GRADE 90%

TO PASS 80% or higher

Retake the assignment in 7h 58m

Hyperparameter tuning, Batch Normalization, **Programming Frameworks**

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90%

1.	If searching among a large number of hyperparameters, you should try values in a grid rather than random values, so that you can carry out the search more systematically and not rely on chance. True or False?	1/1 point
	○ True	
	False	
	✓ Correct	

2. Every hyperparameter, if set poorly, can have a huge negative impact on training, and so all hyperparameters are about equally important to tune well. True or False?

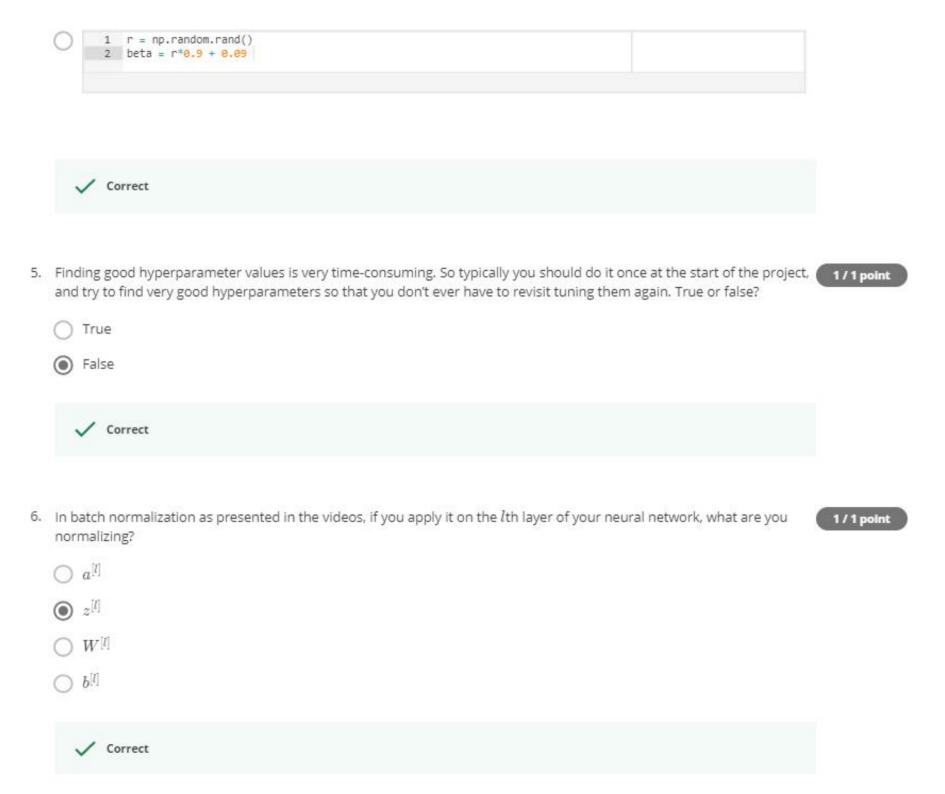
1/1 point

True

False



Yes. We've seen in lecture that some hyperparameters, such as the learning rate, are more critical than others.



- \bigcirc In case μ is too small
- To avoid division by zero
- O To speed up convergence
- To have a more accurate normalization

✓ Correct

8. Which of the following statements about γ and β in Batch Norm are true?

0 / 1 point

 $\hfill \square$ They set the mean and variance of the linear variable $z^[l]$ of a given layer.

Correct

They can be learned using Adam, Gradient descent with momentum, or RMSprop, not just with gradient descent.

✓ Correct

- There is one global value of $\gamma \in \Re$ and one global value of $\beta \in \Re$ for each layer, and applies to all the hidden units in that layer.

9.	Afte show	r training a neural network with Batch Norm, at test time, to evaluate the neural network on a new example you uld:	1 / 1 point
	0	If you implemented Batch Norm on mini-batches of (say) 256 examples, then to evaluate on one test example, duplicate that example 256 times so that you're working with a mini-batch the same size as during training.	
	0	Use the most recent mini-batch's value of μ and σ^2 to perform the needed normalizations.	
	•	Perform the needed normalizations, use μ and σ^2 estimated using an exponentially weighted average across minibatches seen during training.	
	0	Skip the step where you normalize using μ and σ^2 since a single test example cannot be normalized.	
	`	/ Correct	
10	. Whi	ch of these statements about deep learning programming frameworks are true? (Check all that apply)	1/1 point
		Deep learning programming frameworks require cloud-based machines to run.	
	\checkmark	Even if a project is currently open source, good governance of the project helps ensure that the it remains open even in the long term, rather than become closed or modified to benefit only one company.	
		/ Correct	
	V	A programming framework allows you to code up deep learning algorithms with typically fewer lines of code than a lower-level language such as Python.	
		/ Correct	