



✓ **Congratulations! You passed!**
TO PASS 80% or higher

Keep Learning

GRADE
100%

Practical aspects of deep learning

LATEST SUBMISSION GRADE
100%

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

1 / 1 point

- 33% train . 33% dev . 33% test
- 98% train . 1% dev . 1% test
- 60% train . 20% dev . 20% test

✓ Correct

2. The dev and test set should:

1 / 1 point

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

✓ 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

- Increase the number of units in each hidden layer
- Make the Neural Network deeper
- Add regularization

✓ Correct

- Get more training data

✓ Correct

- Get more test data

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.)

1 / 1 point

- Increase the regularization parameter lambda

✓ Correct

- Decrease the regularization parameter lambda

- Get more training data

✓ Correct

- Use a bigger neural network

5. What is weight decay?

1 / 1 point

- A regularization technique (such as L2 regularization) that results in gradient descent shrinking the weights on every iteration.
- The process of gradually decreasing the learning rate during training.
- A technique to avoid vanishing gradient by imposing a ceiling on the values of the weights.

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

✓ Correct

6. What happens when you increase the regularization hyperparameter lambda?

1 / 1 point

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

✓ Correct

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 $1/\text{keep_prob}$ factor in the calculations used in training
- You apply dropout (randomly eliminating units) and do not keep the $1/\text{keep_prob}$ factor in the calculations used in training
- You do not apply dropout (do not randomly eliminate units), but keep the $1/\text{keep_prob}$ factor in the calculations used in training.
- You apply dropout (randomly eliminating units) but keep the $1/\text{keep_prob}$ factor in the calculations used in training.

✓ Correct

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

1 / 1 point

- Increasing the regularization effect
- Reducing the regularization effect

✓ Correct

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

✓ Correct

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

1 / 1 point

- Xavier initialization
- Dropout

✓ Correct

- Vanishing gradient
- Data augmentation

✓ Correct

- L2 regularization

✓ Correct

- Gradient Checking
- Exploding gradient

10. Why do we normalize the inputs x ?

1 / 1 point

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

✓ Correct

