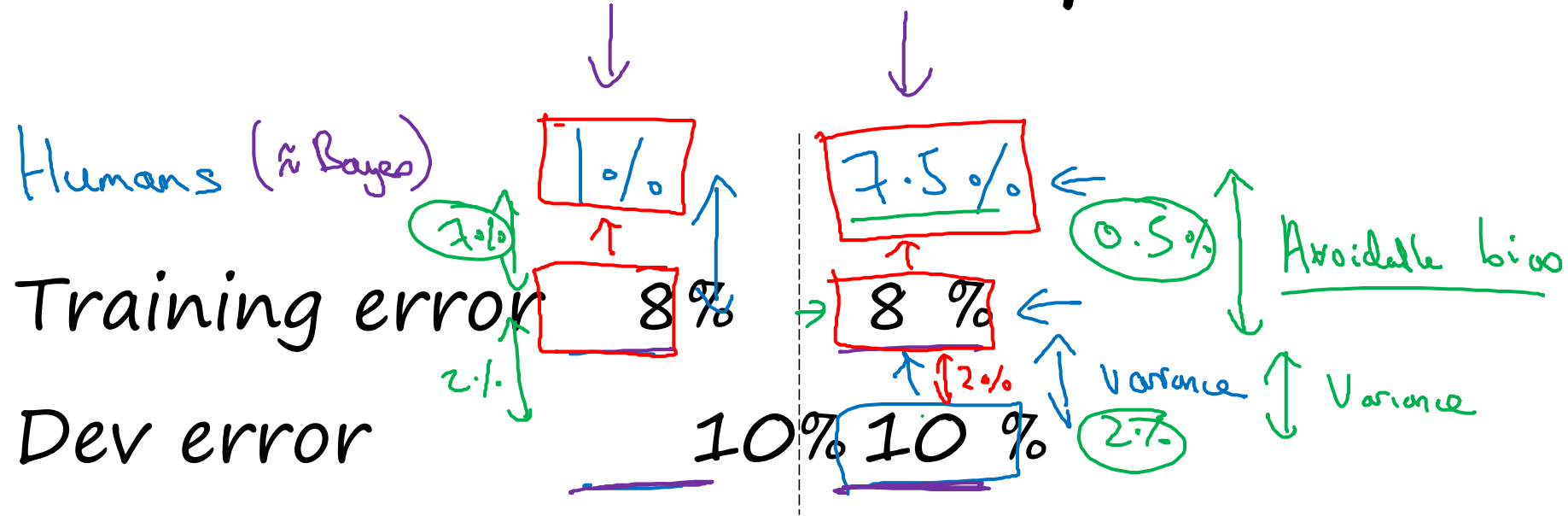
Human-level error as a proxy for Bayes error.