A brief note on model learning

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How does training, or learning, work?

I want to find parameters that give me the best performance.

- 1. What does best mean, exactly? We need to be able to quantify it numerically in order to determine which parameters are best.
 - -> define the *loss*
 - -> the *best* parameters are those that minimize it

- 2. How do I find the parameters that minimize the loss?
 - -> this is the field of *optimization*

Cross-Entropy Loss for Binary Classifier

Parameter Optimization by Gradient Descent