Quiz, 10 questions



	1 r = np.random.rand() 2 beta = r*0.9 + 0.09
once at	good hyperparameter values is very time-consuming. So typically you should do it the start of the project, and try to find very good hyperparameters so that you
don't ev	ver have to revisit tuning them again. True or false? True
	False
Corre	ct
	n normalization as presented in the videos, if you apply it on the $\it l$ th layer of your
neuraii	network, what are you normalizing? $oldsymbol{W}^{[l]}$
	b [t]
	$a^{[l]}$
	$z^{[l]}$
Corre	ct
In the n	formalization formula $z_{norm}^{(i)}=rac{z^{(i)}-\mu}{\sqrt{\sigma^2+arepsilon}}$, why do we use epsilon?
	In case μ is too small
	To avoid division by zero
Corre	ct
	To speed up convergence
	To have a more accurate normalization
Which o	of the following statements about γ and eta in Batch Norm are true?
	There is one global value of $\gamma\in\mathfrak{R}$ and one global value of $eta\in\mathfrak{R}$ for each
	layer, and applies to all the hidden units in that layer.
Un-se	elected is correct
	They can be learned using Adam, Gradient descent with momentum, or RMSprop, not just with gradient descent.
Corre	ct
	β and γ are hyperparameters of the algorithm, which we tune via random sampling.

The optimal values are $\gamma = \sqrt{\sigma^2 + \varepsilon}$, and $\beta = \mu$.

Un-selected is correct

They set the mean and variance of the linear variable $z^{[l]}$ of a given layer.

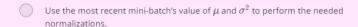
Correct



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

- 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.
- Perform the needed normalizations, use μ and σ^2 estimated using an exponentially weighted average across mini-batches seen during training.

Correct





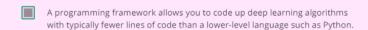
10. Which of these statements about deep learning programming frameworks are true? (Check all that apply)



Deep learning programming frameworks require cloud-based machines to run.

This should not be selected

No. You can run deep learning programming languages from any machine with a CPU or a GPU, either locally or on the cloud.



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 closed or modified to benefit only one company.

This should be selected