Practical aspects of deep learning

10/10 points (100%)

Teste, 10 questions

Parabéns! Você foi aprovado!

Próximo item

1/1 pontos

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

- [x] 98% train . 1% dev . 1% test

Correto

- [ ] 33% train . 33% dev . 33% test
- [ ] 60% train . 20% dev . 20% test

1/1 pontos

2.
The dev and test set should:

- [x] Come from the same distribution

Correto

- [ ]

Come from different distributions

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

Have the same number of examples

1/1 pontos

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.)

Get more test data

Não selecionado está correto

Make the Neural Network deeper

Correto

Increase the number of units in each hidden layer

Correto

Add regularization

Não selecionado está correto

Get more training data

Não selecionado está correto

1/1 pontos

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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.)

- [x] Increase the regularization parameter lambda

Correto

- [x] Decrease the regularization parameter lambda

Não selecionado está correto

- [x] Get more training data

Correto

- [x] Use a bigger neural network

Não selecionado está correto

1/1 pontos

5.

What is weight decay?

- [ ] Gradual corruption of the weights in the neural network if it is trained on noisy data.
- [ ] A technique to avoid vanishing gradient by imposing a ceiling on the values of the weights.
- [x] A regularization technique (such as L2 regularization) that results in gradient descent shrinking the weights on every iteration.

Correto

The process of gradually decreasing the learning rate during training.

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1/1 pontos

6.

What happens when you increase the regularization hyperparameter lambda?

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

Correto

- [ ] 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 pontos

7.

With the inverted dropout technique, at test time:

- [ ] 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.
- [x] 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

Correto

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1/1 pontos

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

Não selecionado está correto

- [ ] Reducing the regularization effect

Correto

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

Não selecionado está correto

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

Correto

1/1 pontos

9.

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

- [ ] Xavier initialization

Não selecionado está correto

- [x] Gradient Checking

Não selecionado está correto

- [x] L2 regularization

Correto

- [x] Dropout

Correto

- [x] Vanishing gradient

Não selecionado está correto

- [x] Data augmentation

Correto

- [x] Exploding gradient

Não selecionado está correto

1/1 pontos

10.

Why do we normalize the inputs x?

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