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## Congratulations! You passed!

Grade received 90% Latest Submission Grade 90% To pass 80% or higher

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١.	If you have 20,000,000 examples, how would you split the train/dev/test set? Choose the best option.	1/1 point
	90% train. 5% dev. 5% test.	
	99% train. 0.5% dev. 0.5% test.	
	60% train. 20% dev. 20% test.	
	∠ <sup>™</sup> Expand	
	<ul><li>Correct</li><li>Yes. Given the size of the dataset, 0.5% of the samples are enough to get a good estimate of how well the model is doing.</li></ul>	
2.	The dev and test set should:	1/1 point
	Have the same number of examples	
	Be identical to each other (same (x,y) pairs)	
	Come from the same distribution	
	Come from different distributions	
	∠ <sup>™</sup> Expand	
	<b>⊘</b> Correct	
3.	If your Neural Network model seems to have high variance, what of the following would be promising things to try?	1/1 point
	Add regularization	
	✓ Correct	
	Get more test data	
	Make the Neural Network deeper	
	☐ Increase the number of units in each hidden layer	
	Get more training data	
	✓ Correct	
	∠ <sup>≯</sup> Expand	
	K submine	

4.	Working	on a model to classify bananas and oranges your classifier gets a training set error of 0.1% and a dev set error of 11%. Which of the following two are true?	0 / 1 point
		✓ The model is overfitting the dev set.	
		! This should not be selected  No. This would imply a very low error on the dev set.	
		✓ The model has a high variance.	
		<ul> <li>✓ Correct</li> <li>No. This model has a low bias and high variance.</li> </ul>	
		✓ The model is overfitting the train set.	
		✓ Correct  Yes. This is precisely what happens when overfitting.	
		✓ The model has a very high bias.	
		! This should not be selected  No. This model has a low bias and high variance.	
		xpand	
	⊗ Inc		
	-	u chose the extra incorrect answers.	
_	14/1+ t- ·		
5.	what is v	weight decay?	1/1 point
		<ul> <li>A regularization technique (such as L2 regularization) that results in gradient descent shrinking the weights on every iteration.</li> <li>A technique to avoid vanishing gradient by imposing a ceiling on the values of the weights.</li> </ul>	
		Gradual corruption of the weights in the neural network if it is trained on noisy data.	
		The process of gradually decreasing the learning rate during training.	
	∠ <sup>7</sup> E	xpand	
	⊘ co	rrect	
6.	To reduc	te high variance, the regularization hyperparameter lambda must be increased. True/False?	1/1 point
		○ False	
		True	
	∠ <sup>7</sup> E	xpand	
	<b>⊘ c</b> ₀ Co	rrect rrect. By increasing the regularization parameter the magnitude of the weight parameters is reduced. This helps reduce the variance.	

Correct

Great, you got all the right answers.

7.	With the inverted dropout technique, at test time:	1/1 point
	You do not apply dropout (do not randomly eliminate units) and do not keep the 1/keep_prob factor in the calculations used in training	
	You apply dropout (randomly eliminating units) but keep the 1/keep_prob factor in the calculations used in training.	
	You apply dropout (randomly eliminating units) and do not keep the 1/keep_prob factor in the calculations used in training	
	You do not apply dropout (do not randomly eliminate units), but keep the 1/keep_prob factor in the calculations used in training.	
	<sub>∠</sub> <sup>ス</sup> Expand	
8.	Decreasing the parameter keep_prob from (say) 0.6 to 0.4 will likely cause the following:	1/1 point
	Reducing the regularization effect.	
	Increasing the regularization effect.	
	Causing the neural network to have a higher variance.	
	<sub>∠</sub> <sup>≯</sup> Expand	
	Correct Correct. This will make the dropout have a higher probability of eliminating a node in the neural network, increasing the regularization effect.	
9.	Which of the following actions increase the regularization of a model? (Check all that apply)	1/1 point
	Increase the value of keep_prob in dropout.	
	Decrease the value of the hyperparameter lambda.	
	Use Xavier initialization.	
	Increase the value of the hyperparameter lambda.	
	<ul> <li>Correct</li> <li>Correct. When increasing the hyperparameter lambda, we increase the effect of the L_2 penalization.</li> </ul>	
	Decrease the value of keep_prob in dropout.	
	Correct Correct. When decreasing the keep_prob value, the probability that a node gets discarded during training is higher, thus reducing the regularization effect.	
	∠ <sup>™</sup> Expand	

1/1 point

It makes the cost function faster to optimize

 $\textbf{10.} \ \text{Why do we normalize the inputs } x?$ 

It makes it easier to visualize the data
Normalization is another word for regularizationIt helps to reduce variance
It makes the parameter initialization faster
∠ <sup>™</sup> Expand
<b>⊘</b> Correct