

✔ Selamat! Anda lulus!

Nilai  
diterima 100%

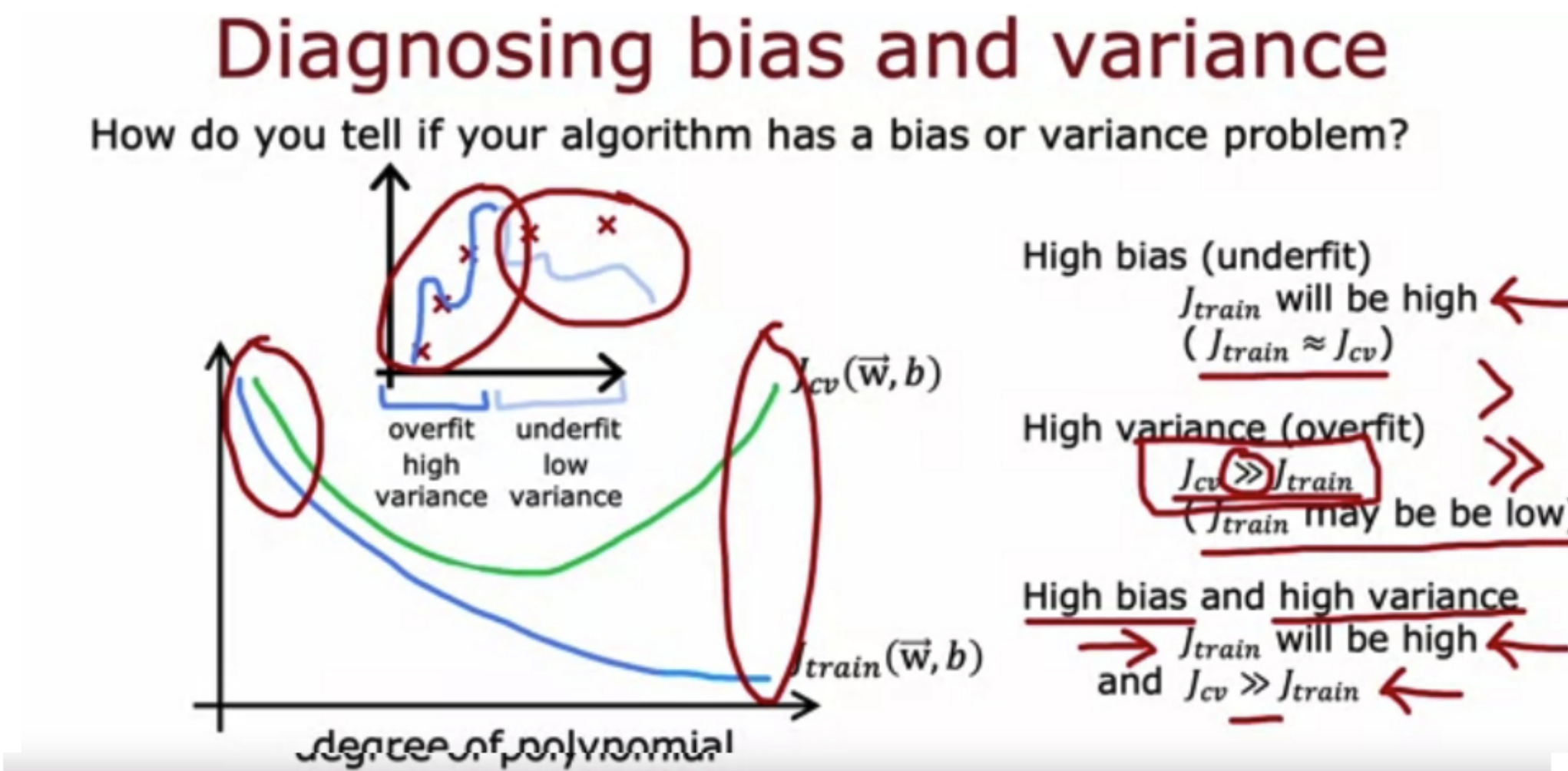
Nilai Pengiriman  
Terbaru 100%

UNTUK LULUS 80% atau  
lebih tinggi

Pergi ke item  
berikutnya

1.

1 / 1 poin



If the model's cross validation error  $J_{cv}$  is much higher than the training error  $J_{train}$ , this is an indication that the model has...

- ☐ high bias
- ☒ high variance
- ☐ Low bias
- ☐ Low variance

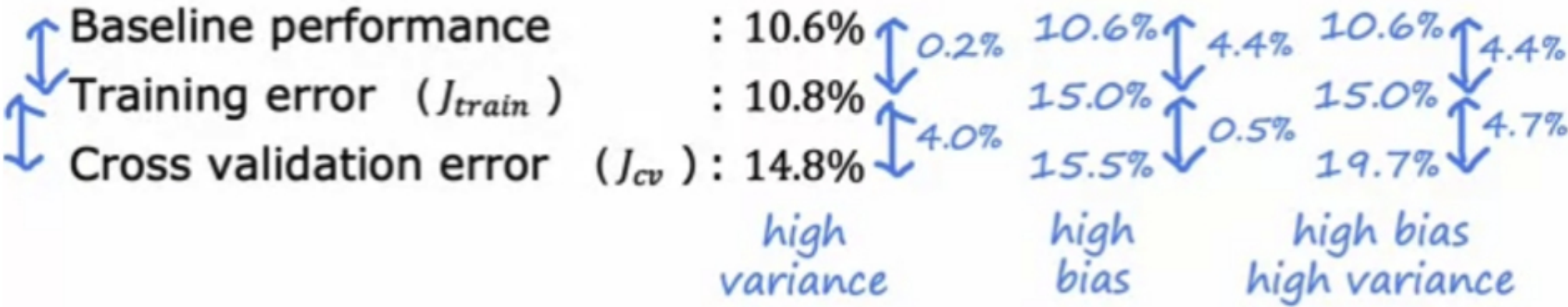
✔ Benar

When  $J_{cv} \gg J_{train}$  (whether  $J_{train}$  is also high or not, this is a sign that the model is overfitting to the training data and performing much worse on new examples.

2.

1 / 1 poin

### Bias/variance examples



Which of these is the best way to determine whether your model has high bias (has underfit the training data)?

- ☐ See if the cross validation error is high compared to the baseline level of performance
- ☐ Compare the training error to the cross validation error.
- ☐ See if the training error is high (above 15% or so)
- ☒ Compare the training error to the baseline level of performance

✔ Benar

Correct. If comparing your model's training error to a baseline level of performance (such as human level performance, or performance of other well-established models), if your model's training error is much higher, then this is a sign that the model has high bias (has underfit).

3.

1 / 1 poin

### Debugging a learning algorithm

You've implemented regularized linear regression on housing prices

$$J(\bar{w}, b) = \frac{1}{2m} \sum_{i=1}^m (f_{\bar{w}, b}(\bar{x}^{(i)}) - y^{(i)})^2 + \frac{\lambda}{2m} \sum_{j=1}^n w_j^2$$

But it makes unacceptably large errors in predictions. What do you try next?

- Get more training examples
  - Try getting additional features
  - Try adding polynomial features ( $x_1^2, x_2^2, x_1 x_2$ , etc)
  - Try decreasing  $\lambda$
  - Try increasing  $\lambda$
- fixes high variance
- fixes high bias
- fixes high bias
- fixes high bias
- fixes high variance

You find that your algorithm has high bias. Which of these seem like good options for improving the algorithm's performance? Hint: two of these are correct.

- ☐ Collect more training examples
- ☒ Decrease the regularization parameter  $\lambda$  (lambda)

✔ Benar

Correct. Decreasing regularization can help the model better fit the training data.

- ☐ Remove examples from the training set
- ☒ Collect additional features or add polynomial features

✔ Benar

Correct. Collecting more training data can help the model better fit the training data.

4.

1 / 1 poin

You find that your algorithm has a training error of 2%, and a cross validation error of 20% (much higher than the training error). Based on the conclusion you would draw about whether the algorithm has a high bias or high variance problem, which of these seem like good options for improving the algorithm's performance? Hint: two of these are correct.

- ☒ Increase the regularization parameter  $\lambda$

✔ Benar

Yes, the model appears to have high variance (overfit), and increasing regularization would help reduce high variance.

- ☐ Decrease the regularization parameter  $\lambda$
- ☒ Collect more training data

✔ Benar

Yes, the model appears to have high variance (overfit), and collecting more training examples would help reduce high variance.

- ☐ Reduce the training set size