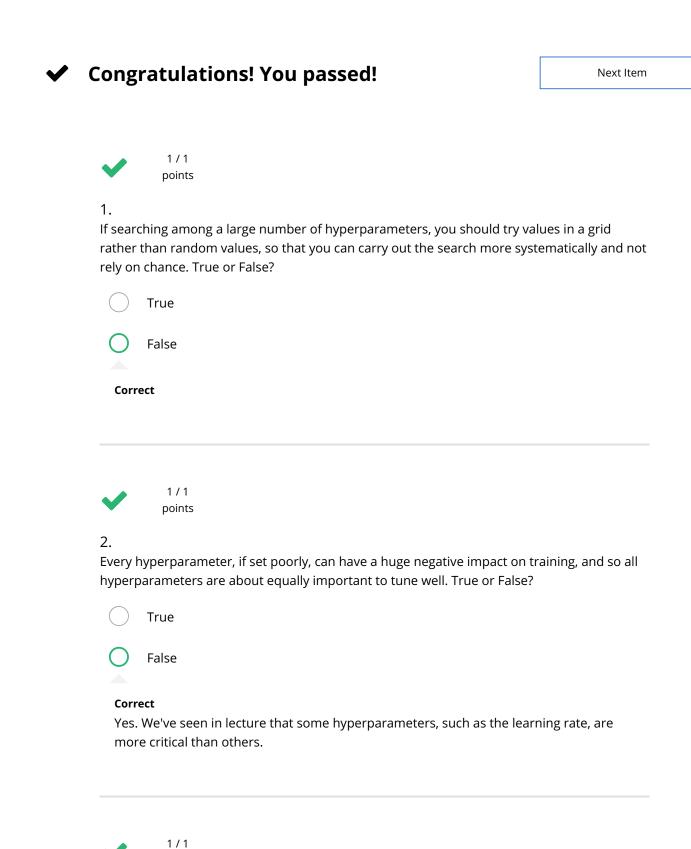
Hyperparameter tuning, Batch Normalization, Programming Frameworks

Quiz, 10 questions

10/10 points (100%)



points

0 questions	M6 a lot of models in parallel ("Caviar") is largely determined by: Whether you use batch or mini-batch optimization	(100%)
(The presence of local minima (and saddle points) in your neural network	
(The amount of computational power you can access	
	Correct	
(The number of hyperparameters you have to tune	
•	1 / 1 points	
	you think eta (hyperparameter for momentum) is between on 0.9 and 0.99, which of the llowing is the recommended way to sample a value for beta?	
(1 r = np.random.rand() 2 beta = r*0.09 + 0.9	
(1 r = np.random.rand() 2 beta = 1-10**(- r - 1)	
	Correct	
(1 r = np.random.rand() 2 beta = 1-10**(- r + 1)	
(1 r = np.random.rand() 2 beta = r*0.9 + 0.09	

https://www.coursera.org/learn/deep-neural-network/exam/CzYDo/hyperparameter-tuning-batch-normalization-programming-frame...

Hyperparameter tuning a Batch Normalization in Regeramming hould do 40/10 points Framewooks at the start of the project, and try to find very good hyperparameters so that you do (100%) Quiz, 10 questionever have to revisit tuning them again. True or false? True Correct points 6. In batch normalization as presented in the videos, if you apply it on the $\it l$ th layer of your neural network, what are you normalizing? $W^[l]$ Correct



1/1 points

7

In the normalization formula $z_{norm}^{(i)}=rac{z^{(i)}-\mu}{\sqrt{\sigma^2+arepsilon}}$, why do we use epsilon?

O To avoid division by zero

Correct

To speed up convergence

Hyperparameter tuning, Batch Normalization, Programming Frameworks

Quiz, 10 questions

9.

To have a more accurate normalization

10/10 points (100%)

~	1 / 1 points					
8. Which	of the following statements about γ and eta in Batch Norm are true?					
	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.					
Un-selected is correct						
	They can be learned using Adam, Gradient descent with momentum, or RMSprop, not just with gradient descent.					
Corr	ect					
	They set the mean and variance of the linear variable $z^{\left[l ight]}$ of a given layer.					
Correct						
	β and γ are hyperparameters of the algorithm, which we tune via random sampling.					
Un-selected is correct						
	The optimal values are $\gamma=\sqrt{\sigma^2+arepsilon}$, and $eta=\mu$.					
Un-selected is correct						
	1/1					
V	points					

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After training a neural network with Batch Norm, at test time, to evaluate the neural n Hyperparameter, நடிந்து, நிரைப் Normalization, Programming Frameworks				
Quiz, 10 question		Perform the needed normalizations, use μ and σ^2 estimated using an exponentially weighted average across mini-batches seen during training.		
	Corre	ect		
		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.		
		Skip the step where you normalize using μ and σ^2 since a single test example cannot be normalized.		
		Use the most recent mini-batch's value of μ and σ^2 to perform the needed normalizations.		
	~	1 / 1 points		
,		of these statements about deep learning programming frameworks are true? (Ch apply)	eck	
		Deep learning programming frameworks require cloud-based machines to run.		
	Un-se	elected is correct		
		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 close or modified to benefit only one company.	ed	
	Corre	ect		
		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.	1	
	Corre	ect		

Hyperparameter tuning, Batch Normalization, Programming
Frameworks
Quiz, 10 questions

10/10 points
(100%)