Hyperparameter tuning, Batch Normalization, Programming Frameworks

10/10 points (100%)

Quiz, 10 questions

	✓ Congratulations! You passed!	Next Item	
/	1/1 points		
١.			
	ching among a large number of hyperparameters, you should try values in a grid rath n carry out the search more systematically and not rely on chance. True or False?	er than random values, so t	nat
	True		
	False		
Corr	ect		
	1/1		
	points		
2.			
very l	hyperparameter, if set poorly, can have a huge negative impact on training, and so all	hyperparameters are about	
	y important to tune well. True or False?		
	y important to tune well. True or False? True		
equally	True False		
equally	True False	e critical than others.	
quall	True False ect We've seen in lecture that some hyperparameters, such as the learning rate, are mor	e critical than others.	
equally	True False	e critical than others.	
Corr Yes.	True False ect We've seen in lecture that some hyperparameters, such as the learning rate, are more		
Corr Yes.	True False ect We've seen in lecture that some hyperparameters, such as the learning rate, are more 1/1 points shyperparameter search, whether you try to babysit one model ("Panda" strategy) or		
Corr Yes.	True False ect We've seen in lecture that some hyperparameters, such as the learning rate, are more 1/1 points shyperparameter search, whether you try to babysit one model ("Panda" strategy) or "") is largely determined by:		
Corrr Yes.	False ect We've seen in lecture that some hyperparameters, such as the learning rate, are more 1/1 points shyperparameter search, whether you try to babysit one model ("Panda" strategy) or "") is largely determined by: Whether you use batch or mini-batch optimization		
Corrr Yes.	True False ect We've seen in lecture that some hyperparameters, such as the learning rate, are more 1/1 points g hyperparameter search, whether you try to babysit one model ("Panda" strategy) or "") is largely determined by: Whether you use batch or mini-batch optimization The presence of local minima (and saddle points) in your neural network The amount of computational power you can access		

 $W^{[l]}$

 $a^{[l]}$

 $b^{[l]}$

Hyperparameter tuning, Batch Normalization, Programming ^{7.}Frameworks

10/10 points (100%)

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

To avoid division by zero

Correct

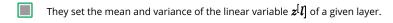
()	In case	11. is	too	sma	ı



1/1 points

8.

Which of the following statements about $oldsymbol{\gamma}$ and $oldsymbol{\beta}$ in Batch Norm are true?



Correct

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

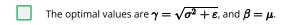
Un-selected is correct

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

Correct

 $m{eta}$ and $m{\gamma}$ are hyperparameters of the algorithm, which we tune via random sampling.

Un-selected is correct



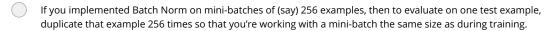
Un-selected is correct



1/1 points

a

After training a neural network with Batch Norm, at test time, to evaluate the neural network on a new example you should:





	perparameter tuning, Batch Normalization, Programming meworks 10 questions	10/10 point (100%)
	Use the most recent mini-batch's value of $oldsymbol{\mu}$ and $oldsymbol{\sigma^2}$ to perform the needed normalizations.	
	Skip the step where you normalize using $oldsymbol{\mu}$ and $oldsymbol{\sigma^2}$ since a single test example cannot be norm	nalized.
/	1/1 points	
0. Vhich	of these statements about deep learning programming frameworks are true? (Check all that ap	ply)
	A programming framework allows you to code up deep learning algorithms with typically fewer lower-level language such as Python.	er lines of code
Corr	ect	
	Even if a project is currently open source, good governance of the project helps ensure that the even in the long term, rather than become closed or modified to benefit only one company.	e it remains op
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