Practical aspects of deep learning
Quiz, 10 questions

✔ **Congratulations! You passed!**

Next Item

✔ 1 / 1
point

1.
If you have 10,000,000 examples, how would you split the train/dev/test set?

○ 98% train . 1% dev . 1% test

Correct

○ 33% train . 33% dev . 33% test

○ 60% train . 20% dev . 20% test

✔ 1 / 1
point

2.
The dev and test set should:

○ Come from the same distribution

Correct

○ Come from different distributions

○ Be identical to each other (same (x,y) pairs)

Practical aspects of deep learning

Quiz, 10 questions

✓ 　　　1 / 1
　　　point

3.

If your Neural Network model seems to have high variance, what of the following would be promising things to try?

☐　　Add regularization

Correct

☐　　Make the Neural Network deeper

Un-selected is correct

☐　　Get more test data

Un-selected is correct

☐　　Get more training data

Correct

☐　　Increase the number of units in each hidden layer

Un-selected is correct

✓ 　　　1 / 1
　　　point

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 0.5%, and a dev set error of 7%. Which of the following are promising things to try to improve your classifier? (Check all that apply.)

☐　　Increase the regularization parameter lambda

Practical aspects of deep learning

Correct

Quiz, 10 questions

☐   Decrease the regularization parameter lambda

Un-selected is correct

☐   Get more training data

Correct

☐   Use a bigger neural network

Un-selected is correct

✔   1 / 1 point

5.

What is weight decay?

○   A technique to avoid vanishing gradient by imposing a ceiling on the values of the weights.

○   The process of gradually decreasing the learning rate during training.

⦿   A regularization technique (such as L2 regularization) that results in gradient descent shrinking the weights on every iteration.

Correct

○   Gradual corruption of the weights in the neural network if it is trained on noisy data.

✔   1 / 1 point

6.

What happens when you increase the regularization hyperparameter lambda?

○

◯ Weights are pushed toward becoming smaller (closer to 0)

Practical aspects of deep learning
Quiz, 10 questions

Correct

◯ Weights are pushed toward becoming bigger (further from 0)

◯ Doubling lambda should roughly result in doubling the weights

◯ Gradient descent taking bigger steps with each iteration (proportional to lambda)

✔ 1 / 1
point

7.
With the inverted dropout technique, at test time:

◯ 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) 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) and do not keep the 1/keep_prob factor in the calculations used in training

▲

Correct

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

✔ 1 / 1
point

8.
Increasing the parameter keep_prob from (say) 0.5 to 0.6 will likely cause the following: (Check the two that apply)

☐ Increasing the regularization effect

▲

Un-selected is correct

☐

Reducing the regularization effect

Practical aspects of deep learning

Quiz, 10 questions

Correct

☐ Causing the neural network to end up with a higher training set error

Un-selected is correct

☐ Causing the neural network to end up with a lower training set error

Correct

✔ 1 / 1
point

9.

Which of these techniques are useful for reducing variance (reducing overfitting)? (Check all that apply.)

☐ Gradient Checking

Un-selected is correct

☐ Xavier initialization

Un-selected is correct

☐ Exploding gradient

Un-selected is correct

☐ Data augmentation

Correct

☐ L2 regularization

Correct

Practical aspects of deep learning

Quiz, 10 questions

☐ Dropout

Correct

☐ Vanishing gradient

Un-selected is correct

✔ 1 / 1
point

10.
Why do we normalize the inputs x?

○ It makes the cost function faster to optimize

Correct

○ Normalization is another word for regularization--It helps to reduce variance

○ It makes it easier to visualize the data

○ It makes the parameter initialization faster