

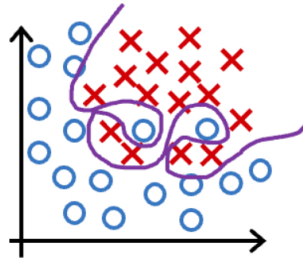
1. Which of the following can address overfitting?

1 point

- ☒ Collect more training data
- ☒ Select a subset of the more relevant features.
- ☒ Apply regularization
- ☒ Remove a random set of training examples

2. You fit logistic regression with polynomial features to a dataset, and your model looks like this.

1 point



What would you conclude? (Pick one)

- ☐ The model has high bias (underfit). Thus, adding data is likely to help
- ☒ The model has high variance (overfit). Thus, adding data is likely to help
- ☐ The model has high bias (underfit). Thus, adding data is, by itself, unlikely to help much.
- ☐ The model has high variance (overfit). Thus, adding data is, by itself, unlikely to help much.

Regularization

1 point

$$\min_{\vec{w}, b} J(\vec{w}, b) = \min_{\vec{w}, b} \left[\underbrace{\frac{1}{2m} \sum_{i=1}^m (f_{\vec{w}, b}(\vec{x}^{(i)}) - y^{(i)})^2}_{\text{mean squared error}} + \underbrace{\frac{\lambda}{2m} \sum_{j=1}^n w_j^2}_{\text{regularization term}} \right]$$

3. Suppose you have a regularized linear regression model. If you increase the regularization parameter λ , what do you expect to happen to the parameters w_1, w_2, \dots, w_n ?

- ☒ This will reduce the size of the parameters w_1, w_2, \dots, w_n
- ☐ This will increase the size of the parameters w_1, w_2, \dots, w_n