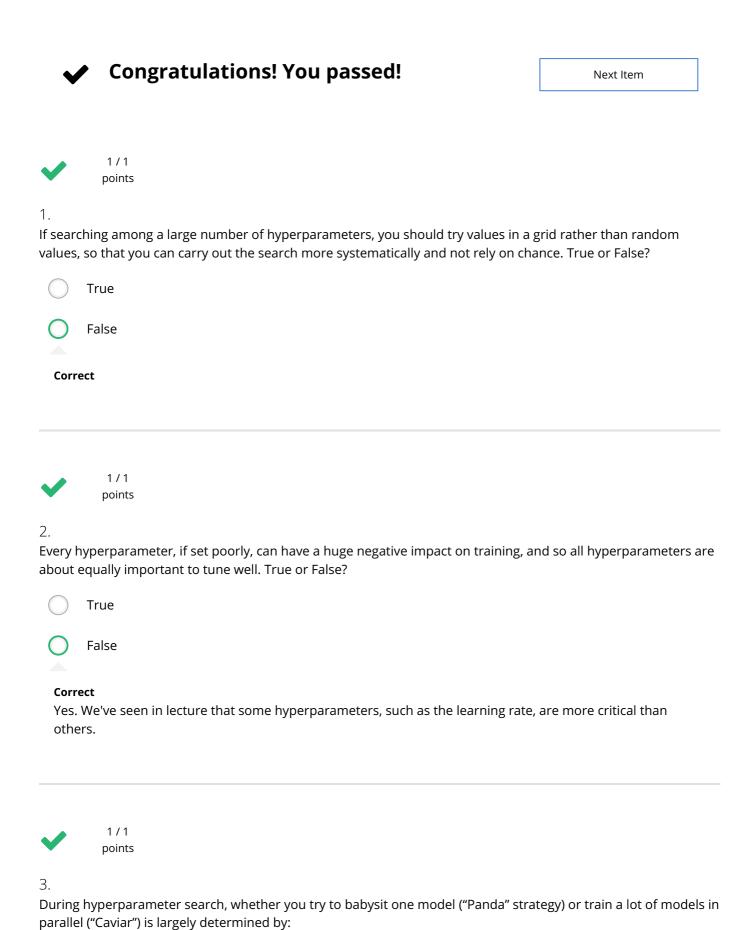
Hyperparameter tuning, Batch Normalization, Programming Frameworks

Quiz, 10 questions



False

Hyperparameter tuning, Batch Normalization, Programming Frameworks

Quiz, 10 questions



1/1 points

In batch normalization as presented in the videos, if you apply it on the lth layer of your neural network, what are you normalizing?

- $b^{[l]}$
- $a^{[l]}$
- $z^{[l]}$

Correct

 $W^{[l]}$



1/1 points

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

To avoid division by zero

Correct

- In case μ is too small
- To have a more accurate normalization
- To speed up convergence



1/1 points

8. Hyperparameter tuning, Batch Normalization, Programming Frameworks

Quiz, 10 questions		
	The optimal values are $\gamma=\sqrt{\sigma^2+arepsilon}$, and $eta=\mu$.	
Un-selected is correct		
	eta and γ are hyperparameters of the algorithm, which we tune via random sampling.	
Un-selected is correct		
	They set the mean and variance of the linear variable $z^{\left[l ight]}$ of a given layer.	
Correct		
	They can be learned using Adam, Gradient descent with momentum, or RMSprop, not just with gradient descent.	
Corre	ect	
	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-s	elected is correct	
~	1/1 points	
9. After tr you sh	raining a neural network with Batch Norm, at test time, to evaluate the neural network on a new example ould:	
	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	Perform the needed normalizations, use μ and σ^2 estimated using an exponentially weighted average across mini-batches seen during training.	
Corre	ect	
	Skip the step where you normalize using μ and σ^2 since a single test example cannot be normalized.	

27/09/2018	Improving Deep Neural Networks: Hyperparameter tuning, Regularization and Optimization - Home Coursera
T T 2 444	Use the most recent mini-batch's value of μ and σ^2 to perform the needed normalizations. Darameter tuning, Batch Normalization, Programming Frameworks
Hyperp	parameter tuning, Batch Normalization, Programming Frameworks
Quiz, 10 que	estions
~	1 / 1 points
10.	
Which o	of these statements about deep learning programming frameworks are true? (Check all that apply)
	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.
Corre	ect
	Deep learning programming frameworks require cloud-based machines to run.
Un-se	elected is correct
	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.
Corre	ect
₹	