Congratulations! You passed!

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

Go to next item

1. If you have 20,000,000 examples, how would you split the train/dev/test set? Choose the best option. **1 / 1 point**

- (•) 99% train. 0.5% dev. 0.5% test.
- ( ) 60% train. 20% dev. 20% test.
- ( ) 90% train. 5% dev. 5% test.

Expand

Correct
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.

2. The dev and test set should: **1 / 1 point**

- ( ) Come from different distributions
- (•) Come from the same distribution
- ( ) Be identical to each other (same (x,y) pairs)
- ( ) Have the same number of examples

Expand

Correct

3. If your Neural Network model seems to have high bias, what of the following would be promising things to try? (Check all that apply.) **1 / 1 point**

- [ ] Add regularization
- [x] Make the Neural Network deeper

Correct

- [x] Increase the number of units in each hidden layer

Correct

- [ ] Get more training data

Expand

Correct
Great, you got all the right answers.

4. You are working on an automated check-out kiosk for a supermarket and are building a classifier for apples, bananas, and oranges. Suppose your classifier obtains a training set error of 19% and a dev set error of 21%. Which of the following are promising things to try to improve your classifier? (Check all that apply, suppose the human error is approximately 0%) **0 / 1 point**

- (•) Get more training data.
- ( ) Use a bigger network.
- ( ) Increase the regularization parameter lambda.

Expand

Incorrect
No. This won't help to reduce the high bias of the model; it is better to address that first before moving to reduce a high variance.

5. Which of the following are regularization techniques? **1 / 1 point**

- [ ] Gradient Checking.
- [ ] Increase the number of layers of the network.
- [x] Dropout.

  ✓ **Correct**
  Correct. Using dropout layers is a regularization technique.

- [x] Weight decay.

  ✓ **Correct**
  Correct. Weight decay is a form of regularization.

Expand

✓ **Correct**
Great, you got all the right answers.

6. To reduce high variance, the regularization hyperparameter lambda must be increased. True/False? **1 / 1 point**

- (•) True
- ( ) False

Expand

✓ **Correct**
Correct. By increasing the regularization parameter the magnitude of the weight parameters is reduced. This helps reduce the variance.

7. With the inverted dropout technique, at test time: **1 / 1 point**

- ( ) 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.
- ( ) You apply dropout (randomly eliminating units) but keep the 1/keep_prob factor in the calculations used in training.
- (•) 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

Expand

✓ **Correct**

8. Decreasing the parameter keep_prob from (say) 0.6 to 0.4 will likely cause the following: **1 / 1 point**

- ( ) Causing the neural network to have a higher variance.
- ( ) Reducing the regularization effect.
- (•) Increasing the regularization effect.

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) **0 / 1 point**

- [ ] Normalizing the data.
- [x] Increase the value of the hyperparameter lambda.

  ✓ **Correct**
  Correct. When increasing the hyperparameter lambda we increase the effect of the L_2 penalization.

- [ ] Make use of data augmentation.
- [ ] Decrease the value of the hyperparameter lambda

- [ ] Increase the value of keep_prob in dropout.

Expand

Incorrect
You didn't select all the correct answers

10. Why do we normalize the inputs x? **1 / 1 point**

- (•) It makes the cost function faster to optimize
- ( ) It makes the parameter initialization faster
- ( ) It makes it easier to visualize the data
- ( ) Normalization is another word for regularization--It helps to reduce variance

Expand

Correct