

3.

Regularization

1 / 1 point

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

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

✓ Correct

Regularization reduces overfitting by reducing the size of the parameters w_1, w_2, \dots, w_n .