



## Congratulations! You passed!

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1. If searching among a large number of hyperparameters, you should do a systematic grid search rather than start from random values, so that you are not relying on chance. True or False?

- ☐ True
- ☒ False

## Correct

Correct. Because you don't know which hyperparameters are more important than others, use a smart algorithm that can choose the direction and granularity of your search. In such a smart algorithm, it is a good idea to start with well-distributed, random initial starting points.



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2. It is a good idea to use the training loss itself as the hyperparameter tuning metric. True or False?

- ☐ True
- ☒ False

## Correct

Correct, you want to use an eval-metric as your hyperparameter tuning metric so that you are not rewarding models that overfit.



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3. Hyperparameter tuning in Cloud ML Engine involves adding the appropriate TensorFlow function call to your model code. True or False?

- ☐ True
- ☒ False

## Correct

Correct. Often, it is simply a matter of submitting a training job with an additional configuration setting



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4. You are creating a model to predict the outcome (final score difference) of a basketball game between Team A and Team B. Your initial model is a neural network with [64, 32] nodes, learning\_rate = 0.05, batch\_size = 32. The input features include whether the game was played "at home" for Team A, the fraction of the last 7 games that Team A won, the average number of points scored by Team A in its last 7 games, the average score of Team A's opponents in its last 7 games, etc.

Which of these are hyperparameters to the model?

- ☒ The number of nodes in each layer of the DNN

## Correct

- ☒ The number of layers in the DNN

## Correct

- ☒ The learning rate


## Correct

- ☒ The number of previous games that the input features are averaged over

## Correct

Correct. It is possible that we need to look back only 3 games, or that we have to look back 15 games. We don't know before hand what the right number is. Because this is the creation of the input feature itself, formulating it as a hyperparameter is a little tricky. However, this is a hyperparameter, and in practice, you do want to experiment.

☒ The batch size

 The batch size

Correct

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