The prol

Quiz submitted

- Due No due date
- Points 30
- Questions 3
- Time Limit None
- Allowed Attempts Unlimited

Instructions

You can have multiple attempt on this quiz to improve your score. Only the highest score will be recorded.

Take the Quiz Again

Attempt History

	Attempt	Time	Score
KEPT	Attempt 3	2 minutes	30 out of 30
LATEST	Attempt 3	2 minutes	30 out of 30
	Attempt 2	49 minutes	30 out of 30
	Attempt 1	4 minutes	16.67 out of 30

Score for this attempt: 30 out of 30
Submitted Nov 2 at 7:18pm
This attempt took 2 minutes.

Question 1
10 / 10 pts
Which of the following can address overfitting?
Correct!

- [x] Apply regularization

Regularization is used to reduce overfitting.
Correct!

- [x] Collect more training data

If the model trains on more data, it may generalize better to new examples.

Correct!

- [x] Select a subset of the more relevant features.

If the model trains on the more relevant features, and not on the less useful features, it may generalize better to new examples.

- [ ] Remove a random set of training examples

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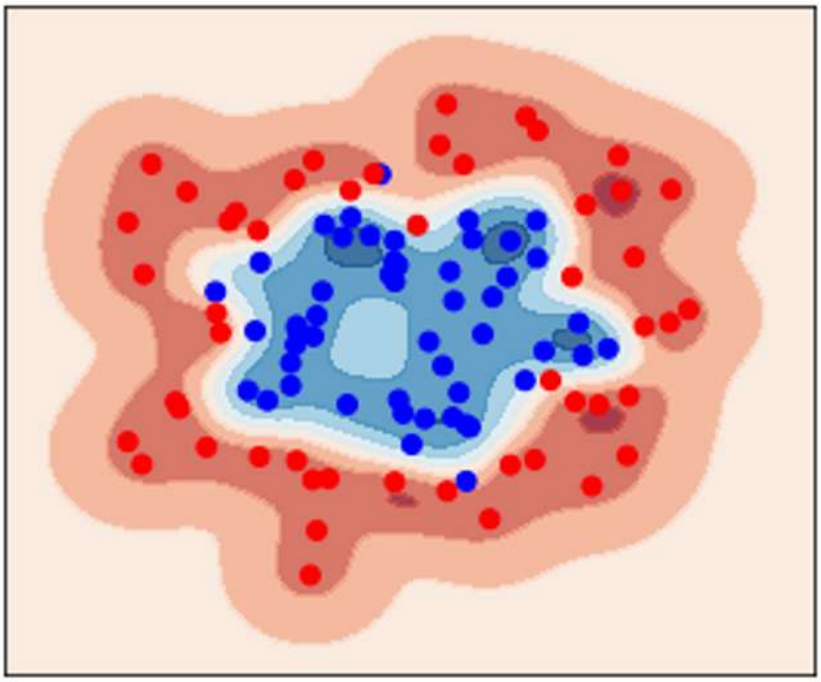
Question 2
10 / 10 pts

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



What would you conclude? (Pick one)

- [ ] 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.
- [ ] The model has high bias (underfit). Thus, adding data is likely to help

Correct!

- [x] The model has high variance (overfit). Thus, adding data is likely to help

The model has high variance (it overfits the training data). Adding data (more training examples) can help.

Question 3
10 / 10 pts

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

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

- [ ] This will incre

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Correct!

- [x] This will reduce the size of the parameters $w_1, w_2, \ldots, w_n$

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

Quiz Score: 30 out of 30